

AUSTRONESIAN TAIWAN: CURRENT STRATEGY FOR A CALIFORNIA DIGITAL LIBRARY PUBLICATION

ELECTRONIC CULTURAL ATLAS INITIATIVE OSAKA PRESENTATION FOR PNC 2002

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Abstract

Austronesian Taiwan: Linguistics, History, Ethnology, and Prehistory recently edited by David Blundell, published by the Phoebe A. Hearst Museum of Anthropology, University of California, Berkeley, is a comprehensive work tracing the studies on the indigenous peoples in Taiwan known as Austronesian-speakers.³ Presently David Blundell and Jeanette Zerneke are working on an e-publication based on the data and concepts presented in *Austronesian Taiwan* as a series for the Electronic Cultural Atlas Initiative (ECAI) publications for the California Digital Library (CDL) e-Scholarship program. The first publication will include a TimeMap of Taiwan introducing the languages of the Formosan and Yami groups. Eric Yen and Paul Jen-kuei Li at Academia Sinica, Taipei, (see Li 2000b) have accomplished the initial task for a linguistic map of the Taiwan region. Further designing of the map linked with the selected revised linguistic texts from *Austronesian Taiwan* will result in the first e-publication for the series. A second publication in the series will incorporate the archaeological map of Taiwan with the important Neolithic sites geo-referenced.

This work has resulted from the stated goals and activities of the Pacific Neighborhood Consortium (PNC) from the early 1990s (see *Pacific Neighborhood Project*, 1990). The present research of the ECAI Austronesian team is based on digital projects concerning

¹ During this year and previous academic semesters David Blundell conducts research at UC Berkeley under International and Area Studies. In terms of publishing with the California Digital Library (CDL), Blundell has benefited from the aesthetic and technical publishing skills of Jeanette Zerneke, and from the information library systems knowledge of Prof Michael Buckland at the School for Information Management and Systems, UC Berkeley.

² Jeanette Zerneke serves as the Director of Information Systems and Services, International and Area Studies, UC Berkeley, and the Director of Electronic Cultural Atlas Initiative (ECAI) Tech managing overall strategy and implementation of the information technology architecture and oversees publications.

³ The term Austronesian refers to a linguistic family that was the most extensive in the world prior to European colonial days ranging from Taiwan (Formosan groups) across the Pacific to Micronesia, skirting Melanesia to Polynesia, and to Madagascar in the Indian Ocean (see Blust 1986; Chang 1989; Bellwood, 1998, 2000; Blundell 1999, 2000b, 2001).

linguistics, prehistory, and ethnology, as a “virtual museum” (see Wasley 1995) of the Pacific and Indian oceans. Over the past few years, groups from the University of California, Berkeley (see *Berkeley Image Database Project*, 1991), and others are setting up the Electronic Cultural Atlas Initiative (ECAI) projects to connect geographical areas of the world through a digital geographical information system (GIS) with time depth (Lancaster and Henderson 1998). Gatherings convened at Academia Sinica, the British Library, Hong Kong, Sydney, Guadalajara, and now here in Osaka. From these gatherings, scholars have shared technical information to unify digital parameters to chart global spatial data. The initiative is to link geographical regions of the world as modular areas of research. In 1997, the founder and chairman of ECAI, Professor Lewis Lancaster, University of California, Berkeley, suggested that an atlas be developed to the attendees of a conference: *Austronesian Studies in Taiwan—Retrospective and Prospect* held by the Phoebe A. Hearst Museum of Anthropology.

Linguistics (1)

As the publication *Austronesian Taiwan: Linguistics, History, Ethnology, and Prehistory* was completed, the ECAI/CDL academic series has listed the edition as a forthcoming e-Scholarship publication. Jeanette Zerneke and David Blundell have decided to serialize the edition with linguistics coming first (see Li 2000a; Tsuchida 2000). This is the logical step since the subject is about the Austronesian Language Family extending from the Formosan languages in Taiwan to Oceania. The TimeMap of Taiwan accomplished by Paul Li and Eric Yen at Academia Sinica (see Li 2000b, 2001) will serve as the basis for this publication with links from the data, such as dictionaries and linguistic articles referenced to spatial/temporal designation. (See Figure 2. Taiwan Austronesian Languages below taken from Web site www.ecai.org, Austronesian Team.)

