

From SLIS to OCLC:

An Alumnus Reflects on His Career and the Evolving Profession

- Andrew K. Pace
- Executive Director
- Networked Library Services
 - OCLC



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1994...somewhere in Pennsylvania



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1994: A very good year

- Nirvana plays its last concert in Munich
- O.J. Simpson is arrested after a long televised car chase
- Baseball strike forces cancellation of the World Series
- “Friends” premieres on NBC
- Michael Jackson and Lisa Marie Presley confirm rumors that they are married

Also in 1994...

- Apple Computer, Inc. releases the first Macintosh computers to use the new PowerPC Microprocessors
- Redhat Linux 1.0 released
- World Wide Web Consortium was founded
- The MARC record turns 30



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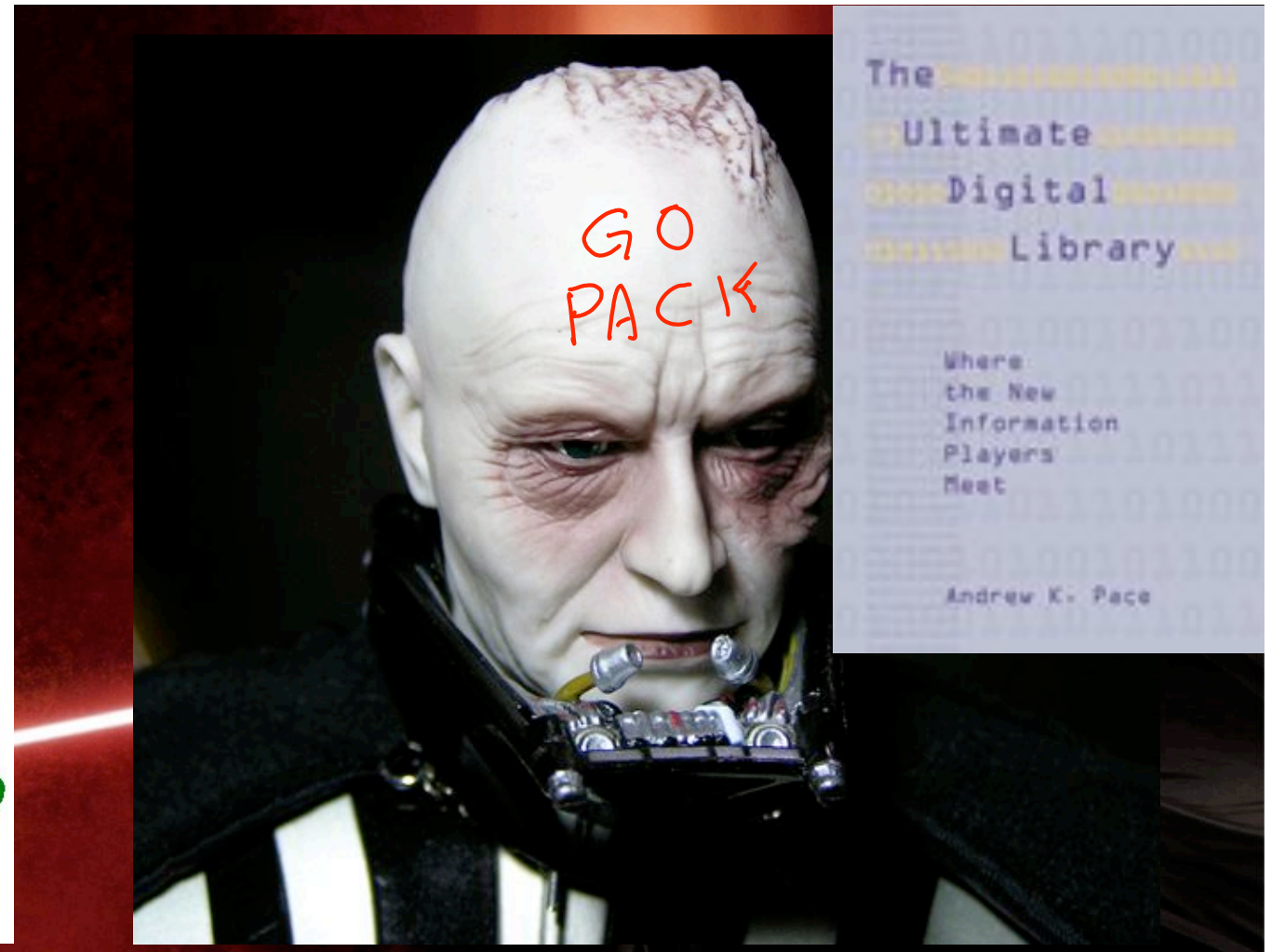
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CUA Nostalgia

- Library & Information Science Library (LISL)
 - Graduate Library Pre-Professionals
 - The faculty, adjuncts, and staff
- Elizabeth Aversa
 - J.W. Coffman
 - Tula Giannini
 - Ingird Hsieh-Yee
 - Jean Preer
 - Ken McGill
 - Barry Wheeler
 - Diane Kresh
 - Paul Koda
 - Debbie Ozga



There's a Dark Side?



