Sustainable Collection Services SCS

Rethinking Library Resources: Print Books and Data-Driven Deselection

June 5, 2013

MIDWEST COLLABORATIVE for LIBRARY SERVICES

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Deselection: Defined Broadly

- **'Deselection' can encompass a number of different goals:**
- Weeding or Withdrawal
- Transfer to offsite storage, automated storage & retrieval systems (ASRS) or compact shelving
- Shared Print Archiving
- Retention and Preservation
- Digitization

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SCS: Decision Support for Deselection

To provide data, tools, and services that make monographs deselection safe and cost-effective.

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Sustainable Collection Services (SCS)

http://sustainablecollections.com

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Actionable Collection Intelligence™

Customers & Partners

Customers

- Adelphi University
- Augustana College
- Bard College
- California State University – Dominguez Hills
- California State University – Fullerton
- California State University – Long Beach
- California State University – Los Angeles
- California State University – Northridge
- California State University – Pomona
- Canisius College
- Central Michigan University
- Colgate University
- Connect New York
- Connecticut College
- Drake University
- Eastern Michigan University
- Ferris State University
- Grand Valley State University
- Hamilton College
- Hope College
- James Madison University
- Johns Hopkins University
- Lansing Community College
- Le Moyne College
- Medaille College
- Michigan Shared Print Initiative (SPI)
- Michigan Technological University
- Missouri Library Network
- New Mexico State University
- Oakland University
- Occidental College
- Pace University
- ReCAP Shared Print
- Rollins College
- Saginaw Valley State University
- St. Lawrence University
- Union College
- University of North Alabama
- Vassar College
- Wayne State University
- Wesleyan University
- Western Michigan University

Finding space

For other uses

Today's Specials

- The Why: The Changing Value of Local Print Collections
- The How: Collecting and Using Deselection Metadata
- Independent in a Collective Context or Shared Print?

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THE WHY: THE CHANGING VALUE OF LOCAL PRINT COLLECTIONS

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Evolution of the Library Paradigm

Reader-centered: from monastic scriptorium and library; dominated by light and reading tables

Book-centered: collection growth; unrelenting need for more shelving

Learning-centered: digital content; information commons; learning spaces; information literacy

Source: Scott Bennett, *Libraries and Learning: A History of Paradigm Change (2003)*

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The Problem

- Stacks are overcrowded
- Use of print books is low and declining
- Library space is wanted for other purposes
- Print redundancy is significant
- The cost of keeping books on shelves is high
- Alternatives exist, but data is scattered
- Traditional approaches to deselection are costly and time-consuming

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Stacks are crowded *and* empty

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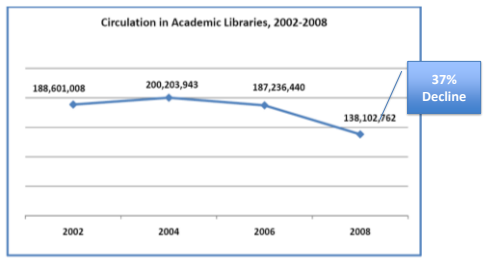
Circulation in Academic Libraries: Declining Since 2004



Source: National Center for Education Statistics. *Academic Libraries*, various years. Table 1 (http://nces.ed.gov/pubsearch/getpubcats.asp?sid=041#)

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Print Use Dwarfed by Electronic Use

	2010-11	2009-10	2008-09	2007-08	2006-07
Volumes Held	4,484,590	4,388,356	4,281,213	4,224,113	4,162,980
Books Purchased (print & electronic)	20,961	24,923	30,637	26,689	26,144
Current Journals (print & electronic)	86,170	85,796	71,905	59,878	49,970
Loans to Other Libraries	64,121	61,359	59,715	50,554	41,083
Loans from Other Libraries	43,509	55,787	51,249	48,729	46,627
Group Presentations (library instruction sessions)	895	947	878	1,226	630
Presentation Participants	8,782	9,121	8,163	11,010	5,672
Reference Questions	53,947	61,078	59,161	73,301	65,626
Items Checked Out -23%	431,540	456,588	435,800	501,355	561,928
Use of Electronic Journals *	2,840,613	2,795,821	3,068,449	2,966,605	3,134,055
Website Visits *	2,836,141	2,444,343	2,256,169	2,233,473	2,270,924
Online Catalog Searches *	2,913,400	2,190,680	2,048,534	2,875,788	2,579,083
Database Searches * +76%	2,324,335	1,879,405	1,827,472	1,589,472	1,324,170

