Creating The Library’s Future

Dr. Norman Jacknis
Westchester Library System Board
President, Metropolitan New York Library Council
Senior Fellow, Intelligent Community Forum
October 7, 2014
The Relevant Trends
Technology Trend #1

Digitization Of Written, Oral and Visual Materials
Digitization of Materials

- Delivery via e-readers AND smart phones, web, etc.
- Massive worldwide effort to digitize material on paper and other non-electronic media
  - Digitization of other libraries’ collections expands the collection you can offer your patrons with a limited increase in space
- Combined with many media that are born digital
- The end of the self-contained book
  - Infinite variety of mashups
“Big Data” Analytics: Library Cloud Meta-Data Project

LibraryCloud is a metadata server that gathers library metadata from multiple institutions and makes it available through open APIs and as Linked Open Data. The aim is to make everything libraries know available to the full Web ecosystem.
Virtual Views Of A Library: ShelfLife with Shelf Rank
Semantic Web

1792-1800

1600 Pennsylvania Ave.

James Hoban

White House

President Obama

Constructed

Address

Designer

Resident

Document

http://en.wikipedia.org/wiki/White_House
Technology Trend #2

Artificial Intelligence & Robotics
Speech Recognition

- Most well known current example: Apple Siri
  - Also Google and Amazon Yap; Nuance, Datria, etc.
Artificially Intelligent Guide

SGT STAR: Hello. I'm SGT STAR, the Virtual Guide for goarmy.com. My training allows me to answer almost any question about what life is like in the US Army. Interacting with me is simple. Just type in your question just as though you were chatting with a live recruiter.

Here's More:
- SGT STAR’s Mobile App
- Log into My GOARMY Account

Type your question here.
Ask A Librarian
Robots As Human Aides
Robotic Warehouse Workers
Technology Trend #3

High Quality
Visual Communications
Non-Verbal Communications

- 93% of communication is nonverbal
  - Especially critical in establishing trust between people
  - “Seeing Is Believing”

- We process visual information 60,000 times faster than text

- Mehrabian's communications research
  - 7% of message pertaining to feelings and attitudes is in the words that are spoken.
  - 38% of message pertaining to feelings and attitudes is paralinguistic (the way that the words are said).
  - 55% of message pertaining to feelings and attitudes is in facial expression.
Corporate Video-Conferencing Is Rapidly Increasing

Within the next couple of years, about two thirds of businesses will have adopted some kind of telepresence solution – Forrester
Extending The Library Through Video

- Meetings of focused groups (SIGs) from many library/branch locations
- Literacy training & ESL; public health; etc.
- Each library can become a “Little City Hall”
Holographic-Like Telepresence
It’s Like Being There

3D HOLOGRAPHIC LECTURE
presented at the ASE 2013
in Minneapolis, MN, July 1st
by
Partho Sengupta
MBBS, MD, DM, FASE
Technology Trend #4

Ubiquitous Internet
Some Of The Ways This Is Happening

- The “cloud”
- Internet of Things
  - sensors
  - video/audio surveillance
- Wearable technology
- Non-traditional user interfaces
  - Going beyond the mouse, the typewriter keyboard and even the desktop/laptop display screen
Augmented Reality
Get More Information About What You’re Looking At
WordLens
The Mouse-less Mouse
Any Surface Can Be A Keyboard

Celluon Celluon Magic Cube Laser Projection Keyboard and Touchpad
Sears Item# SPM811100601 | Model# RESE1004831
Really — Any Surface Can Be A Keyboard!
Any Surface Can Be A Display Screen
Augmented Product Displays
You Can Move Video On Walls
Car Window As Display Screen
Fin Uses Your Finger For Remote Control
Remote Control By Moving Your Arms
Leap Motion Watches Your Hands
No-Touch Input: Tobii Eye Tracking
Google Glass Combines Reality And A Virtual Display
Wireless Contact Lens Display
Technology Trend #5

Billions Of People Who Produce And Consume Content — The “Pro-Sumer”
You Can Make Your Own Books

blurb
Beautiful books. Made by you.

Create.
Publish.
Sell.

Take Control with Independent Publishing

With Amazon's independent publishing services you can reach millions of readers worldwide and keep control of your work. It's fast and easy to publish your print book with CreateSpace, your digital book with Kindle Direct Publishing and create an audiobook with ACX.

Publish to Kindle
Publish your book for free and reach millions of readers.

Earn royalties of up to 70%. Available for sales to customers in the U.S., U.K., Germany, and many more countries.

Publish quickly. Easily publish in just minutes and have your book appear on Amazon sites within two days.

Distribute globally. Publish once and sell worldwide on Amazon sites. Easily publish your book in multiple languages.

Publish to the Kindle ecosystem. Make your book available for all Kindle devices and free Kindle reading apps.

Get started
Readers Add Tags To The Library Catalog – And Greatly Enhance It

“In an Internet world, hierarchical classifications do not necessarily work best”

*Ontology is Overrated: Categories, Links, and Tags – by Clay Shirky*
Aarhus: User Involvement

The Clapping Screen in the Exhibition Lab made it very simple for the users to affect the physical space of the library. The users like to have something to do, and they like to contribute with something, but it should not be too troublesome, and it should bring about an instant result.

http://www.youtube.com/watch?v=TpFO_L_jA1c
Aarhus: Music Lab

The Music Lab became a place of production where the users recorded their own music and shared it with each other.
Aarhus: Interactive Floor

The interactive floor, the iFloor, in the Literature Lab. Via SMS and e-mail, the users could ask questions to the iFloor for other users to answer via SMS and e-mail. In order to see and answer the questions, the users would have to be present at the iFloor, be physically active and co-operate with other users to achieve the optimal experience.
3D Printing