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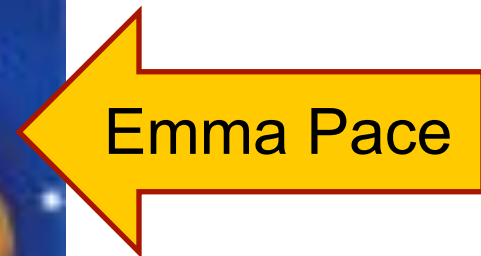
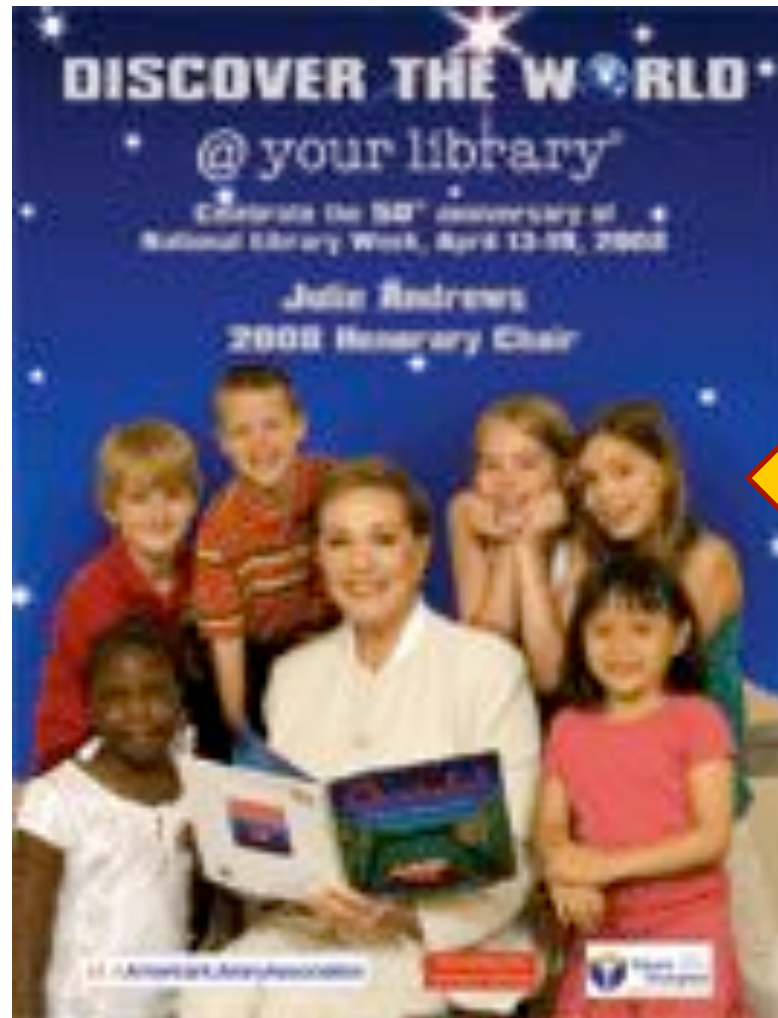
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A few of my favorite things...

- “A Guide to the Bookarts and Book History on the WWW” (CUA 1996)
- Doubled the LISL bookarts collection
- First website for CUA SLIS Alumni, ably taken over by Martin Kalfatovic
- First Intranet web page at Innovative Interfaces
- NCSU: E-Matrix (ERM), Endeca, and many other digital library initiatives
- Over 75 presentations, talks, and keynotes
- Over 100 articles and columns



Proud papa



“It’s the ‘OPAC Sucks’ Guy”



- “There’s so much talk about portals, metasearch, learning objects—the list goes on—that we have been distracted from the fact that the OPAC still sucks.”
 - 2005 ALA Mid-Winter Top Technology Trends Panel
- In a gentler mood, I also called customizing the OPAC “putting lipstick on a pig” but few people remember that one or attribute it to Roy Tennant who was quoting me in his column
- My mother is immensely proud of my additions to the library technology lexicon.

I much prefer....

- “the Dis-integrated library system guy”
- “the Endeca library catalog guy”
- “the metasearch guy”
- “the e-book guy”
- ...or even “Hectic Pace”



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“Doing the Catalog since 1994...”

- **1994:** Converted NOTIS Aladdin Catalog guides at CUA from paper to HTML
- **1996-99:** Product Manager, WebPAC, Innovative Interfaces
- **1999-2005:** ~~DRA, Sirsi~~, SirsiDynix Web2 Administrator, NCSU Libraries
- **2005-2006:** Project Manager, NCSU Endecca Catalog
- **2006-2007:** Doing presentations about the new faceted catalog
- **2008- :** examining the management iceberg underneath the public catalog

I am a lover of euphemism

Stu's Views

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Counselor! Kindly refer to it as "murder," not "thinning out the herd."

- "Multi-tasker"
One with a short attention span.
- "Generalist"
One who knows less and less about more and more until he knows nothing about everything.
- "Thought leader"
One who accidentally says something seemingly radical that the blogosphere labels a new meme.



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Libraries 1.1 in a Patron 2.0 World: where we are...where we're going



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Library 2.[Gr]0[an]

- Do good better
- Give the people what they want
- Be where the user is
- Make it more efficient
- Rinse and repeat

Words to live by...

“The worst level of Internet service that users will accept is the best level of service they have ever seen.”

