

## **Demonstrations**

**Session Organizer:**

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### **Demo 1: Multiple Access and Retrieval of Information with ANnotations**

**Edward A. Fox**  
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MARIAN is a client/server online public access catalog system developed at Virginia Tech to support large numbers of users running on a variety of terminals and workstations, searching our million MARC record library catalog. It:

- implements vector retrieval with a forms-based interface,
- uses our specially developed object-oriented DBMS (LEND) which has a powerful "information graph" query language and minimal perfect hash functions,
- has clients for NeXTstep and Motif,
- runs as a distributed server with a thread assigned to each user session to increase concurrency on a small network of NeXTs,
- incorporates our algorithms to use objects and stopping rules for greater efficiency.

### **Demo 2: Project Envision**

**Edward A. Fox**  
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This system involves the development of a user-centered hypermedia database from the computer science literature. We will demonstrate several innovative screens for "digital library" access, that are the result of an ongoing program of user-interviewing, interface design, usability testing, and iterative refinement. Searching, retrieval, and display of ACM publications builds upon our work with the Large External object-oriented Network Database (LEND) and MARIAN systems, along with extensions to the Z39.50 information retrieval protocol.

### **Demo 3: Incremental Interface Design: A Prototype Graphical User Interface for Grateful Med**

**Gary Marchionini**  
**University of Maryland**

An important problem for established information retrieval systems is system upgrades to new platforms and interface styles. Although front-ends for online systems shield users from the intricacies of data structures and retrieval engine machinations, no interface can be totally independent of the underlying data and retrieval algorithms. Just as most programming efforts today go into maintenance rather than new developments, user interface efforts are increasingly given to upgrading character-based and graphical user interfaces (GUI). Designing interfaces under such incremental constraints offers interesting challenges to designers.

This demonstration presents the results of our efforts in the University of Maryland Human Computer