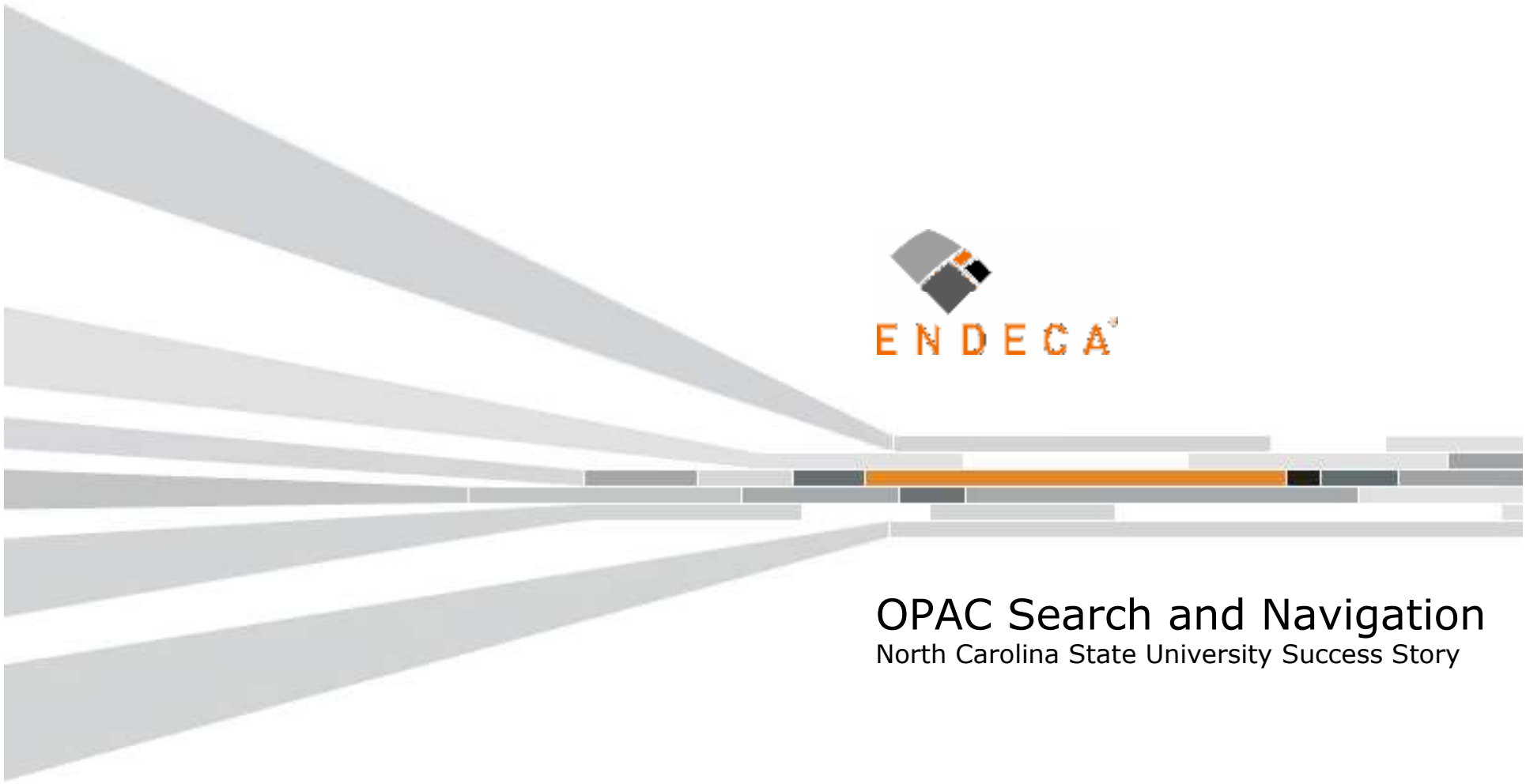

OPAC Search and Navigation

North Carolina State University Success Story

Deidre Caldbeck
Endeca Technologies, Inc.
November 28, 2006

Agenda

- Endeca Company Overview
- Information Access Gaps in Academic Institutions
- Endeca Information Access Platform
- North Carolina State University Success Story
- Q&A