-paraphrased from Ron Dunn,
International Thomson Publishing
National Online 1999



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Pace's Library 2.0 (Beta)

- Do good better
 - The online catalog, Semantic Web
- Give the people what they want
 - Self-checkout, personalized service, better spaces
- Be where the user is
 - RSS, MySpace, Facebook, Instant Messaging, Second Life
- Make it more efficient
 - Self-checkin, RFID, mass digitization, FAST (Faceted Access to Subject Terms), RDF, SKOS (Simple Knowledge Organization Systems)
- Rinse and repeat

Pace's Library 2.0 (Beta)



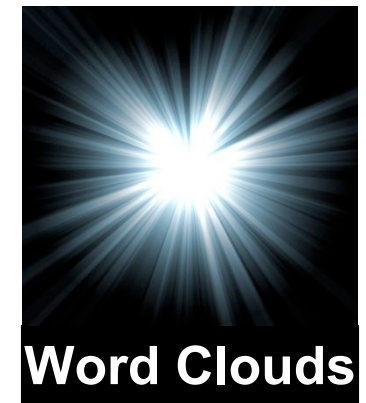
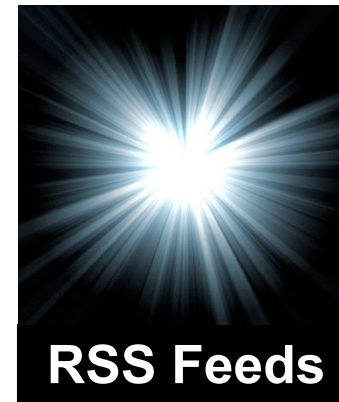
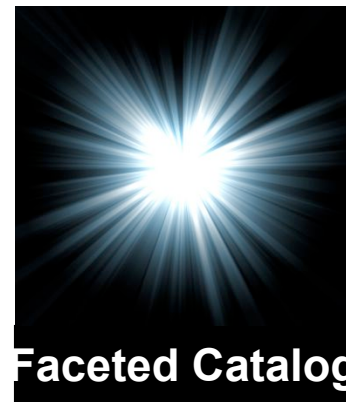
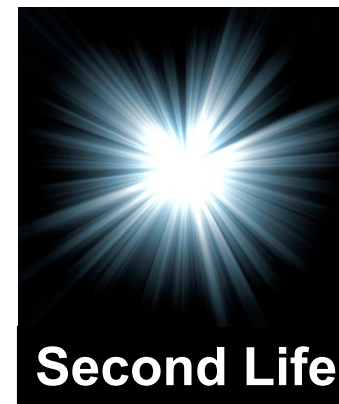
- **Collections 2.0**
 - Mass digitization, institutional repositories, e-books
- **Technical Services 2.0**
 - METS, MODS, SKOS, RDA (?!?!), semantic web, special collections processing
- **Access Services 2.0**
 - Self check-out and self check-in, materials management routing, compact shelving, off-site storage
- **Library Education 2.0**
 - Business, computer science, management, advanced subject specialty, gaming, social network navigation
- **Spaces and Interfaces 2.0**



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IT + Manager+ 1 oz. Free Time + browser =



A Prescient Example



"Librarianship as it is practiced: a failure of intellect, imagination and initiative"

Maurice B. Line
Interlending & Document Supply (Reprint)



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Nothing New Under the Sun



"Trying to hold on to unused publications that libraries no longer have room to house, having theological arguments about the contents of catalogue records, and indulging in the numerous other irrelevant, inappropriate or trivial activities of which librarians are so fond, with their unerring eye for the inessential."

From an
address given
in **1983** !

"Librarianship as it is practiced: a failure of intellect, imagination and initiative,"

Maurice B. Line



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Pessimist words to live by...

“Pessimist: One who, when things are never so bad as they seem, chooses the worst of two evils. chooses both.”

— Oscar Wilde



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Intellect, Imagination, and Initiative

- Frankly, I think this is the library era that we are currently experiencing....BUT....
- It's time to get on the bus or get off at the next stop

Collections 2.0
Technical Services 2.0
Access Services 2.0
Library Education 2.0
Spaces & Interfaces 2.0



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Collections & Technical Services 2.0

- Rumors of MARC's death have been greatly exaggerated.
- Nevertheless, the "cult of MARC" could keep us from seeing or moving ahead

- New *socially-based* non-standards are over-shadowing disciplined content descriptions
- Nevertheless, new *community-of-interest-based* content standards are emerging to replace AACRx (DA(DCRM, CSDGM)
- Subject content
 - **R**esource **D**escription **F**ramework
 - **S**imple **K**nowledge **O**rganization **S**ystems
 - **O**ntology **W**eb **L**anguage



Technical Services 2.0

- It's not *MARC* that's killing us, it's the *record*
- Use of derived smart linkages through the semantic web requires the ability to transfer bits, not records
- The pursuit of the perfect record must end

Collections 2.0

- Library business intelligence based on large collections of management system data
- Libraries excel at sharing resources between patrons but have management systems that preclude them from sharing meaningful data with each other.



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What the catalog *could* be...

- The catalog (semantic web) should:
 - recognize clusters of knowledge
 - show lineage of publications, authors
 - make previously unknown connections visible
 - show authoritativeness of sources
 - show popularity/use

Timothy Burke

(Bibliographic Control Working Group, March 2007)

Access Services 2.0



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Access Services 0.1



Access Services 2.0



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Access Services 2.0

Thank you Lori Ayre for these images and information



University of Utah

- \$20/item: public shelving
- \$4/item: compact storage and Automated Retrieval System (ARS)

University of Chicago

- \$67M: public shelving
- \$18M: off-site, non-automated
- \$36M: compact shelving & ARS



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Library Education 2.0



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Once upon a time....

penmanship was a required course.

