Edward A Fox; VA Polytechnic Inst & St U  
US-Korea Joint Workshop on Digital Libraries: Removing Barriers to International Collaboration on Research and Education through Digital Libraries

Participant Individuals:  
Technician, programmer(s): Debra K Dudley

Partner Organizations:  
San Diego Supercomputer Center: In-kind Support; Facilities; Collaborative Research

1. SDSC hosted the workshop on August 10-11, 2000. They provided many services and varied types of assistance throughout the course of the project.

2. Reagan W. Moore helped with preparation of reports and publications.

University of Maryland College Park: Collaborative Research

Ronald L. Larsen of U. Md. served along with Reagan W. Moore (SDSC) as co-PI in terms of running the workshop and project. He participated in preparation of reports and publications.

Chungnam National University: Financial Support; Collaborative Research; Personnel Exchanges

Chungnam National University helped run the workshop and project on the Korean side. Sung Hyon Myaeng (shmyaeng@cs.chungnam.ac.kr) has been the main organizer there, and is co-author on project reports and publications. He helped host a number of visits to Korea by US researchers working on this project.

Mann-Ho Lee was on sabbatical at Virginia Tech visiting for 1 year starting Aug. 14, 2000. He also was part of a delegation discussing a cooperative exchange program between Virginia Tech and Chungnam National University, with an MOU signed 2/19/2002 by respective university presidents.

Sookmyung Women's University: Financial Support; In-kind Support; Collaborative Research

Sookmyung Women's University helped run the workshop and project on the Korean side. Kim, Sung-Hyuk (ksh@sookmyung.ac.kr) has been a key organizer there, and is co-author on project reports and publications. He helped host a number of visits to Korea by US researchers working on this project. He has attended many meetings in the USA over the
course of the project.

Other collaborators:

1. Several US researchers have visited Korea to help on the project, to promote US-Korea collaboration on digital libraries. Many attended ICADL’2000 in Seoul, Korea over the period Dec. 6-8, 2000. PI Fox also was in Seoul as well as Daejeon on July 12-13, 2003. There are reports on the WWW site (http://fox.cs.vt.edu/UKJWDL/) regarding the two most recent visits. Below are brief notes about those:

1a. Ching-chih Chen, Professor, Graduate School of Library and Information Science, Simmons College, Boston, MA 02115, chen@simmons.edu, visited Daejeon and Seoul over the period Nov. 26 - Dec. 1, 2002. Dr. Chen is a member of PITAC. See her report at http://fox.cs.vt.edu/UKJWDL/later/CCC_Korea_report_120402_rev.pdf

1b. Robert B. Allen, Professor, University of Maryland, rba@glue.umd.edu, visited Korea in October 2002 to speak at the Oct. 14 symposium the National Library of Korea hosted to examine plans for a new National Digital Library of Korea. He gave a second presentation, about NSDL, since Dr. Jane Frey of NSF was at the last minute unable to attend. See his report at http://fox.cs.vt.edu/UKJWDL/later/KoreaRBA.txt

2. Many people attended the Aug. 10-11, 2000 workshop. Details are given on the WWW site, such as the alphabetical list of attendees at http://fox.cs.vt.edu/UKJWDL/later/attendees.pdf

2a. A number received reimbursements from the project funds. They are:
- Robert B. Allen, University of Maryland
- Ching-chih Chen, Simmons College
- Su-Shing Chen, University of Missouri-Columbia
- Gregory Crane, Tufts University
- Lois Delambre, Oregon Graduate Institute of Science & Technology
- Edward A. Fox, VT
- Michael Gertz, University of California
- Stephen Helmreich, New Mexico State University
- Ulf Hermjakob, University of Southern California
- Ronald L. Larsen, University of Maryland
- Reagan Moore, San Diego Supercomputer Center

