Research and Discovery
Key Trends

Paul Gandel
The Electronic Home Library: 1959

...CLOSER THAN WE THINK!

College training can be had by anybody who truly wants it and can qualify academically. Money need not be a problem if a spirit of sacrifice is accepted. Other obstacles, too, can be overcome by real determination. Young men and women may become students and graduate at the University of your choice, and produce an academic background and a breadth of education that will be accepted almost without exception. It is a simple fact that there is no substitute for knowing something. It is a fact that knowledge ispower. It is a fact that knowledge can be the source of personal happiness and the source of personal freedom.

An electronic voice to accompany the images!
Trends...2007.....
Network Trends

Bandwidth is no longer a barrier!
Storage

- On the verge of being the next disruptive technology—numbers that are mind boggling!
- 400 gig portable drives and counting
- Flash memory
- We can now store
  EVERYTHING!
MyLifeBits –
The Man with the Perfect Memory

• Gordon Bell—recording his life digitally
• How much?
  – 1300 videos, 5,067 sound recordings, 42,000 digital pictures, nearly 100,000 emails, and 67,000 webpages. GPS and health data is also being stored.
• What happens to the information?
  – Access is restricted but Bell says he may pass it on to his children
• How much memory does a life need?
  – About 200 terabytes if we recorded video constantly
The Long Tail

• In a World that is unconstrained by Physical Limitations…
• Rule #1
Make Everything Available
Discovery and Content

“The new Internet economy resembles a planetary system where everything and everyone orbits around search in general, and around Google in particular.”


“There is way too much obsession with search, as if it were the end of the world. Google equals money equals search equals search advertising; it all gets combined as if this is the last great business model.” – Esther Dyson


http://www.nytimes.com/2007/01/01/technology/01search.html?_r=2&ih&emc=th&oref=slogin&oref=slogin
Everything is Miscellaneous
Weinberger

- In a Digital World.....
  - Disorder is order
  - Metadata is data
  - Our ways of organizing information in the future will be more adaptable, more flexible, and will have fuzzy borders
Aggregating Content in Unpredictable Ways

MASHUPS
A World of Individual Pipes and Channels

Yahoo Pipes
MS PopFly
Salesforce.com
Back to the Future?
Alexandria Revisited?

- The notion of a single library holding all the world’s knowledge was undermined by technologies like the printing press.
- Will the notion of any library holding enough information to be useful also be undermined by technology?
- The Web is now making the creation and sharing of information both an individual and social activity.
Library Trends

- **Dying technologies**
  - The integrated library system (as we have known it)

- **Stable but shifting technology**
  - Print publications [digital publishing; print on demand]

- **Moving beyond emerging technologies**
  - Rapidly improving display technology and e-reading devices
  - Increased portability (folding screens, micro-projectors, mobile social networking software)
  - Burgeoning interest in gaming software, coffee shops
  - Open source software increasingly employed by libraries
  - The Holy Grail: integrated search and access systems (beyond federated searching)
What Do We Know Today’s Library User?

Overview

• A number of recent studies have done re-examining the information seeking behavior of the library user
  – Sense Making the Information Confluence—OCLC/IMLS/Ohio State
  – Study of undergraduates at the University of Rochester by an anthropologist.
Library is Not the First Source of Information

• Human Resources
  – Parents
  – Friends, Colleagues
• Google
• Blogs
• Wikipedia
• Amazon.Com
• Electronic Databases

“The library is a good source if you have several months.”
Possible Response
Focus on Strategic Value

But How?

“We have lots of information technology. We just don’t have any information.”
Changing Role of the Information Specialist

Information professionals must infiltrate the areas of the disciplines and campus services where they can add value.
“Information needs will only be met if the information professional is willing to move into a new phase—that of playing an active part in the research team and of providing research colleagues with information relevant to their work”

(Foskett, 1963)
Cyber-Infrastructure Facilitators

The challenges of mastering one’s own scientific discipline generally preclude also becoming an expert in advanced cyberinfrastructure, and this situation creates the need for the education and training of a new breed of information processionals called “Cyberinfrastructure Facilitators” or CI-facilitators. These CI-facilitators will possess both the capabilities to innovate with current information infrastructure and the metacognitive skills to master new information infrastructure as it emerges.

from NSF cyber-infrastructure grant proposal Liddy, Stanton, Gandel, Oakleaf Cogburn, Lankes
Information Fluency in Teaching and Learning

- Integrate into the classroom—become part of the “team.”
- Information fluency part of the “core” courses in every discipline—embedding information fluency directly into the curriculum
- Information fluency not just a “buzz word” but a meaningful set of concepts tied to lifelong learning and strategies for Personal Information Management (PIM)
Questions?