Italian language - Grammar.
458
R 735
Rosteri, P. S.
New Italian grammar
Ed. 4 eml. Florence, 1873.
For other editions see author card.

Latin language - Orthography.
929.4
Sch85
Schulze, Wilhelm.
Jur geschichte lateinischer
eigennamen. 647 p.
Q. Ber. Weidmann, 1904.
Goettingen-Koenigliche
Gesellschaft der wissen-
schaftlichen Philologisch-his-
torische Klasse. Abhand-
lungen, Neue Folge v. 5 (pt 5)

937
C548
Clark, Frederick Wil
Influence of sea
on the history of the
Roman republic.
XI + 112 p. 8°
Menasha (Wis.), Coll
ate pr. 1915.
Univ. of Chicago Ph.
thesis.



LE ARTS Art -- Granada
23.3
39.2
Calvert, W. Frederick, 1878-
Granada & the Alhambra, a
brief description of the an-
cient city of Granada, with
a particular account of the
Moorish palace.
XXXVI + 38 + 3. p. 460 pl. 12°
Sond. Same, 1907.
(Spanish series.)



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Subject heading used in card

Higher education and state

Geographic location may

Call number under on High And St

USE re under Hand Educat rather Educa PL Har

Use Call Number to locate book on shelf

Publisher's location and name

AUTHOR CARD

RT 73 .B4 1978
 Bevis, Em Olivia
 Curriculum building in nursing: A process/ Em Olivia Bevis. - 2nd ed.
 Saint Louis: The C.V. Mosby Company, 1978.
 xi, 242p.: ill.; 26cm
 Includes bibliographical references & index

Edition
Date of Publication

RT 73 .B4 1978
 Bevis, Em Olivia
 A process/ Em Olivia Bevis. - 2nd ed.
 Saint Louis: The C.V. Mosby Company, 1978.
 xi, 242p.: ill.; 26cm
 Includes bibliographical references & index

SUBJECT CARDS

RT 73 .B4 1978
 NURSING - STUDY AND TEACHING
 Bevis, Em Olivia
 CURRICULUM PLANNING
 Bevis, Em Olivia
 Curriculum building in nursing: A process/ Em Olivia Bevis. - 2nd ed.
 Saint Louis: The C.V. Mosby Company, 1978.
 xi, 242p.: ill.; 26cm
 Includes bibliographical references & index.

1. Nursing - Study and teaching.
 2. Curriculum planning. I. Title.

Subject Headings under which this book can be found



Administration 2.0

“The staff will change, or
the staff will change.”

-anonymous library administrator

More words to live by...

“The days of the ‘accidental systems librarian’ are over and we need to start taking our technology skills more

For Librarians:

- Programmers
- Website Developers
- Interface specialists
- Usability experts

seriously. All library workers need to be effective users of technology. Period. On top of that, we need strong technologists running our networks, administering our databases and, yes, designing our software.”

For Technology Pros:

- Network Engineers
- Desktop Engineers
- Server Administrators
- Technical Support Staff
- Programmers / Developers

-Lori Ayre, Library Consultant

Vendor 2.0

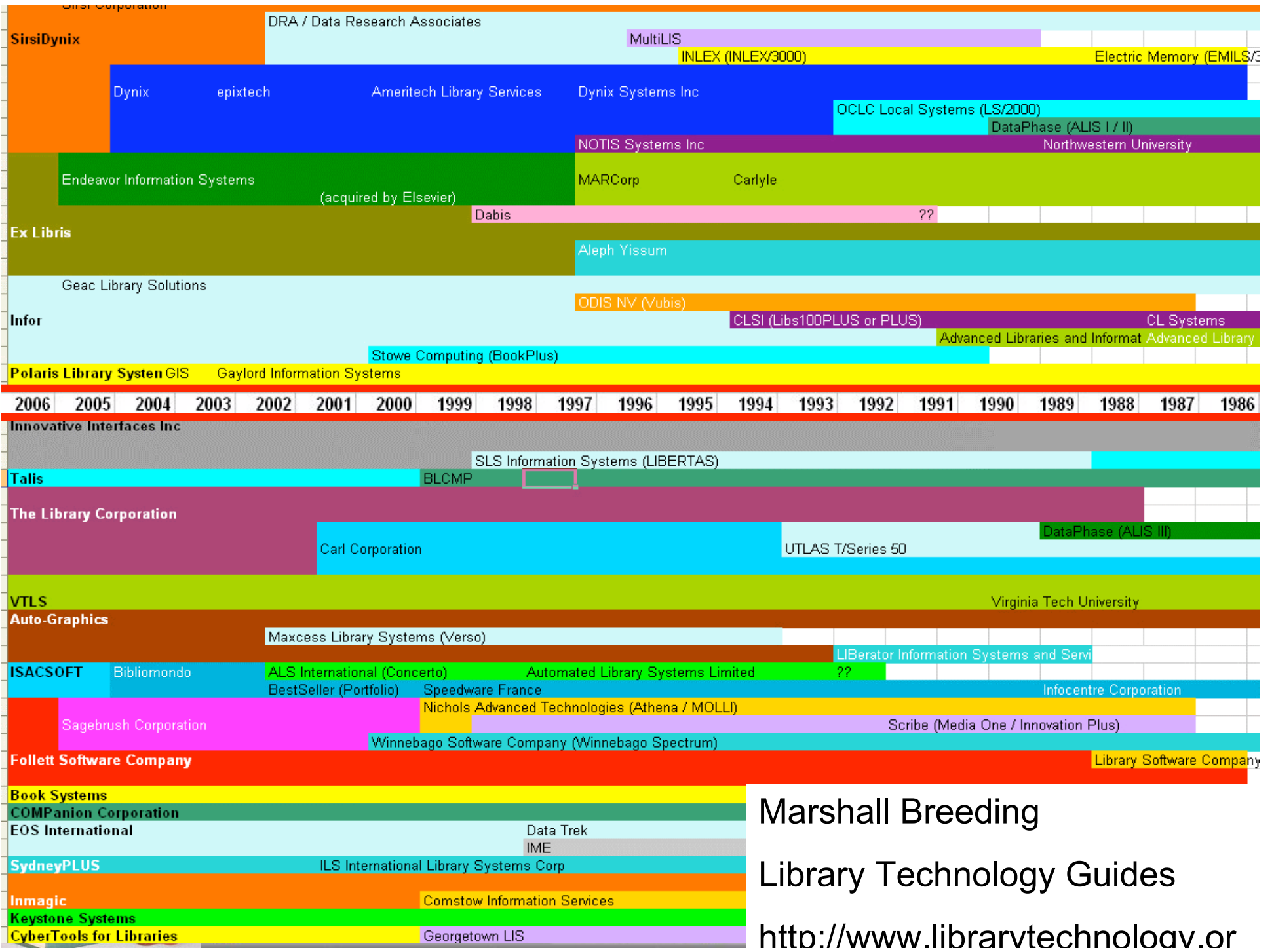
vs.