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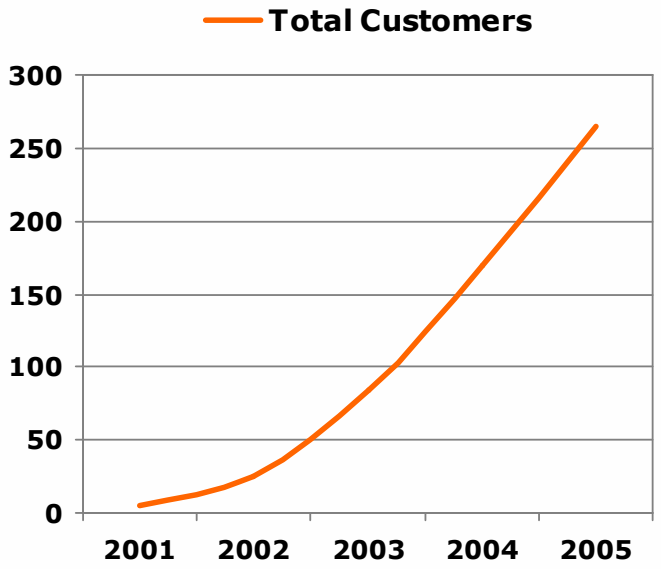
Innovation drives our growth

- Annual revenue growth exceeding 135% each of the past 5 years
- Patented core technology
- Industry accolades



IBM PartnerWorld Beacon Awards WINNER 2006

The Forrester Wave™ Smart data for smart decisions

AMR Research 2006 Innovation Awards

Gartner

pcforum 2005 Best of Show

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Leading global customers

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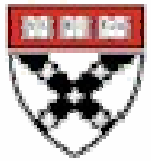
The Information Access Leader in Higher Education and Research



Harvard Business School Publishing

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Endeca delivers business results

	B2C eCommerce	→ Conversion rate increased 30%
	B2B eCommerce	→ Conversion rate increased 75%
	Web Site Search	→ Content downloads increased 400%
	Directory	→ Saved $500M through better consultant staffing analysis
	Online Publishing	→ Page views increased 20%

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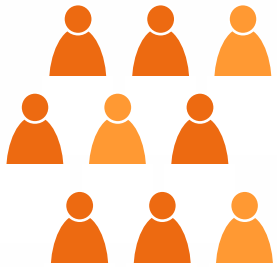
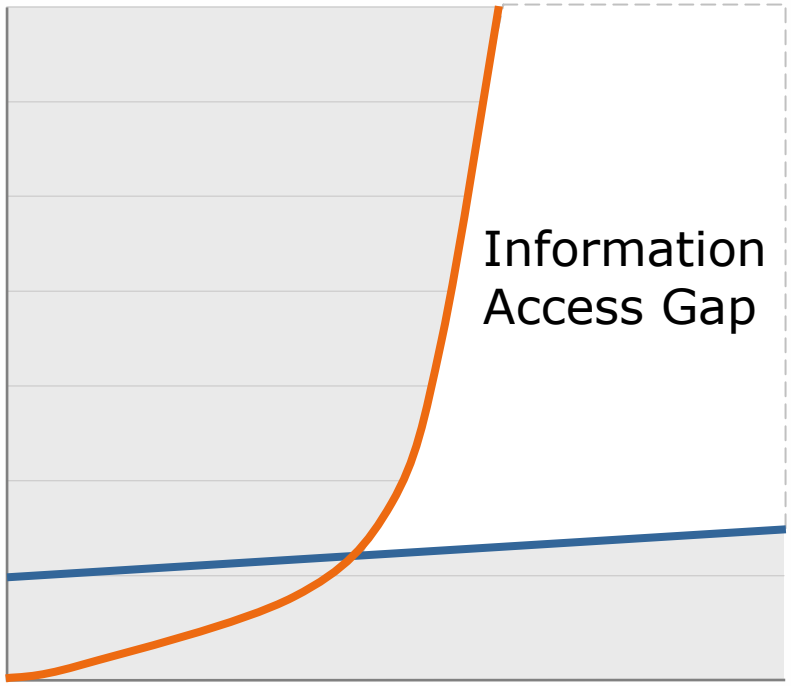
Information Access Gap

