

Collaborative US-Sino Digital Library Research: The Initial Experience of CMNet (Chinese Memory Net)

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1. Position Statement

CMNet (Chinese Memory Net), a US-Sino collaborative research project, is a recent NSF funded project under its International Digital Library Program. It will bring selective academic educational and research partners in the United States, Taiwan, and China together working toward an effective and sustainable global digital library in Chinese Studies. Each collaborator of this complimentary and synergetic group of the highest calibre possesses experience, knowledge, expertise, and capability in different but related research area(s). Each participating institution will attempt to bring to the research superb collections of Chinese culture and heritage, which form the core of Chinese memory. These collections are unique and essential to education and research, but currently are not accessible or usable because of distance, form, and technical barriers. This research project is to find new ways to enable academic users to access and exploit these significant research collections via global networks.

The immediate objectives of the project are to avoid duplication of efforts, to prevent the development of fragmented and non-interoperable digital systems in Chinese studies already taking place in different parts of the world, to define characteristics of an interoperable system in dealing with Chinese information resources, to find possible solutions for multilingual (specifically Chinese) language processing, and to develop commonly accepted standards of methods, protocols, tools and technology for system development in the current networked environment. This research project will also investigate the use of current networks of different speeds, bandwidth, and configurations available to project partners for digital data and image transmission for enhancing education and research in Chinese studies.

With initial intensive meetings and discussions with the collaborators in China and Taiwan, essential research agendas and activities to be partitioned for partners to investigate have been proposed, taking into account both the interests and research capabilities of the collaborators. Agenda for the US collaborators are still being developed. The partners will draw on their substantial experience in database construction, multilingual information system, metadata, digital imaging, network development, and the like to lay the groundwork for a new and effective information system. This system will transcend present inhibitors such as geography, time, and the cost of international consultation; and open up access to Chinese cultural and historical information resources and artifacts for a distributed set of international users taking advantage of the currently available advanced global network capabilities.

The research team will first attempt to address the baseline problems and issues related to standards such as metadata, protocol, and multilingual processing, and then the use of networks. The resulting commonly agreed standards and tools, and the knowledge gained from exploring the use of networks of varying speeds will simultaneously enlarge the understanding for creating multilingual, multinational digital libraries. They will also set a healthy direction and provide much needed guidelines for all those interested in developing their virtual library and museum collections in Chinese studies and/or other subject areas. By developing different prototype virtual library and museum collections at participating institutions, all academic partners will benefit by the enriched opportunities to compare and contrast materials and thus will accelerate the pace of discovery. This will undoubtedly broaden the use of and access to the unique digital collections in Chinese studies by knowledgeable scholars all over the world.

The Next Generation Internet will transform the way we live, communicate, work, learn, and conduct research. But, few in Chinese studies have the privilege to experience the use of this because of the lack of

such network connection. The I2 and Taiwan partners of this research group are privileged to have vBNS connections (connections to partners in China are expected to be available now). Therefore they will capitalize this rare capability available to them, conduct research together on technical practices, and develop organizational policies. Alternatives in using networks of much slower speeds will also be explored particularly between the US partners and the partners in China. These research results will be significant because they will contribute to the body of knowledge required to create a global collaborative multilingual information system, which is vital for the global sharing of much needed digital collections for education and research. It is certain that as more research efforts made to formulate approaches that are responsive to emerging scholarly practices, that more effective and easy-to-use systems can be created.

CMNet is hoping to further connect to other collaborative research groups in the future, thus while sharing the initial experience with the US-Korean group, there is great potential to explore closer collaborative research among groups like US-Sino, US-Korean, and the like, since there are considerable overlap on a number of significant research areas. Meaningful collaboration will further eliminate unnecessary duplication of efforts, and create better synergy toward a functional global digital library of Asian studies.

Biographical Information

Dr. Ching-chih Chen, Professor of the Graduate School of Library and Information Science, Simmons College, Boston is an international consultant and speaker to over 30 countries. The author/editor of more than 29 books and author of over 150 journal articles, in areas of new information applications, she produced the award winning interactive videodisc and multimedia CD entitled *The First Emperor of China*. She has served as consultant to many international organizations, including UNESCO, World Health Organization, World Bank, Soros Foundation, USIA. In the last 10 years, she has been advocating the global digital library concept by linking libraries and museums all over the world together, and this Global Digital Library Initiative has helped the development of digital libraries in numerous countries. Currently she is leading an International Digital Library Project of the U.S. National Science Foundation, *CMNet (Chinese Memory Net): US-Sino Collaborative Research Toward Global Digital Library in Chinese Studies*, and is a consultant of numerous major digital library projects in the world, including the Tsinghua Digital Library Program and Taiwan's Digital Museum Program.

A Fellow of the American Association for the Advancement of Science, President Clinton appointed her, in February 1997, to his President's Information Technology Advisory Committee (PITAC). She is co-chair of the PITAC Subcommittee on International Issues, and a member of the PITAC Subcommittees on Next Generation Internet (NGI), IT*2 Initiative Review, and Digital Library. She also chairs the PITAC's activity on Digital Divide for Smaller Institutions.

Since 1987, Dr. Chen has been Chief Organizer of a series of 11 New Information Technology (NIT) conferences in many parts of the world -- Bangkok, Singapore, Guadalajara (Mexico), Budapest, Hong Kong, Puerto Rico, Alexandria (Virginia), Riga, (Latvia), Pretoria (South Africa), Hanoi (Vietnam), and Taipei -- helping to bring NIT to many developing countries. The outcome of NIT '94 is her groundbreaking book, *Planning Global Information Infrastructure*. IT and Global Digital Library Development is a 520-page book resulted from NIT 1999. NIT 2001 will be held at Tsinghua University, Beijing, May 29-31, 2001 with the theme, "*Global Digital Library Development in the New Millennium: Fertile Ground for Distributed Cross-Disciplinary Collaboration*".