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Titel: Session III: Navigating Multimedia Collections

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Session III: Navigating Multimedia Collections

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As the Library of Congress moves to make massive amounts of multimedia items available over networks, it must consider the challenge these new digital collections present for navigation. Sound and image databases are particularly challenging to searchers. For example, how can a digital record be searched if it has no finding aid, structured text, or unstructured description of the record? What kind of global searching mechanism do libraries want and what kind of assumptions would they make about the dynamics that occur a search session?

Discussion during this session centered on what Library visitors are seeking. What are the expectations of the Library's digital collections audience? Studies have shown that 95 percent of the people using public libraries are browsing. At college and university libraries, 25 percent of the people are searching for known items. At special libraries, 50 percent are doing known-item searches. Because known-item searches tend to be focused, the challenge is to define the subject of an item. Users come into the Library with many preconceived notions about what they need. As their backgrounds vary, so will their definitions of the same subject and therefore the words used to search for items in a given category.

It is difficult to distinguish who the Library's users are. It is easier to define what the Library's users use. The book collections are most frequently used items; users primarily want English-language material published in the last five years. This usage pattern does not necessarily indicate the most important use of the Library's collections, however. Many quick visits account for the frequently used items, but the serious scholar mines the depths of the Library. These scholars often stay for months or years because the Library's collections are vital to their research. The Library must find a way to meet the needs of both kinds of visitors - the quick book search and the requests of the long-term scholar - and provide them with searching aids that support each researcher's needs.

One option is for the Library to support free text and structured searching, including dynamic relevancy ranking. Also, automatic clustering and dynamic classification as aids to searching should be tried. Those strategies will support people who are looking for a particular item and want to do searches that will point them to that item. For people trying to broaden their cultural understanding, interfaces that enable them to browse through the data and

choose items will be helpful. The intellectual process by which people use analogical thinking to synthesize data into knowledge must not be forgotten. People move from one subject to another when thinking or cummunicating. Similarly, electronic searching should be able to model this intellectual process.

Visual Navigation

As graphical user interfaces continue to overpower the text-only world, two-dimensional and three-dimensional viewing technologies are growing. More and more computer systems are based on point-and-click technology that lets the user navigate information visually. One participant brought up the concept of a "library in a cave". The virtual reality community has been developing the idea of a cave, where the user views presentations displayed in a three-dimensional environment. The question is: what should that experience include? Some of the features should focus on browsing, others on searching. The options for library navigation in an electronic world could go way beyond the mundane experience of viewing plain text on a computer terminal. Such creative interfaces expand the options of how students learn and how researchers find information. Libraries must consider experimenting in this area.

References to resources

As users navigate digital multimedia collections, the Library of Congress will not be the sole source of information. The Library must define a niche for itself as one of many sources of electronic information. Participants had two different visions of the Library's future role as an information guide. Some said the Library of Congress should be the first place people look for comprehensive answers. In such a situation, other libraries would feed information about their networked resources to the Library of Congress, which would act as an online directory of other libraries' holdings. Other participants felt the Library should not serve as a directory. Instead, they believed the Library of Congress should be the place users seek information after educating themselves about the options at the local level. Referral is going to be important, because a database with 10 million records is poorly set up to answer basic questions such as, "I'd like a book about Russian history", or "I need an introduction to physics". As a cost-saving measure, the Library could sent users to their local public libraries first, and let the local libraries then route them to the Library of Congress when necessary, just as it does now with written reference requests.

Technology levels

If the Library's larger goal is increased access to its collections, then it must focus on the technology level of its users and, consequently, select appropriate interfaces for its data to suit those levels. Ideally, the interface should open access to users at many technology levels. Users on the Internet probably cover four or five different technology levels; these must be taken into account. The library will have to make some tradeoffs between an interface that requires high-end hardware and connectivity, and an interface designed for an ASCII terminal and lower speeds. Sophisticated users are going to campaign for the interface that delivers the most without regard to hardware constraints, but the Library must be careful not to leave the majority of its clients behind.

The technology problem can also become a chicken-and-egg issue, one participant noted. If the Library becomes too preoccupied with the common denominator, it will not be in a position to push the state of library technology forward. Another participant added that the Library should digitize items at the highest resolution and disseminate its digital offerings using the best state-of-the-art technology possible within cost constraints. The Library could push industry to create better interface technology. The library community also must push users to get better hardware, software, and connectivity. If the Library could move slightly ahead of the common denominator, for example by using multimedia workstations with sound capability, public libraries and schools would be likely to follow and to aquire the compatible, new technology. The tangible payoff to schools and public libraries would be access to multimedia programs put out by the Library of Congress. The key is for the Library to store its data in the highest possible resolution, in a format that lends itself to reformatting and redistribution later. Aiming high does not guarantee that the resolution will be high enough. The best computer technology can become outdated in a year and a half. Libraries must hone their vision to see as far into the future as possible when choosing technology that will survive the transitions to newer and better versions. They also must choose technology that does not shut out users with older versions of systems.

The Library is aware of this tension and its sensitive to it. Obviously, within the Library of Congress, the user technology environment is controlled. But once the services move away from this controlled environment, not only is control lost but knowledge of the environment becomes sparse. Such tension may put real constraints on what services the Library can deliver via the Internet.

One resource the Library could exploit is the multimedia expertise of other organizations. Groups with digital organizational skills concerning particular collections could serve as proving grounds and educational resources for the Library of Congress. For example, the Defense Mapping Agency, the U.S. Geological Survey, and the National Geographic Society all have better map organization and digital experience than the Library of Congress. Cooperating

with others to use specialized skills and knowledge bases could save the library time and money. The Library could serve to focus the experts on a universal system for navigation of such collections.

Language Differences

The role of language has a strong effect on the successful navigation of a large database. If someone performing a search does not use the same terminology as the person indexing the material, the search might be meaningsless. Medical terminolgy is a useful example. If a query was based on "heart disease", for instance, the system might not find the reference because it was input using a more technical medical term.

The role of language will become very important because different groups will look at a library collection from very different perspectives. People will want to interact with the computer system in their own natural languages. Even if the system moves away from key-word searching and allows full natural-language navigation, the language of a particular user group must work with the retrieval mechanisms mapped into the system. Increasing access to collections will be dependent on successful retrieval using familiar language patterns.