Variety in user paths





Unique user paths desired

Unique user paths supported

Variety in data and content

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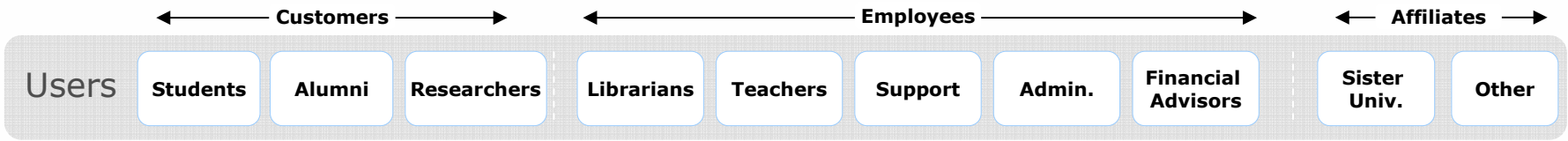
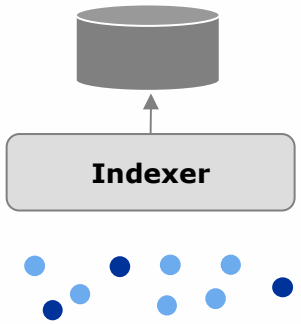
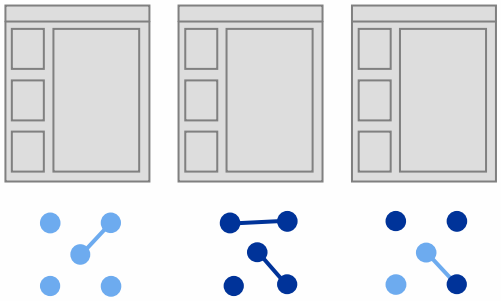
Information Access Gap



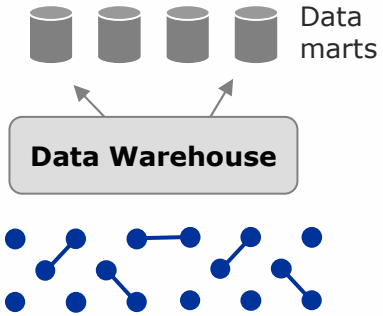
Traditional Search

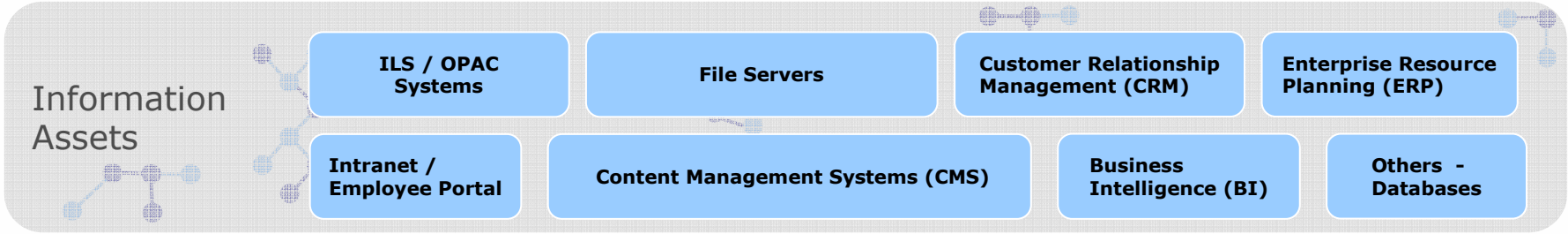


Traditional Applications



Traditional BI





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Elements Of Information Retrieval

- Cataloging / IA

PS3557
.R5355 The firm
F57 1991

Grisham, John
The firm / John Grisham. 1st. ed.
New York : Doubleday, c1991.
421p. ; 24 cm.