2b. The full list of attendees (alphabetical) is:
- Robert Allen - University of Maryland - rba@GLUE.UMD.EDU
- Dookwon Baik - Korea University - baik@SWSYS2.KOREA.AC.KR
- Ching-Chih Chen - Simmons College, Boston - chen@SIMMONS.EDU
- Su-Shing Chen - University of Missouri - Columbia - schen@ECN.MISSOURI.EDU
- Jonghoon Chun - Myongji University - jchun@WH.MYONGJI.AC.KR
- Gregory Crane - Tufts University - gcrane@PERSEUS.TUFTS.EDU
- Lois Delambre - Oregon Graduate Institute - lmd@CSE.OGI.EDU
- Edward Fox - Virginia Tech - fox@VT.EDU
- Michael Gertz - University of California, Davis - gertz@CS.UCDAVIS.EDU
- Stephen Helmreich - New Mexico State University - shelmrei@CRL.NMSU.EDU
- Ulf Hermjakob - USC Information Sciences Institute - ulf@ISI.EDU
- Soon Joo Hyun - Information & Communications University (ICU) - shyun@ICU.AC.KR
Activities and findings:

Research and Education Activities:

The main activity of the project was to run the 'US – Korea Joint Workshop on Digital Libraries', August 10-11, 2000, at the San Diego Supercomputer Center in San Diego, California. Follow-on efforts included further discussion facilitated by subsequent visits of US researchers to Korea, and visits of Korean researchers to USA. Additional activities included meeting with government officials in both countries to explore possibilities for funded programs. To promote the development of more collaborative initiatives, we engaged in constructing a WWW site (http://fox.cs.vt.edu/UKJWDL), publishing about the effort, and preparing recommendations.

Findings:

Key recommendations, which are supported by the discussion below, include:

1. Since researchers in both US and Korea are involved in R&D related to digital libraries (DLs), there are real and potentially significant opportunities for collaboration in this area that should be nurtured.

2. Since education has high priority in Korea, and since in the last years there has been successful US-Korea collaboration regarding such educational resources as electronic theses and dissertations, an important opportunity that should be exploited is involvement of Koreans in the initiative led by the US National Science Foundation to develop the National STEM (Science, Technology, Engineering, and Mathematics) education Digital Library, NSDL (see NSF 02-054, http://www.nsf.gov/pubsys/ods/getpub.cfm?nsf02054, and NSF 03-530, http://www.nsf.gov/pubsys/ods/getpub.cfm?nsf03530, as well as www.nsdl.org).
3. Since NSF has supported work by US researchers through NSF 02-085 in connection with its Digital Libraries Initiative (DLI, see http://www.dli2.nsf.gov/), and in Spring 2002 launched a new International Digital Libraries Collaborative Research and Applications Testbeds Program Solicitation (NSF 02-085, http://www.nsf.gov/cgi-bin/getpub?nsf02085), US teams are encouraged to apply to such programs in concert with partners that may obtain support from similar programs in Korea.

4. Further focused programs for US-Korea collaboration on DLs should be developed and explored, especially if related to the following opportunities:

4a) Work on Korea Culture and Heritage Digital Libraries: has support in Korea; could provide an opportunity for US citizens (including students) to access Korean culture and heritage; can benefit from technologies and experience developed by US researchers; and could lead to important solutions to problems such as cross cultural, cross lingual, cross religion, and multidisciplinary interoperability.

4b) Advances in work on ontologies and on the various areas dealing with human languages (e.g., machine translation, cross-language information retrieval, text summarization) should allow DLs to support users in both nations.

4c) Application areas of particular importance, such as health and medical care, seem particularly amenable to US-Korea collaboration, especially with regard to special services such as annotation.

4d) A number of important DL problems, such as digital library architecture (including for managing data, information, and knowledge), interoperability, and user-centered design and evaluation, are of particular interest to US-Korea teams that may need new insights regarding solutions that cross national, linguistic, and cultural barriers.

