

Digital Libraries Colloquium Series

The future of libraries & information technologies

JUDITH GELERNTER

Improving Retrieval by Means of Ontologies and Visualization

Wednesday, January 14
11 a.m. to noon

3305 Newell Simon Hall
Carnegie Mellon University

ABSTRACT I will discuss aspects of my doctoral dissertation and current research that use semantic techniques to improve retrieval relevance. Already, some information retrieval systems employ word-relationship structures known as ontologies that are generally unseen by users. Ontologies serve to widen relevant results to make retrieval “smart.” My research offers a novel layout for an input screen that could enhance the ontologies’ indexing value.

Retrieval algorithms measuring the degree of result relevance are standard, as are result display lists that impart little of those relevance

measurements. I will give an example of one of our algorithms for result retrieval and offer an alternative model of result display that would give users more knowledge about which results are likely to be worth a click, ultimately saving time.

Confidence in our methods has brought about a collaboration with the e-science project GEON (Geosciences Network). We are excited about working with GEON because the future of library science will probably encompass storage and access to actual data as well as the records describing physical data that our catalogs historically have contained.

BIO Judith Gelernter is a postdoctoral fellow at Carnegie Mellon University. She is working on an evaluation of the pilot collection for Qatar Heritage Digital Library. She is doing research in the Language Technologies Institute on metadata generation and information retrieval on journal articles, and the prototype will be absorbed in the GEON project (www.geongrid.org) as a beta test site. Her current project in the Human Computer Interaction Institute is to design an interface to enhance joint exploration of an area. She received her PhD in information science in May 2008 from Rutgers University.