1. Government investigators--Fiction.
2. Organized crime--Fiction.

- Backend

- User Interface

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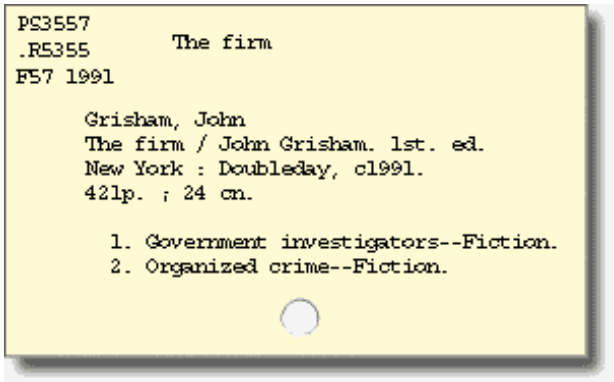
Computerized Library – Cataloging / Backend


PS3557
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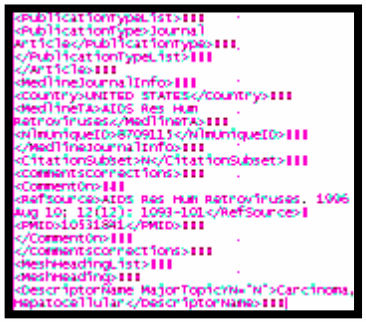
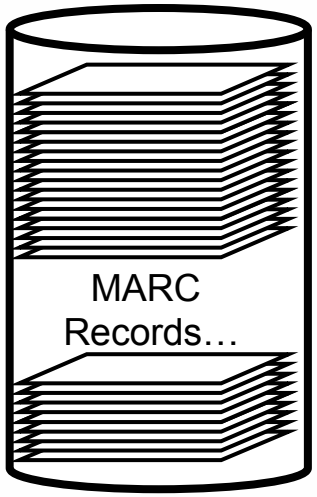


Cataloging / IA MARC records



Integrated Library System Backend

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Computerized Library – User Interface

Where is the Cataloging?

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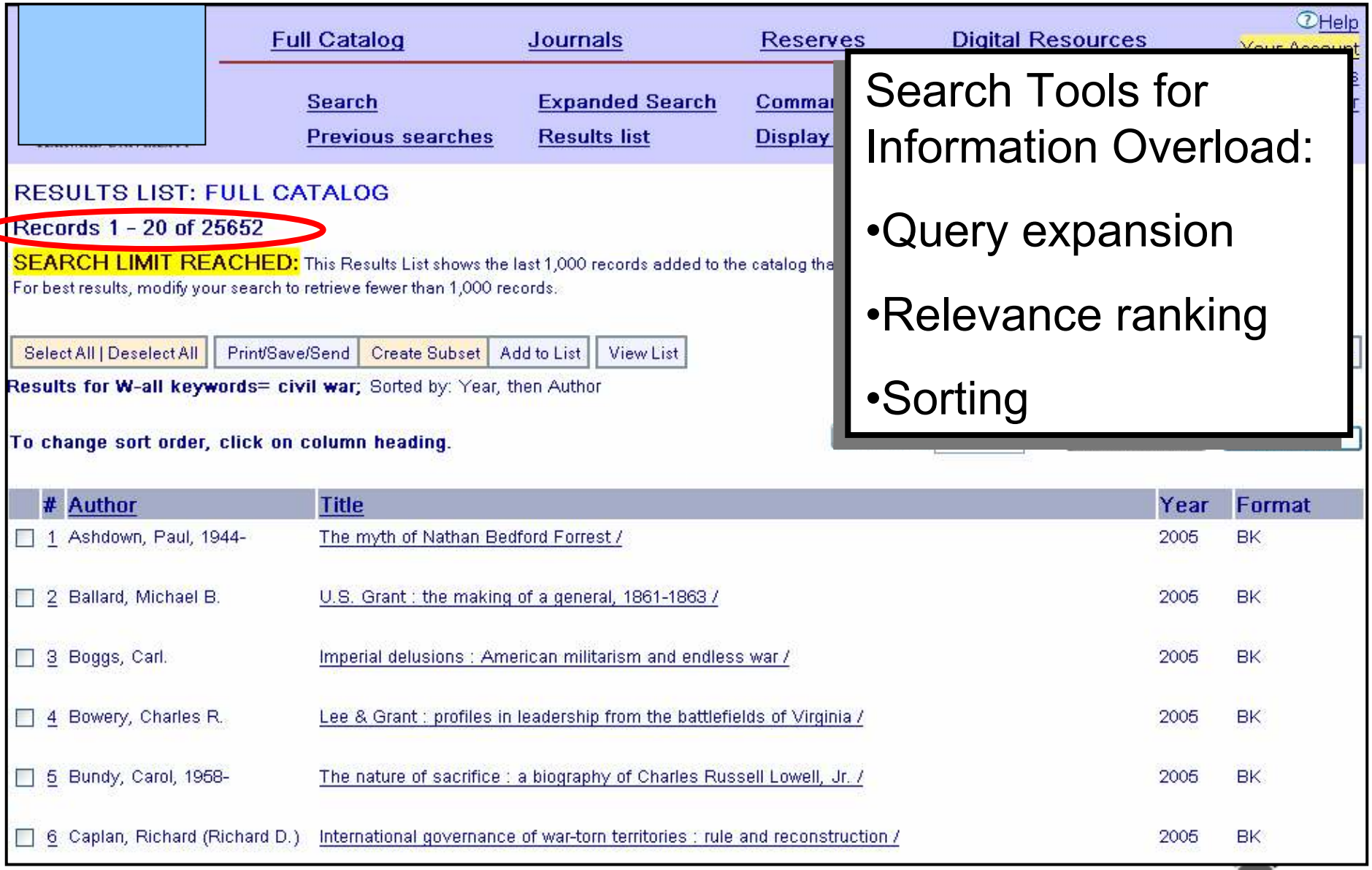