Space Requirements: Monographs

Volumes	Square Feet
100,000	20,000
250,000	45,000
500,000	80,000
1,000,000	150,000
2,700,000	405,000
	Source: Stephen R. Lawrence, Lynn Silipigni Connaway, and Keith H. Brigham, "Life Cycle Costs of Library Collections" *College & Research Libraries*, November 2001, p. 546.

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Library space is wanted for other purposes…

"The crowding out of readers by reading materials is one of the most common and disturbing ironies in library space planning."

--Scott Bennett

Lifecycle Costs: Monographs

On the Cost of Keeping a Book

1. Introduction

- CLIR, June 2010
- Courant & Nielsen
- Estimated Annual Costs
  - $4.26/ volume annually in central stacks
  - $0.86/volume in high-density facility

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Lifecycle Costs: Monographs

Cost Element	*Shelving Model*			
	Open Stack	High Density	Hybrid (10 years in open stack)	Hybrid (20 years in open stack)
Construction	108.51	16.40	32.36	43.21
Maintenance	16.69	1.24	5.66	8.99
Cleaning	3.64	0.28	1.32	2.09
Electricity (heating and cooling)	2.39	0.20	1.03	1.53
Base staffing	6.08	1.20	2.42	3.36
Circulation	4.58	9.45	8.19	7.25
Total	141.89	28.77	50.98	66.43
Annual Average	4.26	0.86	1.53	1.99

Table 1: Our best storage cost estimates (in 2009 US$)

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Print redundancy is significant…

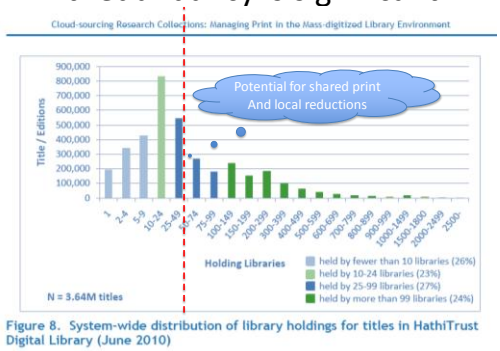

Figure 8. System-wide distribution of library holdings for titles in HathiTrust Digital Library (June 2010)

Premises for Action

- Users value other library services more than print collections
- Opportunity for deselection with no impact on users and no risk to the record
- New tools and approaches will be necessary to make it safe & economical

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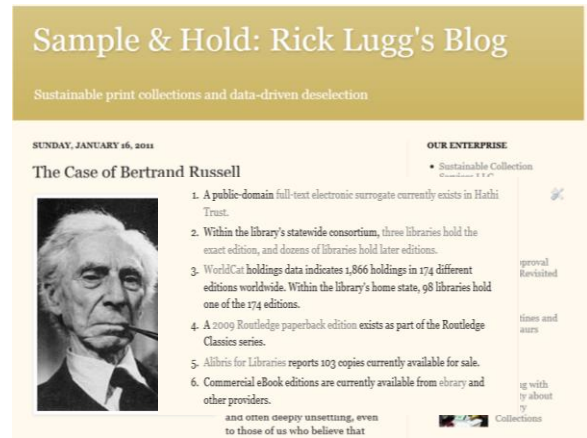
The Case of Bertrand Russell…

Alternatives exist, but the data is scattered…

Just because it's rational doesn't mean it's easy…



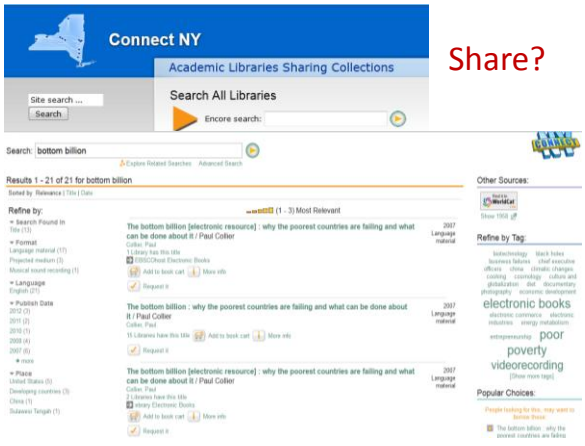
WHAT TO DO?

