Final Delos Workshop on Future Directions in the Digital Libraries Domain

by Carol Peters

Thirty two participants, including delegates from nine ERCIM institutions, attended the final workshop of the DELOS Working Group on Digital Libraries, hosted by CNR in Pisa, 25-26 November. The main goal of the workshop was to bring representatives of major applications together with members of the research community, in order to discuss the impact of digital library (DL) technology in a number of different domains and to identify those areas where efforts should be concentrated in the near future. This is particularly relevant in view of the fact that the activities of DELOS will be continued and extended in a Network of Excellence (NoE), a thematic network on digital libraries funded by the European Commission.

The six talks on the first morning of the two-day workshop presented perspectives from the worlds of electronic publishing, television, music, geographic information systems and health care.

The first speaker, Michael Mabe of Elsevier, United Kingdom, affirmed that going digital has profound consequences for all members of the information chain in the scientific journal community. The main purpose of such journals is to serve their authors rather than their readers, although these are usually the same people. The conflict between author and reader modes of thinking creates most of the challenges faced by publishers in their desire to meet the needs of users and librarians, Some if not all have been partially solved, but in a world where paper and digital have simultaneous existence clear outcomes have yet to appear. It is not evident that more technology is necessarily the answer - human factors remain paramount.

Johannes Kraus, of the Austrian Broadcasting Company (ORF) and also representing the International Federation of Television Archives (FIAT/IFTA), discussed issues involved in the segmentation and representation of video in television, and the needs for image processing with respect to both input (annotation) and output (retrieval). His conclusion was that the integration of information systems in an integrated digital workflow is crucial in order to pave the way to new forms of collaboration and content presentation using video-embedded metadata.

Ingeborg Solvberg, of the Norwegian Technical University (NTNU) and representing SINTEF, described challenges faced by traditional library communities in the digital library world. Important tasks are the building and sharing of collections at the local, national and international levels, and the integration of digital documents from libraries, archives and museums. In order to ease access to information and to increase precision in the IR process, new models and metadata must be developed. The value of controlled vocabularies and the use of thesauri were described. Examples from the Alexandria DL project at the University of California - Santa Barbara, and the operational California Digital Library (CDL) were given.

Matthias Hemmje, IPSI-GMD, gave an overview of a number of projects at GMD using digital library technology.

Werner Deutsch, from the Acoustics Research Lab. in Vienna of the Austrian Academy of Sciences, focused on music and music information in libraries and sound archives. Main challenges being faced by music libraries and archives regard digitisation and preservation, and the provision of music services over the Internet. Semiautomatic segmentation and content description are evaluated in a demonstrator system implemented by the European project HARMONICA (http://www.kfs.oeaw.ac.at). This session was concluded by Erich Leisch from the Institute of Computer Science, FORTH, who described the success of ongoing health care projects in Crete that adopt digital library technologies.

The afternoon sessions focussed on DL technologies. Jim Davis, a visiting scientist at CWI, introduced two new internet protocols (WebDAV and DASL) now being developed by the Internet Engineering Force (IETF) and outlined their potential areas of application in digital libraries. Norber Fuhr, University of Dortmund, Germany, discussed open research issues in resource indexing and discovery. In order to cope with the diversity of information, users, uses, systems and communication protocols in distributed digital libraries, problems regarding organizational, system, content, and human-computer interface aspects must be solved. Thomas Baker of GMD reported on the DELOS EU-NSF Working Group on Metadata and on several related projects that have since emerged. These include a distributed registry of Dublin-Core-related schemas in multiple languages; HARMONY, an international project on metadata interoperability; and SCHEMAS, a forum for designers of interoperable metadata vocabularies.

The final presentation, by Carol Peters, IEI-CNR, Pisa, discussed the state-of-the-art and current trends in multilingual information access. She gave an overview of the results and recommendations that emerged from the DELOS EU-NSF Working Group on this topic and from an ACM DL/SIGIR Workshop held in Berkeley, August 1999, on Multilingual Information Discovery and Access. Important challenges now facing this area are to begin to explore the issues introduced by multilingual information access in media other than character-coded text, i.e. how do we manage and query image, audio and video data in multiple languages, and to move from bilingual (pairwise) retrieval to truly multilingual systems.

Probably the main conclusion to be drawn from this confrontation between the application and research communities was the need for the developers of new technologies to study very closely the requirements of the users. Innovative proposals will not be adopted if they do not satisfy basic expectations. For this reason, communication and exchange of ideas between the two groups is crucial.

The encouragement of international collaboration in the DL domain has been a main priority for DELOS and will be one of the core activities of the future NoE. The second day of the meeting began with two presentations describing DL initiatives in Asia and South America. Jerome Yen of the Chinese University of Hong Kong discussed the building of a digital framework to support cultural exchange between East and West. He described two projects now under way at his university: Multi-lingual

Informedia, in collaboration with the University of Carnegie Mellon, US, and the CyberLibrary. Gabriela Ortúzar of the University of Chile presented the digital archives and digital library activities of her university.

The Workshop ended with a preparatory discussion aimed at identifying the main activities to be conducted within the framework of the DELOS NoE, which is scheduled to kick-off at the beginning of 2000. The proceedings of the Workshop will be published by ERCIM in the DELOS Workshop series and will be available shortly on-line at the DELOS Web site: http://iei.pi.cnr.it/DELOS/.

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