Training and Development:

The workshop itself was the major training and development event of our project. This provided an opportunity for all attendees to explain their research, through presentations as well as group discussions on particular topics. Through the WWW site and our various publications, this teaching has spread to have wider impact.

A secondary type of teaching occurred through the several visits by people helping with this project aimed to promote collaborative research, through presentations as well as discussions with government officials and program directors of funding agencies.

The third type of research and teaching that has been demonstrated in this project, and which might lead to further sabbatical and other exchange programs, is illustrated in a new VT-CNU connection. After the workshop, two Korean researchers interested in digital libraries came to work with PI Fox during their sabbatical. Further, in Spring 2002 a delegation from Chungnam National University, led by its President, came to Virginia Tech to sign an MOU for academic collaboration.

Outreach Activities:
In addition to the workshop and follow-up trips, there has been active involvement of US researchers who attended the workshop in US-Asia digital library discussions. In particular, the International Conference on Asian Digital Libraries series has provided a forum for researchers from US and Korea to meet and help increase public understanding. For example, PI Fox has played the following roles:

- Program Co-Chair, ICADL'2002, Dec. 17-20, 2002, Singapore
- Member, Program Committee, ICADL 2001, Dec. 10-12, 2001, Bangalore, India, 4th Int'l Conf. of Asian Digital Libraries

**Journal Publications:**

**Book(s) of other one-time publications(s):**

**Other Specific Products:**

**Internet Dissemination:**
http://fox.cs.vt.edu/UKJWDL

The project home page is http://fox.cs.vt.edu/UKJWDL. An increasing amount of documentation related to the workshop has been available online since August 2000, including:

* proposal to US National Science Foundation (NSF) for the workshop;
* agenda and other general information about the meeting;
* presentations given at the meeting (in PowerPoint and other formats);
* position statements of attendees (in PDF and other formats);
* reports of discussions: by working groups, breakout groups, and meeting organizers;
* draft of outlines and reports;
* pointer to Oct. 2002 D-Lib Magazine publication derived from this
* reports from visits to Korea in late 2002 by workshop participants Robert B. Allen and Ching-chih Chen

**Contributions:**

**Contributions within Discipline:**

Korean researchers and government officials are moving forward so that there will be additional work and support in Korea for the DL field. The US DL research community is more aware than before of both the interest in DL activities in Korea, and the quality of a number of Korean DL research activities. Indeed, there have been various discussions of collaborative projects, and if funding can be worked out, further development of a program of collaborative research should proceed.

**Contributions to Other Disciplines:**

Many areas relate to computing, especially regarding branches of science and engineering that deal with human-computer interaction, or the organization and utilization of data, information, and knowledge. Particularly connected are efforts in the library and information sciences, which are closely related. All of these fields benefit from our research and collaboration regarding digital libraries.

**Contributions to Education and Human Resources:**

We work toward advances in digital libraries, which very often are supportive of scholarly activities, including all forms of learning. Thus we broadly support the development of human resources.

**Contributions to Resources for Science and Technology:**

Over the recent years, Korean agencies have begun to broaden support for specialized digital libraries, such as of theses and dissertations, leading gradually to more availability of Korean research to the USA and other nations, thus enabling advancement across the board in research and education. Since digital libraries are a key part of the infrastructure of modern scholarship, all such efforts, whether for basic or applied research, or for advanced development, may have highly leveraged benefit.

**Contributions Beyond Science and Engineering:**

We work to remove barriers to collaboration on research and education between pairs of nations with very different languages and cultures, such as the US and Korea. We report on recommendations (to remove such barriers) that appear promising for these two nations. These recommendations are presented early in 2003, when peace, economic development, and cross-cultural understanding are of particular importance with regard to US relations with the Korean Peninsula — and when various developments have occurred that finally make feasible
both further productive collaboration and possible funding by both
governments. We urge action by NSF and others that will make possible
such contributions.

Categories for which nothing is reported:
Products: Other Specific Product

We welcome comments on this system