Search Tools for Information Overload:

- Query expansion
- Relevance ranking
- Sorting

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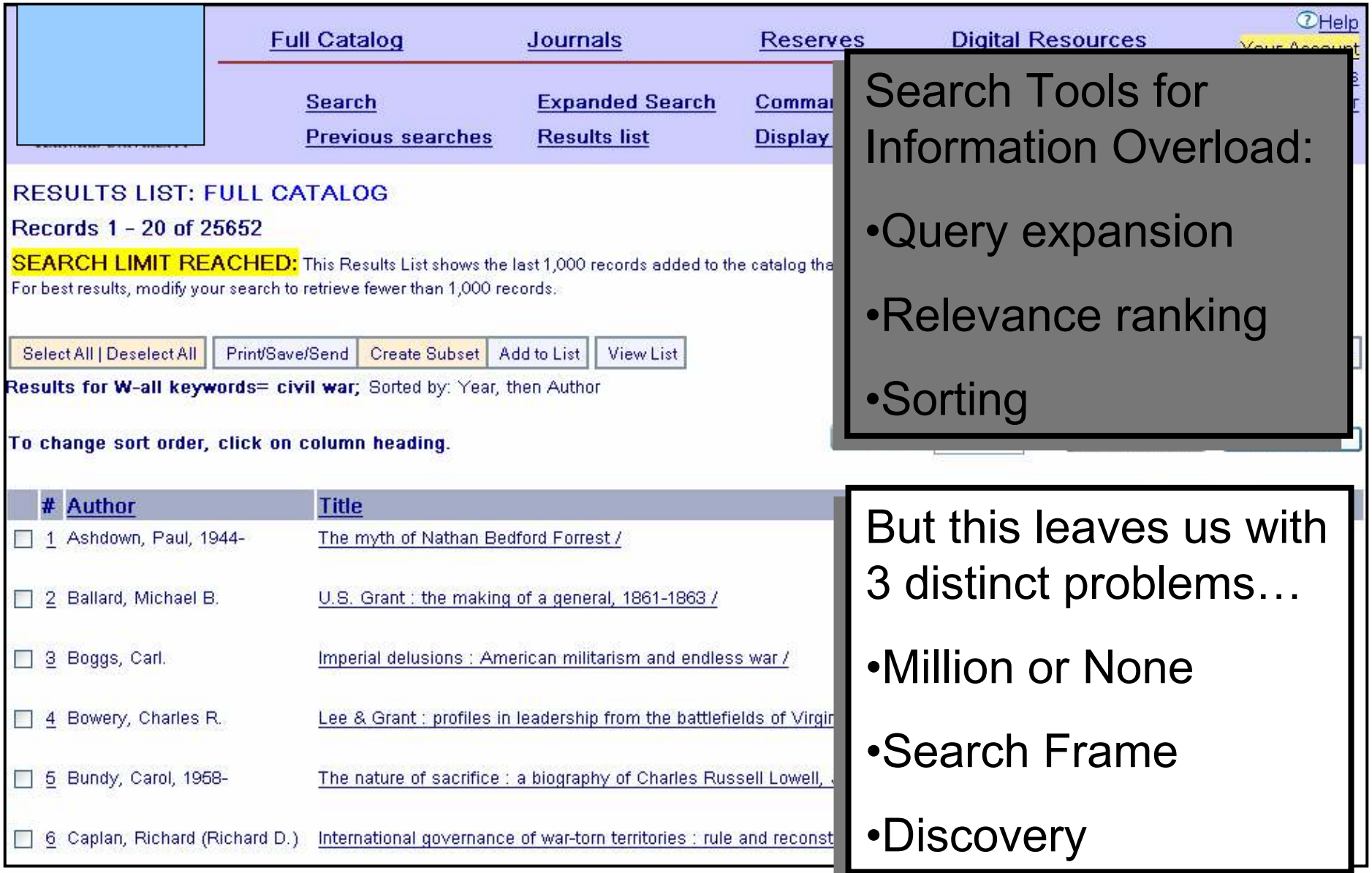