How else could we…?

- Preserve collection integrity
- Assure low-use content is available if/when needed

AND

- Bear less unnecessary cost
- Free more space for users and other purposes



Share?

Store?

Discard?

25

Create?

26

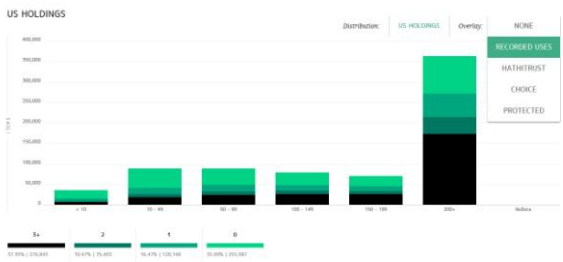
Regret?

27

Benefit?

28

Independent action in a collective context



Shared print initiatives (Monographs)

- Michigan Shared Print Initiative (MI-SPI)
- Maine Shared Collection Strategy (IMLS-funded; Statewide scope)
- Connect New York Shared Print Archiving
- California State University LOFT project
- Central Iowa Collaborative Collections Initiative
- FLARE (Florida), GWLA, SCELC

THE HOW: USING DATA TO INFORM MONOGRAPHS DESELECTION

Two functions of library print collections

- Preservation function
- "Dispensing" function: accounts for the "the great preponderance of operating costs.

Source: Michael Buckland, Redesigning Library Services: A Manifesto (Chicago: American Library Association, 1992).

'Archive' copies

- Digital Archives
  - Secure, high-quality
  - Hathi Trust, Portico
  - CRL certification
- Print Archives
  - Failsafe for technological or natural disaster
  - New digital surrogates or re-digitization
  - Dark, dim, or light?

'Service' copies

- Once content is securely archived, 'dispensing' function can be managed with fewer surplus copies
- Focus on distribution, convenience, speed of delivery
- Borrow or re-purchase; print, electronic (including PDA, DDA, Short-term Loan); POD

Surplus copies

- Archiving requirements satisfied
- Sufficient service copies to meet anticipated demand
- How many holdings/copies remain?
- Are all of them needed?

Good Decisions Require Data

- How many holdings/copies?
- Where are they?
- Is the title secure?
- Can the title be accessed quickly?
- Can the title be re-obtained if needed?
- What options are available for each title?

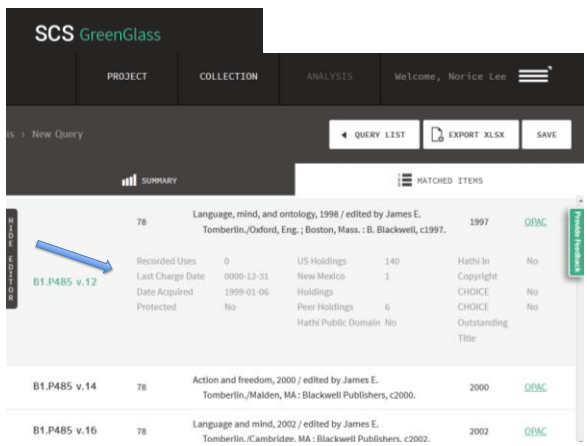
SCS and Collection Analytics

- Assembles deselection metadata
- Supports library-defined rules that operate against that metadata
- Coordinates withdrawal and retention scenarios across all institutions (in a group setting)
- Incorporates 'archival' values *and* 'service' values into deselection decisions

The SCS Approach: Data-Driven Decisions

- Circulation & other use data (ILL, in-house)
- Holdings in other libraries (peer, regional, national)
- Secure digital copy (Hathi)
- Authoritative title lists
- *[Commercial availability]*
- Library-defined rules
- Interactive rule sets

http://sustainablecollections.com



SHARED PRINT MANAGEMENT: GROUP PROJECTS

Shared print initiatives (Monographs)