Web 2.0



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Marshall Breeding
 Library Technology Guides
<http://www.librarytechnology.org>

Keystone Systems, Inc.



CyberTools.
for Libraries



equinox
software

SirsiDynix



focus on essentials

extensity

BookSystems®



INNOVATIVE
INTERFACES



OCLC™
The world's libraries.
Connected.

POLARIS
LIBRARY SYSTEMS

Follett
Software
Company
A Follett Corporation Company

SydneyPLUS



ISACS^{FT}

Ex Libris



auto-graphics inc.

LIBLIME

CARE
AFFILIATES

COMPanion®



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Jotspot

Frapprr! Beta

jeteye

dabble db

Writeboard

SHOUTWIRE

iKarma Beta Building Your Reputation

KaNooodle

AirSet

tech.memeorandum

CalendarHub

ABC

clipmarks

wayfaring

gOFFICE

F

Suprglu™ PIECING YOUR WEB TOGETHER

pando

zigtag

Findory

backfence

clipmarks

wayfaring

gOFFICE

AllPeers

OTb

Rallypoint

Zoozio

blogbeat

Ziggs

zoto

vSocial

Boltfolio

wink

riya

Audible Wordcast

Opinity

reddit

measuremap

gumshoo

bluepulse

imvo BETA

green

STREAMLOAD Freedom for Your Digital Lifestyle

Ta-da Lists

FeedSky

jellyBarn.INC

FeedTier

phanfare

WIKIPEDIA

Fruitcast

PubSub

native text

CONGOO BETA

PODZINGER BETA

RSS MAD

FeedTier

phanfare

WIKIPEDIA

Fruitcast

PubSub

dPolls

flickr

Ning

Ookles

Strongspace

zoominfo

CASTPOST

WIKIPEDIA

yubnub

AC

BLOOP BETA

ProjectSpaces

FeedBurner

Bloglines

purevolume.com

FOTOLOG

ourmedia

Alpha

gabb.com

Gcast

blinkx

openomy

Yub.com

Spot Runner

myspace

NewsAlloy

Allmydata.com

chatsum

PANDORA

looklater

ajchat

ajchat

Jambo

ROLLYO

ClipShack

WebJay

PLAZES

Noodly

30 BETA

wondir

diigo

box

Jots

Xdrive

vizu

digg

del.icio.us

omni drive

AlmondRocks

Tagyu

30 GIGS

writely

Simpy

Gtalkr

TRUVEO

egoSurf

mozy

Quimble

pegasus

remember the milk

SQUIDOO

picturecloud

newsvine

Clipfire

mozy

Basecamp

pegasus

remember the milk

SQUIDOO

picturecloud

Lexxe

LOOKSTER

PXN8

measuremap

facebook

Netvibes

goowy

My Videokaraoke

yelp

Smarmets

inform

magnolia

ShoZu

urickr.com

feedma

mercora MusicSearch

Meet With Approval

Meet With Approval

HOMEPORTALS

Spin spy

talis

“Versus” is (perhaps) unfair

- Vendors are living in the same 2.0 world as libraries
- 2.0 in the business world means equity buy-outs, mergers and acquisitions, vertical integration, cost-cutting, and (too often) unhappy customers

“You can please some of the people some of the time, and others never at all.”
-Andrew’s Mother