Search Tools for Information Overload:

- Query expansion
- Relevance ranking
- Sorting

But this leaves us with 3 distinct problems…

- Million or None
- Search Frame
- Discovery

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Endeca's unique architectural capability: Adaptivity

Adaptivity is

the dynamic calculation of
relationships among relationships
in the current view

Based on

1) the user's actions

2) the possibilities in the data

3) any business rules

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The Endeca Information Access Platform

Data-driven App Components

Rapid development of rich apps

Pre-packaged capabilities

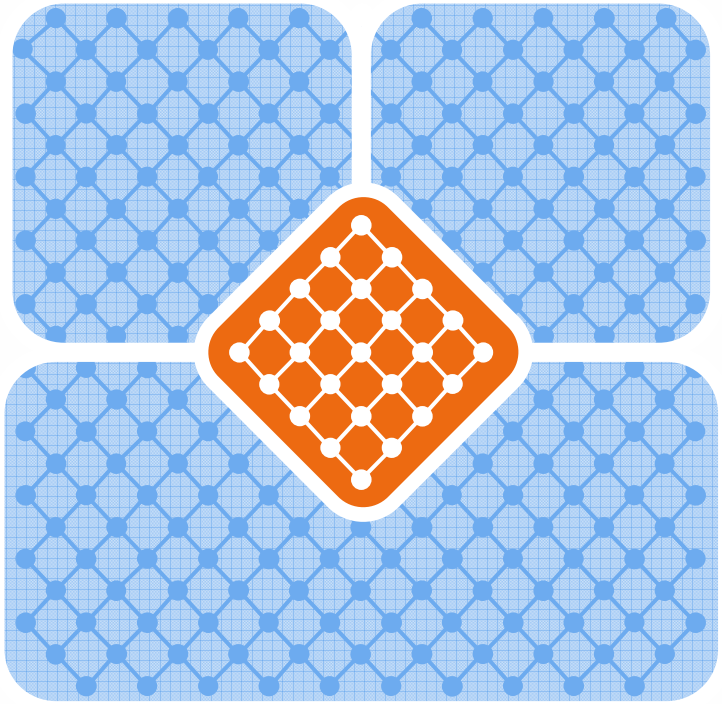
Automatically adapt to changes in data and content