- Michigan Shared Print Initiative (MI-SPI)
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MI-SPI: The First Monographs Project

- Outgrowth of GVSU individual project
- Now called MI-SPI (Michigan Shared Print Initiative)
- 7 libraries seeking a shared print solution
  - Wayne State (1.2 million books)
  - Michigan Tech (200K books)
- Initial discussions: March 2011
- Data loads completed: October 2011
- Lists delivered: March 2012

Connect New York

- 18 Private Academic Libraries
- 12 libraries participating in 'Pod 1'
- Largest: Vassar, Colgate, Hamilton
- Smallest: Medaille, Cazenovia, Canisius
- Distances: Buffalo to Long Island
- Other New York libraries?
- Cornell storage facility?

Collect and prepare the library's data

- Bibliographic, item, circulation, and holdings data extracted, transformed, and loaded to an SCS postgres database
  - Filter out-of scope bib records (eBooks, maps, scores, DVDs, Gov Docs)
  - Eliminate duplicate bib records
  - Normalize call numbers
  - Eliminate trailing spaces in control numbers
  - Validate OCLC numbers
  - Match bib records on OCLC number (with title-string check)
  - LCCN/title-string lookups for records lacking OCLC#
  - Identify and accommodate unusual implementations of MARC
  - Map item-level data and interpret codes

Step 1: Assemble the group's data

Bib records – Unfiltered **3,508,262**	Item records – Unfiltered **4,135,290**	Libraries **12**
Bib records – Filtered **3,344,567**	Item records – Filtered **3,805,820**	
Unique Titles – Filtered **1,607,150**		

Shared Circulation History?

Library	Total Charges	Last Charge Date
Adelphi	19-20 years	9/5/90
Bard	20 years	6/28/96
Canisius	21 years	11/11/91
Cazenovia	16 years	6/10/98
Colgate	21 years	2/9/91
Hamilton	23 years	10/14/93
Le Moyne	18-19 years	8/31/94
Medaille	5 years	7/2/08
Pace	21 years	6/26/92
St Lawrence	23 years	4/18/95
Union	24 years	5/30/02
Vassar	23 years	5/30/90

Bib records filtered out by cause

Bib Records filtered out	163,695
Duplicate bib records removed	*63,563*
Government docs	*17,563*
Non-language materials	*1,860*
Non-monographic materials	*3,879*
Non-print resources	*1,025*
Unable to obtain OCLC number	*71,249*
Bib Title/Author mismatch with OCLC	*6,150*
Multiple OCLC numbers per record	*22*

Step 2: Augment with data from other sources

- OCLC WorldCat
  - Holdings: Global
  - Holdings: US/Canada
  - Holdings: State/Provincial
  - Holdings: Peers/Consortial Partners
- HathiTrust
  - Public domain
  - In-Copyright
- CHOICE

Local holdings not set in WorldCat[tm]

Library	Local holding not set in WorldCat	Percent of filtered bib records
Adelphi	5,995	2%
Bard	275	0%
Canisius	459	0%
Cazenovia	27	0%
Colgate	77,622	16%
Hamilton	2,796	1%
Le Moyne	692	0%
Medaille	1,130	3%
Pace	12,661	4%
St Lawrence	9,041	3%
Union	796	0%
Vassar	4,485	1%
TOTAL	**115,979**	**3%**

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Step 3: Define Comparator Libraries

	Library Name	Selected IDS Libraries + SUNY Albany	6 other not POD #1 CNY Libraries	Cornell
1				
2	Alfred University	YAH		
3	Baruch College	VVB		
4	Binghamton University	BNG		
5	Brockport	XBM		
6	Brooklyn College	VDB		
7	Buffalo State	YBM		
8	City College, CUNY	Z		
9	Clarkson University	Y		
10	Cobleskill	W		
11	College of Environmental Science and Forestry	Y		
12	College of St. Rose	Y		
13	College of Staten Island	Y		
14	Cortland	X		
15	Empire State College	Y		
16	Fredonia	X		
17	Geneseo	Y		
18	Hunter College	Z		
19	Lehman College	Y		
20	Manhattanville College	Y		
21	Mollov College	Y		