Library Spaces 2.0



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Library Interfaces 2.0



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The truth....

```
<Searching: Univ. of Memphis Catalog -- Holdings Display>
Find... Options... Locations Backup Startover Quit Help...

CALL NUMBER: x

TITLE: American literature [Periodical] a journal of literary
       history, criticism and bibliography.

LIBRARY HOLDINGS AT <Press L to see other locations>
LOCATION: MCWHERTER LIBRARY PERIODICALS
CALL NUMBER: Periodicals Main
STATUS: Currently Received

HOLDINGS: MAIN LIBRARY Has Bound: v.1 (1929) thru v.26 (1954), Microfilm:
v.27 (1955) thru v.71 (1999), Bound: v.56 (1984) thru v.57 (1985)
v.59 (1987) thru v.72 nos 1-2 (2000), Unbound: To Date. Missing:
v.68 #2. Analytical Index: v.1-30.

End of information for this holding.
Press RETURN to search the database.
```



Words to slowly die by: “Next Gen” / 2.0

- They are adjectives for ‘Libraries’ or ‘Systems’
- Not our patrons—they are already there



Internet will impact the world in



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Web

[Electronic Medical Records \(EMR\)](#)
NextGen's EMR (Electronic Medical Records system) help medical practices manage their data. [www.nextgen.com/](#) - 43k - [Cached](#) - [Electronic Medical Records - CONTACT](#) - [www.nextgen.com/](#) - [COMPANY INFO](#) - [www.nextgen.com/](#) - [Join Our Staff](#) - [www.nextgen.com/](#) - [More results from www.nextgen.com/](#)

[Next Generation - Interactive TV](#)
 Next Generation Interactive TV and Stuntman, the companies expanding into a multi-team, multi-genre production. [www.next-gen.biz/](#) - 45k - [Cached](#) - [More results from www.next-gen.biz/](#)

[Next Generation - Interactive TV](#)
 Image As **Next-Gen** exclusively their support from the show, [www.next-gen.biz/index.php?9,2007](#) - [Cached](#) - [Similar pages](#) [[More results from www.next-gen.biz/](#)

[Next Gen Home Experience](#)
 The annual **NextGen** demonstration multi-faceted must see showcase of [www.nextgenhome.com/](#) - 17k - [Cached](#)

[NextGen College Investing Plan](#)
 Invest and save for future college costs (FAME), along with Merrill Lynch private [www.nextgenplan.com/](#) - 14k - [Cached](#)

[The NextGen Librarian's Survey](#)
 Companion site for The **NextGen** Librarian's Survey. [www.lisjobs.com/nextgen/](#) - 3k - [Cached](#)

[NextGen on LibraryJournal.com](#)
NextGen. My MySpace Comment - What's Wrong with LIS? — 12/15/2007. [www.libraryjournal.com/community/nextgen/](#)

Search

[From res...](#)

[From Chad](#)

[From pinone](#)

[From pinone](#)

From Computer Desktop Encyclopedia © 2006 The Computer Language Company Inc.

iTunes

You Are The Sunshine Of My Life
 Stevie Wonder
 2:18 / -0:36

Source	Name	Time	Artist	Album	Genre
Library	28 I Feel Fine	2:18	The Beatles	1	Pop
Podcasts	29 I found out	3:37	John Lennon	Plastic Ono Band	Rock
Videos	30 I Should Have Known Better	2:44	The Beatles	A Hard Day's Night	Rock
Party Shuffle	31 I Think I Love You	2:54	David Cassidy		
Radio	32 I Wanna Be Your Man	1:47	The Beatles	Anthology 1 (Dis...	Rock
Music Store	33 I Wish I Was A Single Girl ...	2:29	Eva Cassidy	Time After Time	Folk
Rastaman Vibration	34 Imagine	3:04	John Lennon	Imagine	Rock
u2 playlist	35 Kathy's Song	2:47	Eva Cassidy	Time After Time	Folk
90's Music	36 Let It Be	3:50	The Beatles	1	Pop
My Top Rated	37 Light My Fire	7:08	The Doors	The Doors	Rock
Recently Played	38 Long Ago and Far Away	2:21	James Taylor	Best Of	Rock
Top 25 Most Played	39 Me & Bobby McGee	4:34	Janis Joplin	Janis Joplin's Gr...	Rock
Irmalee List	40 Midnight At The Oasis	3:47	Maria Muldaur	Super Hits Of Th...	Rock
	41 Mockingbird	3:51	Carly Simon	The Best Of Carl...	Rock

Equalizer

On Manual

+12 dB
0 dB
-12 dB

Preamp 32 64 125 250 500 1K 2K 4K 8K 16K

70 songs, 4.3 hours, 263.3 MB

Not another next-gen catalog presentation

<http://www.lib.ncsu.edu/endeca/presentations>

More words to live by...

“Things are never so good
that they can’t get better.”



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Nothing new under the sun (part 2)

- Books are for use
- Every reader his or her book
- Every book its reader
- Save the time of the reader
- The library is a growing organism



3.0?

“[There is] a major theme of web 2.0 that people haven't yet taken data's step ~~back~~ ^{forward} about data and who owns and controls, or gives the best access to, a class of data.”

