US-Korea Collaboration on Digital Libraries: An Overview and Generalization for Pacific Rim Collaboration

Edward A. Fox[1], Reagan W. Moore[2], Ronald L. Larsen[3], Sung Hyon Myaeng[4], and   Kim Sung-Hyuk[5]

[1] Virginia Tech, Dept. of Comp. Science, M/C 0106, Blacksburg, VA 24061 USA, fox@vt.edu
[2] San Diego Supercomputer Center, La Jolla, CA 92093-0505 USA, moore@sdsc.edu
[3] U. Pittsburgh, School of Info. Sciences, Pittsburgh, PA 15260 USA, rlarsen@mail.sis.pitt.edu
[4] Chungnam National U., Div. Electr. & Comp. Eng., Taejon, Korea, shmyaeng@cs.cnu.ac.kr
[5] Sookmyung Women's U., Div. of Information Science, Seoul, Korea, ksh@sookmyung.ac.kr

Abstract. We report on recommendations to remove barriers to worldwide development of digital libraries, drawing upon an Aug. 2000 workshop involving researchers from the US and Korea who met at the San Diego Supercomputer Center. We developed a summary table identifying application domains (e.g., education), institutions engaged in those applications, example activities, technical challenges, and possible benefits. Since education has high priority in Korea, an important opportunity that should be explored is involvement of Koreans in the initiative led by the US NSF to develop the National STEM (Science, Technology, Engineering, and Mathematics) education Digital Library, NSDL.

1   Discussion

There are many barriers to worldwide development of digital libraries (DLs). These are of particular concern in the context of DL support of collaboration on research and education between pairs of nations with very different languages and cultures. Recommendations to remove such barriers were developed at a US-Korea workshop involving DL researchers who met August 10-11, 2000 at the San Diego Supercomputer Center (see http://fox.cs.vt.edu/UKJWDL). A brief summary list of these includes:

1. Real / potentially significant collaboration opportunities should be nurtured.
2. An important opportunity to explore is involvement of Koreans in the US NSF led National Science education Digital Library, NSDL (www.nsdl.org).
3. Teams should apply to NSF's International Digital Libraries Collaborative Research and Applications Testbeds Program and similar programs in Korea.
4. Further focused programs might relate to one or more of:
   a) Korea Culture and Heritage Digital Libraries;
   b) ontologies and the areas dealing with human languages (e.g., machine translation, cross-language information retrieval, text summarization);
   c) application areas of particular importance, such as health / medical care;
   d) important DL problems, such as architecture (including managing data, information, and knowledge), interoperability, and user-centered design.