Sources: Stratasys, 2011; European Air Defense System
Even body parts ...
3D-printed titanium lower jaw implant
3D Printer In Long Island Library

Libraries bringing new technology to users
Westport Library Maker Space

a place to imagine, design, and make
Public Libraries As Entrepreneurial Spaces

The public library becomes the host and corporate librarian for entrepreneurs and other innovators

- Helping to conduct market research, identify opportunities...
- The librarians organize the vast amount of free training and courses online
Long Tail In Books And Products Challenges Companies & Libraries

Only the most popular:
Wal-Mart, Blockbuster retail stores

Everything else:
Amazon, Netflix, iTunes, eBay
We Are Only In The Early Stages Of The Internet’s Development

Not yet today, but in ten or twenty years — A world of high quality visual communication and easy collaboration everywhere, enabling anyone anywhere to virtually meet anyone else anywhere else
Thinking About Libraries
In This Future World
# The Role Of The Librarian

<table>
<thead>
<tr>
<th>Traditional Role</th>
<th>Future Role?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase materials for a “collection”</td>
<td>?</td>
</tr>
<tr>
<td>Organize those materials through a catalog</td>
<td>?</td>
</tr>
<tr>
<td>Refer patrons to materials in the collection</td>
<td>?</td>
</tr>
</tbody>
</table>
What Do You Acquire For Your Collection?

- Text and **not text**
- Stored locally and "somewhere out there"
- Printed and **digital**
  - Material that is born digital
  - or digitized if not born digital
The Warnings Have Been Around For A Long Time

“What are the implications of all for this for the future of public libraries? ... The answer is that while we cannot be certain about the future for our services, we can and should be developing a vision which encompasses and enriches the potential of the Internet. If we do not do that then others will; and they will do it less well.”

- 1995, 61st IFLA General Conference - Conference Proceedings - The library of the future by Chris Batt Croydon LBC

What “others” are providing library services and how well are they doing?
Does OCLC Provide Library Services?

OCLC WorldCat is a global network of library-management and user-facing services built upon cooperatively-maintained databases of bibliographic and institutional metadata.
Does Google Provide Library Services?

Google Book Search

Search for "behavioral economics"

Books

Showing: All books

Books 1 - 10 of 9100 on behavioral economics. (0.09 seconds)

**Behavioral Economics**
by James Allison - Business & Economics - 1983 - 223 pages
Includes indexes.
No preview available - About this book - Add to my library - More editions

**Advances in Behavioral Economics**
by Colin Camerer, George Loewenstein, Matthew Rabin - Business & Economics - 2004 - 776 pages
This book assembles the most important papers on behavioral economics published since around 1990.
No preview available - About this book - Add to my library - More editions

**Beyond Greed and Fear: Understanding Behavioral Finance and the Psychology ...**
by Hersh Shefrin - Business & Economics - 2007 - 368 pages
Shefrin argues that financial practitioners must acknowledge and understand behavioral finance—the application of psychology to financial behavior—in ...
No preview available - About this book - Add to my library - More editions

**Behavioral Dimensions of Retirement Economics**
by Hersh Shefrin - Business & Economics - 1990 - 289 pages
Does ibiblio Provide Library Services?

ibiblio > Collection Index > Social Sciences > Economics

GetWiki
GetWiki is a wiki document collaboration and discussion site for a wide variety of intellectual topics in the Humanities and Sciences, from Metaphysics to Metadata, Philosophy to Technology. The wiki runs on the latest GetWiki collaboration software.

Online Burma/Myanmar Library

Philosophical Issues in Economics
Site devoted to exploring philosophical issues in economics. Material based on a Cambridge University course with the same title - Philosophical Issues in Economics.

The Euro- Information Website
Accurate and current information about the European Economic and Monetary Union single currency - the Euro.
Is Amazon.com A Catalog With Content?

The Elegant Universe: Superstrings, Hidden Dimensions, and the Quest for the Ultimate Theory (Hardcover)
by Brian Greene (Author) "Calling it a cover-up would be far too dramatic..." (more)
Key Phrases: familiar extended dimensions, three extended spatial dimensions, sliding clock, Edward Witten, Nobel Prize, John Wheeler (more...)

List Price: $49.95
Price: $13.57 & eligible for FREE Super Saver Shipping on orders over $25. Details
You Saved: $35.38 (32%)

In Stock.
Ships from and sold by Amazon.com. Gift-wrap available.

Want it delivered Monday, August 4? Order it in the next 18 hours and 33 minutes, and choose One-Day Shipping at checkout. See details

› 61 used & new available from $9.48
Is Amazon.com A Reference Librarian?
Does “Library Thing” Provide Library Services?

Library Thing as a social network for reference and cataloging.
Not Yet. But The Future Library Will No Longer Be Just A Building

- Every space in the community should be considered to be virtually part of the library
- The library should be everywhere
- Access to a national, maybe international, fluid combination of materials
<table>
<thead>
<tr>
<th>Traditional Library Role</th>
<th>Future Role?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase materials for a “collection”</td>
<td>Create and be catalyst for new knowledge and culture from printed and electronic sources which are local or anywhere on the Internet</td>
</tr>
<tr>
<td>Organize those materials through a catalog</td>
<td>Encourage patrons to tag all material so that they have a a meaningful way to quickly and accurately find what they want in search engines</td>
</tr>
<tr>
<td>Refer patrons to materials in the collection</td>
<td>Provide 24 hour a day virtual video reference librarian services, especially in areas of unique knowledge</td>
</tr>
</tbody>
</table>
Thank You!

Dr. Norman Jacknis  
+1 (914) 930-4840  
norm@jacknis.com  
Blog: njacknis.tumblr.com  
Twitter: @NormanJacknis