26	Oneonta	ZBM		
27	Oswego	YOM		
28	Plattsburgh	YPM		
29	Potsdam	ZQM		
30	Purchase	ZPM		
31	St. John Fisher College	VZJ		
32	Stony Brook University	YSM		
33	SUNY Delhi	XDM		
34	SUNY Institute of Technology	YTM		
35	Syracuse University	SYB		
36	The Sage Colleges	ZR5		
37	University at Buffalo	BUF		
38	Utica College	VVV		
39	SUNY Albany	S87		
40	Hobart & William Smith		ZEM	
41	Rochester Institute of Technology		RVE	
42	Rensselaer		YRM	
43	Siena College		VKM	
44	Skidmore College		VZS	
45	US Military Academy at West Point		YWM	
46	Mann Library (Cornell)			AX0
47	Cornell University			COO
48	Weill Medical College (Cornell)			VYC

Step 4: Combine factors to model scenarios

- Usage levels, circulation thresholds
- Availability
  - Service copies
  - Archival copies (print / electronic)
- Date restrictions
  - Date acquired
  - Publication date
- Local Protection Rules
  - Protected subjects
  - Gifts
  - Faculty publications / local theses
- Authoritative Title Lists
  - CHOICE, CHOICE OAT

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Step 5: Produce Group Collection Summary [Handout]

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Connect NY Pod 1 Title-Holding Counts	All Libraries	%	Adelphi	%	Bard	%	Canisius	%	Cazenovia	%	Colgate	%	Hamilton	%
All Title Holdings - Filtered	3,344,567	100%	297,323	100%	164,150	100%	230,802	100%	65,639	100%	488,029	100%	349,629	100%
Total Charges = 0	1,328,348	40%	120,320	40%	50,960	31%	91,171	40%	40,139	61%	129,614	27%	148,119	42%
Total Charges = 1 to 3	1,270,537	38%	114,106	38%	63,276	39%	95,315	41%	20,715	32%	209,489	43%	130,332	37%
Total Charges = 4 to 9	550,001	16%	45,051	15%	35,733	22%	34,507	15%	4,099	6%	109,383	22%	54,163	15%
Total Charges = 10+	195,681	6%	17,846	6%	14,181	9%	9,809	4%	686	1%	39,543	8%	17,015	5%
Last charge after 2010	327,536	10%	24,232	8%	27,128	17%	22,192	10%	4,536	7%	64,417	13%	26,757	8%
Last charge after 2007*	717,575	21%	51,984	17%	54,934	33%	49,989	22%	9,853	15%	135,822	28%	62,921	18%
Last charge after 2005*	916,568	27%	66,855	22%	67,398	41%	64,087	28%	13,061	20%	165,679	34%	83,185	24%
Internal Use Counts														
1 Internal Use	314,300	9%	26,268	9%	14	0%	52,165	23%	3	0%	120,467	25%	69,316	20%
2 Internal Uses	128,282	4%	5,128	2%	1	0%	22,717	10%	0	0%	50,227	10%	41,910	12%

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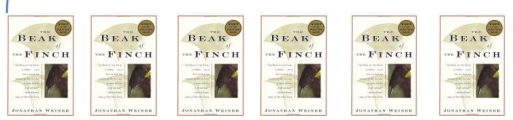
By "titles" we can mean two different things

1. Title Set



Adelphi Bard Canisius Cazenovia Colgate Hamilton

2. Title Holding

Each Title-Holding can have different characteristics

Library	Total Charges	Last Charge Date	Last Item Add Date
Adelphi	2	5/1/06	7/25/94
Bard	1		9/11/96
Canisius	5	10/14/09	6/24/94
Cazenovia	1		1/29/96
Colgate	8	9/23/02	6/23/94
Hamilton	12	4/20/11	5/28/02
Le Moyne	3		3/27/95
Medaille	0		6/26/08
Pace	2	5/13/09	11/1/94
St Lawrence	2	4/4/12	10/25/94
Union	2	9/13/10	4/5/03
Vassar	8	9/4/12	1/11/95