- Tim O'Reilly, April 2007



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Network-effect

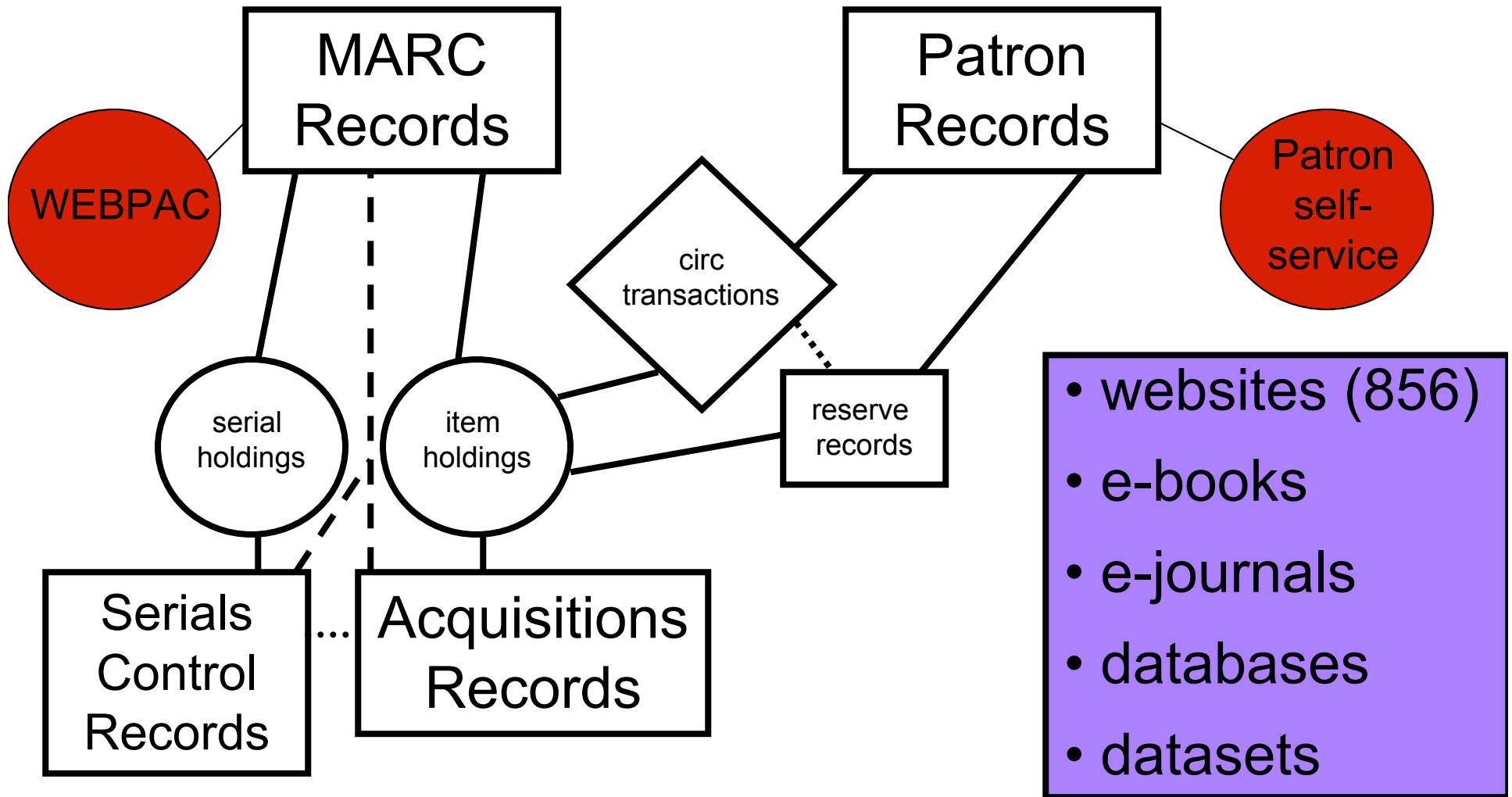
- Who owns the data?
- Who aggregates the data?
- Who has the best network-effect in the business of x , y , or z ?
- Where do you build services that get better with a critical mass of use?

