

# Visual Interfaces to Digital Libraries – Its Past, Present, and Future

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## ABSTRACT

The design of easy-to-use and informative visual interfaces to digital libraries is an integral part to the advances of digital libraries. A wide range of approaches have been developed from a diverse spectrum of perspectives that focus on users and tasks to be supported, data to be modeled, and the efficiency of algorithms. Information visualization aims to exploit the human visual information processing system, especially with non-spatial data (such as documents and images typically found in digital libraries). Generally, information visualization examines semantic relationships intrinsic to an abstract information space and how they can be spatially navigated and memorized using similar cognitive processes to those that would apply during interactions with the 'real world'. This workshop promotes the convergence of information visualization and digital libraries. It brings together researchers and practitioners in the areas of information visualization, digital libraries, human-computer interaction, library and information science, and computer science to identify the most important issues in the past and the present, and what should be done in the future.

## Keywords

Information Visualization, Digital Libraries, Usability Studies, Human-Computer Interaction, and Cognitive Psychology

## 1. AIM AND OBJECTIVES

The primary aim of the workshop is to raise the awareness of several interconnected fields of research related to the design and use of visual interfaces to digital libraries, especially in information visualization, human-computer interaction, and cognitive psychology. This workshop also aims to stimulate participants to reflect on the state of the art in their own fields by identifying challenging issues concerning visual interfaces and thereby fostering a multidisciplinary research agenda for future research and development.

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The workshop's objectives are:

- To provide a stimulating forum for researchers in information visualization and digital libraries to share their views, experiences, and plans.
- To raise the awareness of the state of the art in related fields of research.
- To identify a research agenda concerning the role of visual interfaces in digital library research.
- To exploit potentially useful theories, methodologies, and technologies.
- To establish long-term interdisciplinary collaboration between researchers from different fields.

Papers will be selected by an international program committee composed of leading researchers in this area in university, government, and industry: Ann Blandford, Middlesex University, UK; Kevin Boyack, Sandia National Laboratories, USA; Martin Dodge, University College London, UK; Xia Lin, Drexel University, USA; John MacColl, University of Edinburgh, UK; Sougata Mukherjea, BEA systems, USA; Sue O'Hare, Consignia, UK; Henry Small, Institute for Scientific Information, USA.

## 2. WORKSHOP ORGANIZERS

Katy Börner is an Assistant Professor in Information Science at Indiana University. Trained as an engineer, her major interest has always been a concern with how existing technology can be applied to enhance and extend human capabilities. In particular, she focuses on information visualization and the usage of 3-D technology to build collaborative interfaces that provide intuitive and efficient access to text document and image digital libraries. Her web page is available at <http://ella.slis.indiana.edu/~katy>.

Chaomei Chen is a Reader in the Department of Information Systems and Computing and Director of the VIVID Research Centre at Brunel University in the UK. His research interests include information visualization, digital libraries, visualization of knowledge structures, and social dynamics in multi-user virtual environments. He is the author of *Information Visualisation and Virtual Environments* (Springer, 1999) and a guest editor of several special topic issues. He is a member of the organizing committee of IEEE International Conference on Information Visualization (IV2000 and IV2001). He is also a member of ACM, IEEE Computer Society, ASIST, and Information Visualization Society. He is the symposium chair on Information Visualization in Digital Libraries at IV2000 and IV2001. His web page can be found at <http://www.brunel.ac.uk/~cssrccc2>.