Publication Year 1994

Circulation Counts

	CNY Pod 1 Title-Holding Counts	All-Title-Holdings	%	Pre-2000 Title-Holdings	%
1	All Title Holdings - Filtered	3,344,553	100%	2,512,126	100%
	Circulation Counts				
2	Total Charges = 0	1,370,432	41%	1,021,563	41%
3	Total Charges = 1 to 3	1,248,975	37%	901,710	36%
4	Total Charges = 4 to 9	534,280	16%	423,880	17%
5	Total Charges = 10+	190,880	6%	164,973	7%
6	Last charge after 2010	327,536	10%	159,254	6%
7	Last charge after 2007*	717,575	21%	393,627	16%
8	Last charge after 2005*	916,568	27%	533,106	21%

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	CNY Pod 1 Title-Holding Counts	All-Title-Holdings	%	Pre-2000 Title-Holdings	%
1	All Title Holdings - Filtered	3,344,553	100%	2,512,126	100%
	WorldCat Counts - US and New York State				
12	0-9 Holdings in USA	92,092	3%	66,985	3%
13	10-19 Holdings in USA	77,321	2%	61,200	2%
14	20-49 Holdings in USA	217,327	6%	173,290	7%
15	50-99 Holdings in USA	309,887	9%	238,387	9%
16	100-199 Holdings In USA	578,205	17%	406,713	16%
17	200+ Holdings in USA	2,069,479	62%	1,565,316	62%
18	0-9 Holdings in New York	703,475	21%	517,731	21%
19	10-49 Holdings in New York	1,959,394	59%	1,426,652	57%
20	50+ Holdings in New York	681,698	20%	567,743	23%

	CNY Pod 1 Title-Holding Counts	All-Title-Holdings	%	Pre-2000 Title-Holdings	%
1	All Title Holdings - Filtered	3,344,553	100%	2,512,126	100%
	WorldCat Counts - Overlap with Cornell				
21	Holding set by Cornell - Specific Edition	2,411,498	72%	1,805,468	72%
22	Holding set by Cornell - Any Edition	2,752,123	82%	2,077,509	83%
	Overlap among the 12 CNY Pod 1 libraries				
23	Unique Holding in group	918,520	27%	689,054	27%
24	Title-holdings present in 2 libraries	563,608	17%	423,965	17%
25	Titles-holdings present in > 2 libraries	1,862,439	56%	1,399,107	56%
26	Titles-holdings present in > 4 libraries	1,041,131	31%	792,797	32%
27	Titles-holdings present in > 8 libraries	133,696	4%	106,550	4%
28	Title-holdings present in > 10 libraries	12,424	0%	10,021	0%

	CNY Pod 1 Title-Holding Counts	All-Title-Holdings	%	Pre-2000 Title-Holdings	%
1	All Title Holdings - Filtered	3,344,553	100%	2,512,126	100%
	Overlap with the 6 non-participating CNY libraries				
29	WorldCat holding set in ZERO other CNY libraries	1,360,885	41%	744,272	30%
30	WorldCat holding set in 1 other CNY library	792,252	24%	436,571	17%
31	WorldCat holding set in 2 other CNY libraries	530,956	16%	302,554	12%
32	WorldCat holding set in 3+ other CNY libraries	660,474	20%	438,520	17%
	Overlap w/ Selected IDS Libraries & SUNY Albany				
33	WorldCat Holding set in ZERO libraries	370,450	11%	260,611	10%
34	WorldCat Holdings set in > 5 libraries	1,766,539	53%	1,443,342	57%
35	WorldCat Holdings set in > 10 libraries	1,007,436	30%	884,164	35%

Hathi Trust match rates

	CNY Pod 1 Title-Holding Counts	All-Title-Holdings	%	Pre-2000 Title-Holdings	%
1	All Title Holdings - Filtered	3,344,553	100%	2,512,126	100%
	Hathi Trust Digital Library				
43	Hathi Trust Public Domain Match	211,732	6%	205,231	8%
44	Hathi Trust In-Copyright Match	1,416,354	42%	1,172,575	47%
	Reserve Activity				
45	Titles with Last Reserve Note*	62,234	1.9%	37,212	1.5%
46	Titles with Reserve Activity since 2005* (per Reserve Note)	25,272	0.8%	17,751	0.7%

