JCDL Workshop 2002

Visual Interfaces to Digital Libraries

Workshop Organizers:
K. Borner, Indiana University, US & C. Chen, Drexel University, US

Program Committee:
A. Blandford, K. Boyack, M. Dodge, X. Lin, S. Robertson, J. MacColl, S. Mukherjea & S. O’Hare
Welcome to the
Second International Workshop

“Visual Interfaces to Digital Libraries"

at the Second ACM+IEEE Joint Conference
on Digital Libraries
First WS on Visual Interfaces to Digital Libraries in 2001
Today's Schedule

8:30am Welcome and Introduction by Katy Börner

8:45am Keynote Talk by Tim Bray, Antarcti.ca Systems

9:30am Open Discussion: The Role of Visual Interfaces in Digital Libraries; Self Introduction of WS Participants; Identification of Important Issues to be Addressed.

10:00am Break & System Demos

10:45am Presentation of 3 Papers (a 15min + 5min) & General Discussion

- Time as Essence for Photo Browsing Through Personal Digital Libraries by Graham et al., Stanford University, USA
- Interactive Timeline Viewer (ItLv): A Tool to Visualize Variants Among Documents by Monroy et al., Texas A&M University, USA
- Variations2: Toward Visual Interfaces for Digital Music Libraries by Notess & Minibayeva, Indiana University, USA

12:00 - 1:30pm Lunch Break
Today's Schedule cont.

1:30pm Presentation of 4 Papers (a 15min + 5min) & General Discussion

- Accessing Libraries as Easy as a Game by Christoffel & Schmitt, University of Karlsruhe, Germany
- Interactive Information Visualization in the Digital Flora of Texas by Ong & Leggett, Texas A&M University, USA
- Towards Escaping the Interface Local Minimum: Visualization and the Alexandria Digital Earth Prototype by Ancona & Smith, University of California, USA

3:00pm Break & System Demos
3:45pm Expert Panel: Challenges and Opportunities
4:30pm Summary and Conclusion
System Demonstrations

- **PubMed, Map.Net, and VCDeal map** by Tim Bray, Antarti.ca Systems

- **Interactive Information Visualization in the Digital Flora of Texas** by John Leggett, Texas A&M University

- **2D and 3D Visualization of Large Information Spaces** by Carlos Proal, Universidad de las Americas-Puebla, Mexico

- **Ted Nelson's ZigZag** and How It Can Serve as a Data Structure or Map for Multi-Dimensional Constructs by Nicholas Carroll, Hastings Research

- **James Burke’s Knowledge Web** by Patrick McKercher

- **Collaborative Visual Interfaces to Digital Libraries** by Katy Börner et. al, Indiana University

- **Visualizing Knowledge Domains** by Katy Börner, Indiana University, Chaomei Chen, Drexel University and Kevin W. Boyack, Sandia National Laboratories
Tim Bray has 20 years of experience in software, almost all of it related to textual applications and search. In 1987 he managed the New Oxford English Dictionary Project at the University of Waterloo; in 1989 co-founded Open Text Corporation; in 1994 built one of the first commercially successful Internet Search Engines; in 1996-99, as an invited expert at the W3C, co-invented XML; and in 1999 founded Antarcti.ca Systems. Antarcti.ca's highly scalable Visual Net software powers in PubMed, Map.Net, and VCDeal map.
Open Discussion

- The Role of Visual Interfaces in Digital Libraries
- Self Introduction of Workshop Participants & Identification of Important Issues to be Addressed
The Role of Visual Interfaces in Digital Libraries

- Visual interfaces are a special kind of service to DLs.
- They exploit powerful human visual perception to ease information access and management, e.g., to find an appropriate collection, browse search results or collections, identify major experts, trends, etc.
- 3-D interfaces that connect information to space take advantage of spatial memory for mnemonic purposes.
- Collaborative interfaces support shared information and expertise access.
Top Ten Problems (C. Chen, 2001)

1. Visual Information Retrieval
2. Visual Information Exploration
3. Visual Information Organization
4. Accommodating Individual Differences
5. Supporting Collaborative Work
6. Information Visualization for Bibliometrics
7. Information Visualization for Scientometrics
8. Knowledge Tracking
9. Knowledge Discovery
10. Challenges in Designing and Deploying Tangible and Meaningful Visual-Spatial Metaphors in DL
Important Issues to be Addressed (last year's list)

- Creation of simple but rich visualizations with constant info density.
- Faster, incremental, scalable ordination, mapping, layout algorithms, better labeling (info saturation & relevance of words).
- How to extend 2D geographic representations to n-dimensional representations while preserving neighborhood relationships?
- How to build usable collaborative visual interfaces that connect users to data and expertise.
- Modularization of visual interfaces and interface protocols to connect them to diverse DLs.
- Identification of IV opportunities to make people see what they have never seen before.
- Create repository of IV software components, data sets & references to results.
- Making money with IVs. IV needs success stories!
Important Issues to be Addressed (this year's list)

- Improve interaction among programmers & librarians.
- Having the worlds knowledge at one’s fingertips.
- One data source, many perspectives.
- Designing personal baskets.
- Breaking walls between data sources.
- Federated searching – text, image, spatial data.
- Standardized metadata across fields.
- IV taxonomies may help to modularize IV systems.
- Usability.