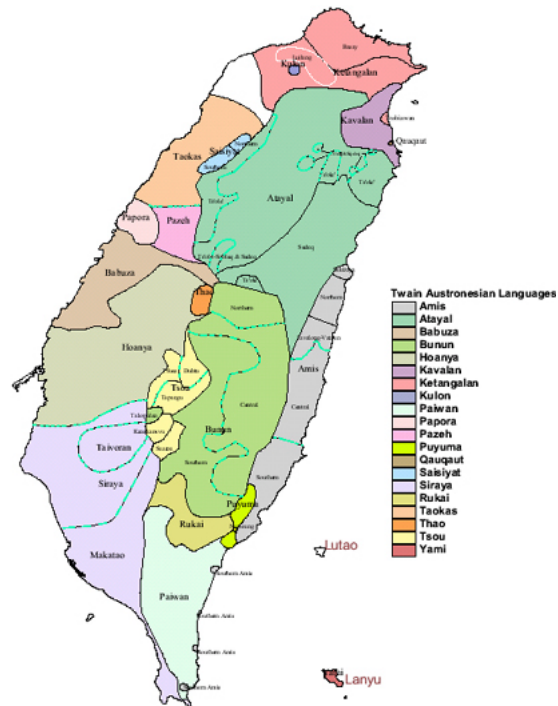


Figure 5 Taiwan Austronesian Languages

In the study of linguistics text and linguistic atlases are the primary media for research and publication. However, there is little integration between these two media. This is partly due to the nature of publication on paper.

The proposed publication will enable complex visual map based navigation of linguistic information including, maps, text, and illustrations. This approach we believe, will enhance the linguistic study and teaching, provide new understanding of the materials presented, and trigger further questions and research.

This first publication in the series will include a text manuscript, an online Java TimeMap of Taiwan, abstracts for each language and a bibliography of references for the languages. Design of the integration of these materials with multiple navigation methods is in progress. Investigation of the best methods of linking the materials to enhance their visibility and usage is part of the design process. The publication design includes an introductory text with links to the publication components; navigation from text to maps and from maps to text; example maps incorporated into the publication manuscripts; map links to the index of resources and bibliographic references for each language; individual language descriptions keyed to the language map; and finishing with a map summary/ index describing the maps in the publication.

Prehistory (2)

The next in the series will be the continuum to prehistory in terms of archaeological sites

(see Li 1989; Sung 1989; Nobayashi 2000; Liu 2000; Tsang 2000). *Austronesian Taiwan* for the first time has a published map of the 150 most important sites in prehistory (Blundell 2000a:322 from Liu) ranging back 6,000 years of the Neolithic back through the era of the Late Paleolithic (Sung 1969). The map will be geo-referenced and set up with linked site maps and related data for each specific site.

Orientation

In Taiwan there is an increased awareness of ethnicity and roots as a people of cultural diversity and ancient time frames (Mabuchi 1974; Chen 1989; Sung 1989; Nakamura 1992; Lien 1995; Moriguchi 1998; Blundell 2000b, 2001). To serve this quest, projects have been initiated in Taiwan such as the National Taiwan University Digital Library/Museum Project (NTU-DLM). It exists as a joint effort from the contribution of Prof. Jieh Hsiang of the Center of Excellence for Research in Computer Systems (CERICS) of NTU and the departments of anthropology, computer science, library sciences, history, and the University Library (Hsiang 1998). The main mission of the project is to digitize the historical documents and artifacts kept in the various departments of NTU and present them through the World Wide Web (WWW). The NTU-DLM Project is intended to preserve, through digitization, the rich historical resources available at NTU, as well as providing them to the research community. During 1997-1999, some materials of the *pingpu* (Austronesian speakers of the Taiwan plains, past and present) were archived for studies (Hu and Tsui 1998; Wu 1999). The facilities developed enhanced the research tools for social scientists.

Electronic Cultural Atlas of Austronesian Languages

An atlas electronically tracing the earliest evidence of the Austronesian linguistic family to the present would add to the process of understanding distinct language groups and the Austronesian voyaging and settlements across the oceans. It would give asset for understanding the Pacific as a highway of population and cultures. In our view, it was be a colorful walk through the layers of living ethnography into the reaches of prehistory, with cultural phases coming, staying and waning according to the evidence from specialized observation and record of data collection.