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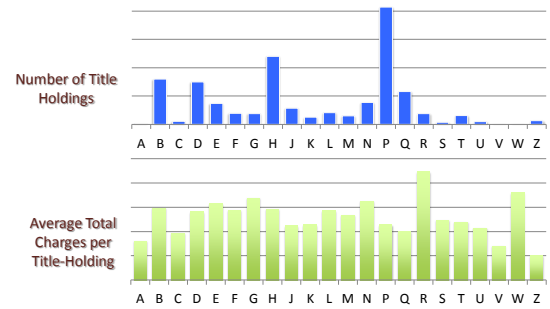
Holdings and Circulation Levels Compared



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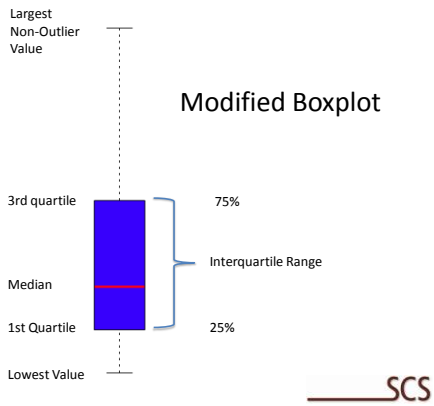
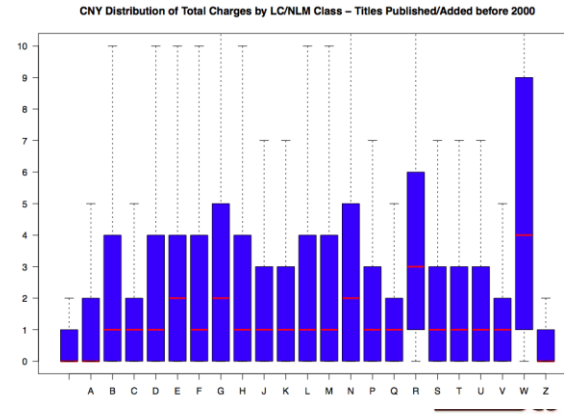
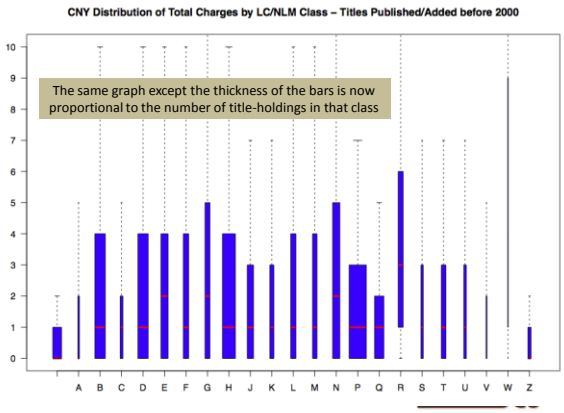
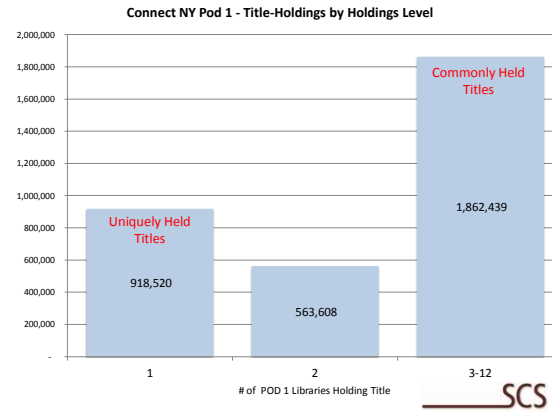
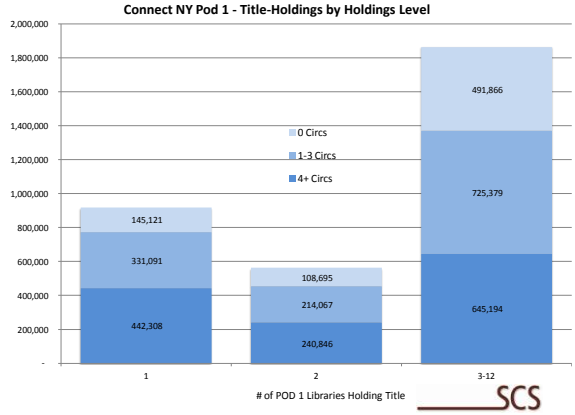