From *creation* to *delivery*

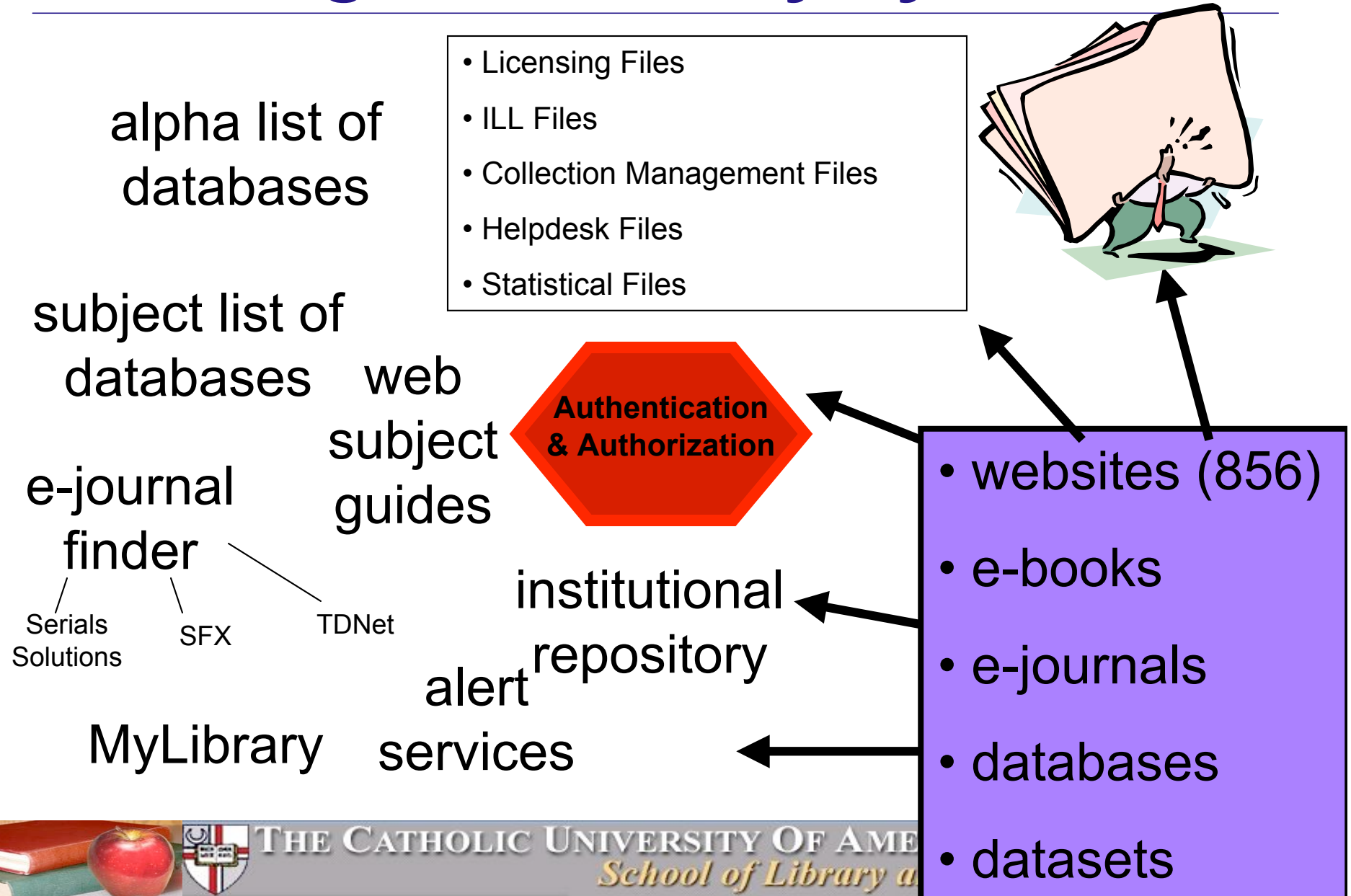
- **Creation and editing:** let's all confess that the present tools are grossly inadequate
- **Collecting and storing:** an ultimately uninteresting problem of physical engineering and technological system administration
- **Indexing:** the most interesting and most challenging part of the problem, IMO
- **Discovery:** distractingly sexy
- **Delivery:** the cart before the four horses listed above



Classic Integrated System



Dis-integrated Library System



What hath disintegration wrought?

CONTENT

- Cultural heritage collections
- Digital assets
- Pre-print services
- Open Web
- Research data
- Learning objects
- Textual primary sources
- Graphical images
- Conference websites
- Datasets
- Software simulations
- Course resources

CONTAINERS

- Federated/Meta Searching
- Reference Linking
- Digital Asset Management
- Institutional Repository
- Learning Management Systems
- Statistics Workstations
- Portals
- Electronic Resource Management
- New online catalogs



True Believer

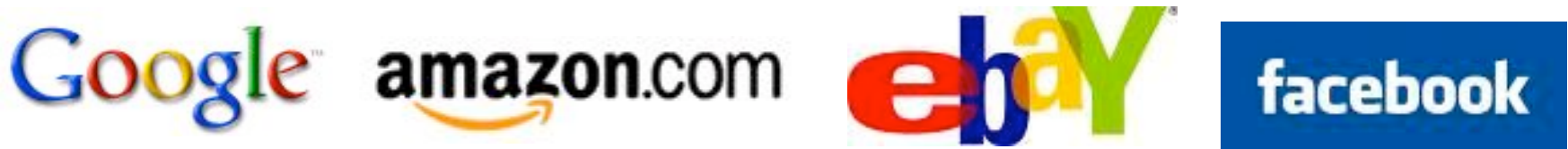


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The next big challenge for libraries

- WEB-SCALE



Amazon EC2: network computing
Amazon S3: network storage

The Library Scale Challenge

- Libraries Worldwide 1,212,383
- Books 15,517,196,010
- Back-office transactions 61,879,349
- OPAC transactions 105,607,800,600
- Database transactions 36,555,852,000
- Circulation / ILL 4,983,393,968
- + Adds/deletes; patron record maintenance
-

- **Annual Transactions 166,041,975,140**



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The benefits of Web-Scale

- Reduce Total Cost of Ownership
- Services architecture
- Enhanced workflow
- Network effects
 - through shared metadata, group identity management, discovery, materials lending, financial transactions, socialization, service resolution, collection management, and reporting / business intelligence.

Parting advice

- For Faculty:
 - Don't treat the business world as an anathema to the library world
 - Don't sacrifice theory for the sake of practice
 - But also...challenge your students in a way that they will be challenged in their jobs



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Parting advice

- For Students:
 - Question authority....respectfully
 - Embrace the library ethos
 - Don't undervalue what you do
 - Remember, it's just a library...



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-
- “Aux viam inveniam aut faciam .”
 - “If I cannot find a way, I will make one.”



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Thank you.

Andrew K. Pace

OCLC

pacea@oclc.org



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