

Digital Library Use: Social Practice in Design and Evaluation

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PANEL DESCRIPTION

Digital Libraries (DLs) are social as well as technological entities. Their purpose is to help people do knowledge work, to carry knowledge processes across space and time. DLs are designed, used, and evaluated in a context of work and community. And DLs interact with this context, changing and being changed by it. Effective DLs must be designed and evaluated with a sensitivity to how knowledge is created and understood, and work is done, in a context of knowledge communities, which share practices and tools. DL use is a socially-embedded process. DL development is likewise a complex social process. This panel grows out of a book on social approaches to DL design and evaluation--currently in press--to which the moderator and each panelist has contributed a chapter. The purpose of the panel is to present socially grounded approaches to understanding DLs; to identify and discuss major issues that arise from these approaches and, more generally, from the social nature of DLs; and to consider implications for the design and evaluation of DLs.

KEYWORDS: Design, evaluation, social context

MODERATOR

Clifford Lynch
Coalition for Networked Information.

USES, USERS, AND USABILITY OF DIGITAL LIBRARIES

Christine L. Borgman
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If national and global information infrastructures are to serve every citizen, then digital libraries should be reasonably easy to learn and to use. But how easy can we make them? While some suggest that information systems

should be as easy to use as automatic teller machines, the comparison is unfair. Automatic teller machines (ATMs) support only a few procedures for withdrawing or depositing funds. Other widely-adopted information technologies such as radios, televisions, and telephones also support only a small set of actions, but even these technologies are becoming more complex and harder to use. One of the reasons that technologies become more complex as features are added is that the relationship between the task and the tool becomes less visible. Desktop computers are especially abstract in their relationship between form and function. A computer cannot be inspected to identify its functions in the ways that a telephone, television, or other information technology designed for a single application can be inspected. In the abstract world of computing, the real-world clues are gone, replaced by pull-down or pop-up menus, screen displays, searching tools, and lists to browse. Usability depends heavily on users abilities to map their goals onto a systems capabilities. Also missing in automated systems is the safety net of human assistance. Information systems will achieve wide acceptance only if they are easy to learn and use relative to perceived benefits. This presentation explores behaviors involved in learning and using digital libraries. My focus is on the individual user and on searching as a form of problem solving.

FINDING THE BOUNDARIES OF THE LIBRARY WITHOUT WALLS

Catherine C. Marshall
FX Palo Alto Research Center

In the first years of digital library efforts, there was much talk of the library without walls. The introduction of electronic resources into the traditional library showed promise of bringing about seamless anytime, anywhere access. How has this seamless access played out as digital collections grow, and an increasing number of institutions and individuals have come to maintain and use them? Contrary to this picture of seamlessness, the practical everyday reality of workplaces and public institutions like libraries is rife with boundaries that shape human interaction and any associated engagement with technology and

documents. A boundary is that which tends to separate, to interpose. It represents a perceptible seam in the social fabric, technological infrastructure, or physical setting (or may span all three). Physical and social factors such as work setting and organizational structure produce some of the most noticeable boundaries. Can boundaries--and the potential success or failure of boundary-crossing technologies--then be predicted readily by identifying certain stereotypical situations? How does this notion of boundaries play out in the library without walls? In this presentation, I'll take a look at boundaries that are less visible, albeit no less crucial, than those introduced by physical space or organizational factors. These boundaries are introduced, amplified, or even overcome, by technology design and the mix of physical and digital document technologies that are common in many workplaces and today's heterogeneous libraries.

TRANSPARENCY BEYOND THE INDIVIDUAL LEVEL OF SCALE: CONVERGENCE BETWEEN INFORMATION ARTIFACTS AND COMMUNITIES OF PRACTICE

Susan Leigh Star

Geoffrey C. Bowker

University of California, San Diego

Laura J. Neumann (Panel Presenter)

Graduate School of Library and Information Science,
University of Illinois, Urbana Champaign

As digital libraries and other types of information systems are used by more people, and permeate more of our working and leisure lives, scholars studying the human side of computing must scale up various concepts traditionally seen as individual or psychological. When large groups of people are using a widely distributed system, old notions of "one person, one terminal" as the basis for design are inadequate. The model is no longer about one person, or a small team, optimizing decisions in a controlled environment. At the organizational level, deciding includes issues of social justice, multiple interpretations, and adjudication of conflict across social boundaries. In this presentation, I focus on just one aspect of the social side of scaling up in information systems -- how it affects the concept of transparency. Transparency for one user means that he or she does not have to be bothered with the underlying machinery or software. As we move up from a single user to a larger community, transparency becomes more complex, requiring a shifting alignment of information resources and social practices.