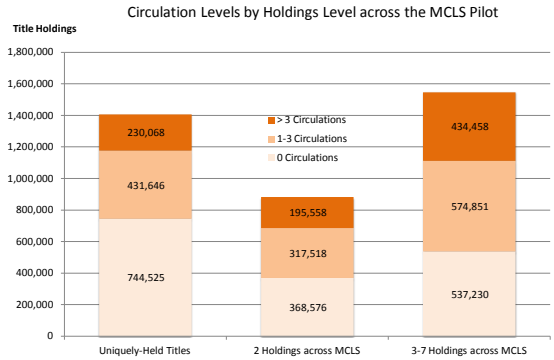






Shared Withdrawal Scenarios within the CNY Pod 1 Titles Published and Acquired before 2000

	0 Circulations	1 or fewer circulations	3 or fewer circulations
Keep 1 Title-holding	588,755	834,206	1,079,014
Keep 2 Title-holdings	384,369	533,837	677,750
Keep 3 Title-holdings	252,756	343,908	428,827



MI-SPI Withdrawal Criteria

Titles with:

- 3 or fewer circulations since 1999
- Pub date and add date prior to 2005
- Held by more than 2 libraries

Results: MI-SPI

- 535,970 withdrawal candidates allocated
- 2 title-holdings remain on hand for all titles
- Retention Lists / Withdrawal Lists
- Retention commitment in MARC 583
- 15-year commitment / MOU now in place
- Issues:
  - Inventory
  - Lost/Missing Replacement Policies

500,000 "surplus" title-holdings

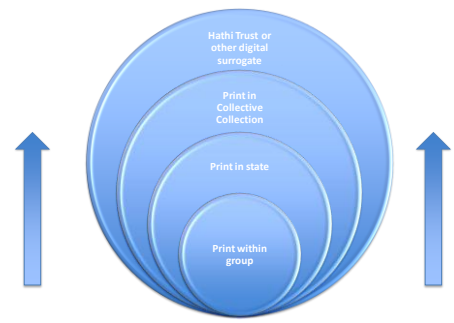
- 100,000 square feet
- Over 12 campuses & branches
- Still 2 title holdings available among the 12 libraries
- Highest circulating items: 1 circulation in 20+ years
- Impact on space: significant
- Impact on service: negligible

SCS

High-level project schedule

Task	Description	Tentative Dates
Planning Meetings	Key players discuss data extracts, anomalies, peers, etc.	October 2012
Data Preparation	Libraries prepare and deliver extracts to SCS. SCS validates, normalizes, matches, and performs holdings lookups.	November 2012
Group Collection Summary	Categorical overview of the group data set. Used to gauge opportunities and guide scenario development.	January 2013
Scenario Development	You Are Here Project leaders suggest preliminary withdrawal and preservation criteria. SCS iterates and revises.	Begin February 2013
Candidate Lists	Detailed Excel spreadsheets for review, bases on finalized criteria for withdrawal. Modify as necessary.	2013
Discussions Facilitation	This will be needed at many points – but especially around scenario development, allocation, and policy development.	Through-out
Allocation	Assignment of withdrawal opportunities and retention commitments – based on many factors.	2013
Production of Picklists and Keeplists	Once allocation decisions have been made, SCS will derive title/item lists for use by individual libraries.	2013
Ongoing Data Management	SCS will maintain (but will not update) the CNY dataset for 2 years, which can be used for additional projects.	…

Strong preferences: print, self-sufficiency



SCS

CLOSING THOUGHTS

SCS

There are other solutions…

SCS

Amazing Desk Made From Recycled Books at Delft University
by Bridgette Meinhold, 09/13/10

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