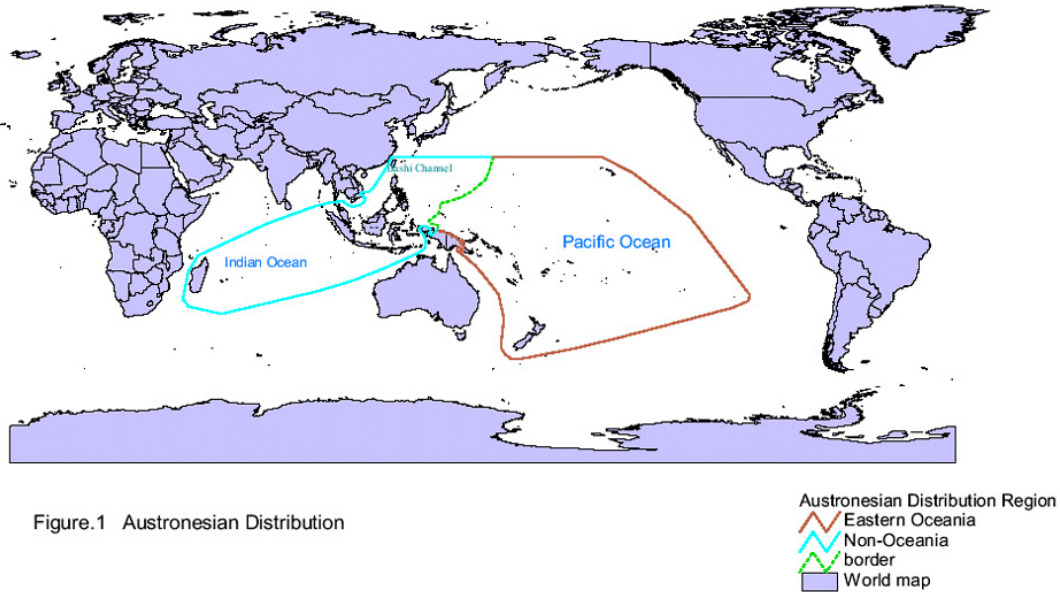


Figure.1 Austronesian Distribution

The atlas is in process of geo-referencing in order to link the scholarly information with a digital (vectored) e-map version. Ian Johnson (1998) has currently developed a TimeMap software system for ECAI. This software will be instrumental in producing the atlas to work as a multimedia device, sustainable, and interactive on the Internet. The first atlas module is the Taiwan area. This electronic atlas contains linguistic, contemporary, historic, and archaeological artifact content, related to Austronesian speaking populations. Layers of time frame maps illustrate the development of cultures in time from the ancient to the present in a continuous process system of spatial data. Each cultural element is coded based on GIS, and specific linguistic areas color-coded. This will provide a user-friendly product for research and education for a continuing understanding of the region. (See Figure 5. taken from Web site www.ecai.org, Austronesian Team.)

The idea of landscape (Cosgrove 1984) and cultural geography currently presented by academics in Western countries has become part of the Asia Pacific conceptual map. Taiwan is expanding its influence to become a regional research center of cultures of Pacific Oceania and the South China Sea (see Chen and Chang 1996) and Indian Ocean. In order to conserve data in an e-format, several important institutions are invited to participate in the Austronesian project such as UC Berkeley, Academia Sinica in Taipei, including other campuses in Taiwan, and the region. The people at Osaka would enhance the prospects including the experience at the National Museum of Ethnology (Matsuzawa 1995). Each institution has unique facilities to set up such a project that would combine studies related to Austronesian languages and cultures. The vast region of the Pacific and Indian oceans will come under this scholarly process.

Conclusion

The Austronesian Taiwan series will be published and hosted by ECAI and distributed by the California Digital Library (CDL) the central library system for the University of California. The eScholarship program of CDL is dedicated to developing infrastructure and support for new kinds of publication and distribution of scholarly information and is helping to support development of the ECAI academic publication program. The digital resources (maps, images and texts) for the publication will be archived by CDL. ECAI and CDL will collaborate to maintain persistent access to the publication including the dynamic mapping applications. Additional information on the ECAI publication program collaboration with CDL can be found at: <http://ecai.org/projects/epublications.html>.

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