Information Transformation Layer

Enriches information

Unites disparate sources

Maintains, augments, creates relationships



Enterprise-class platform

Scalability, reliability, security

Web-based Management Suite

Empowers managers

Right information at right time

Adaptive presentation rules

MDEX Engine™

Meta-relational architecture

Adaptive user interfaces

Reveals relationships

Encourages exploration and discovery

Guided Navigation® experience

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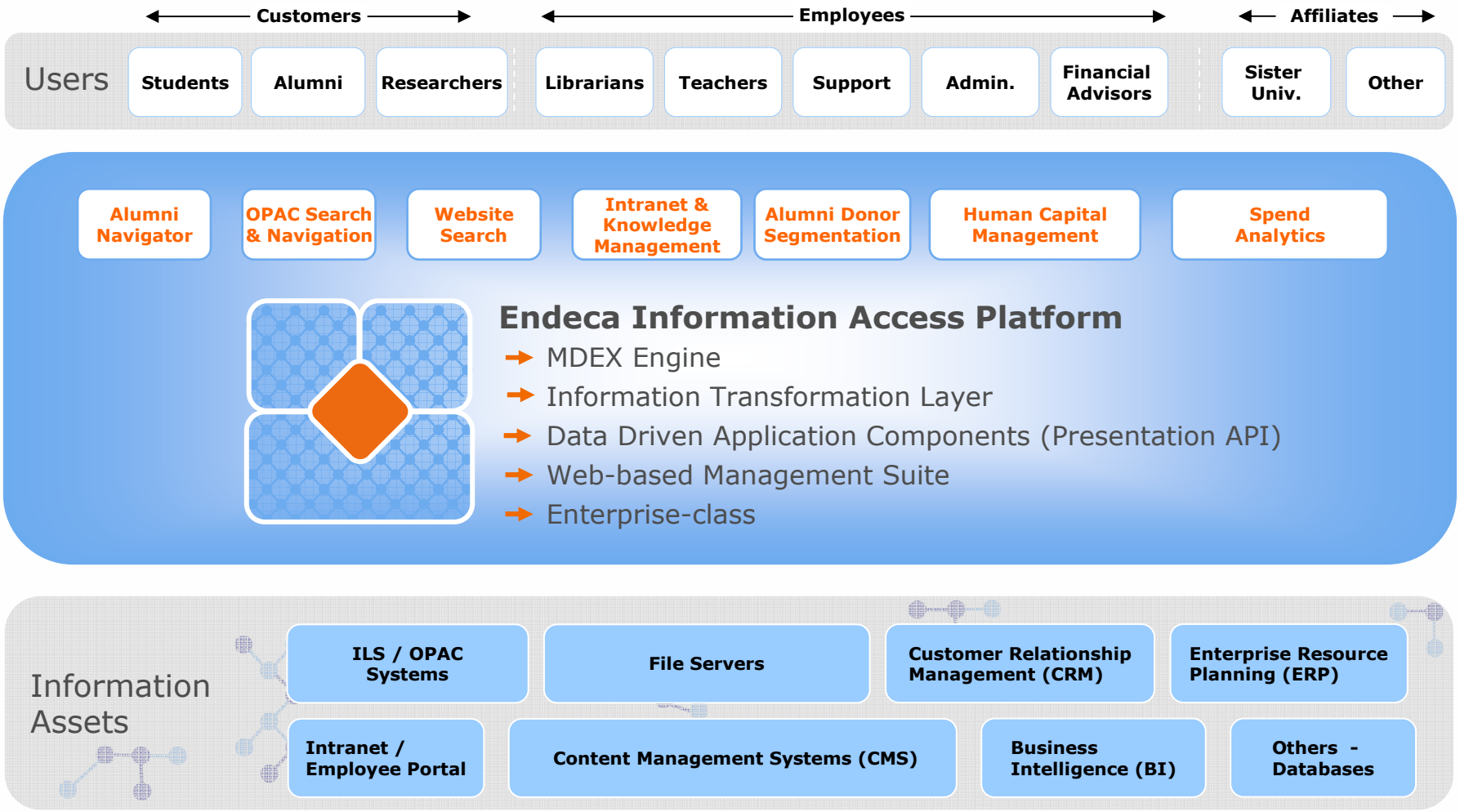
Adaptivity closes the Information Access Gap



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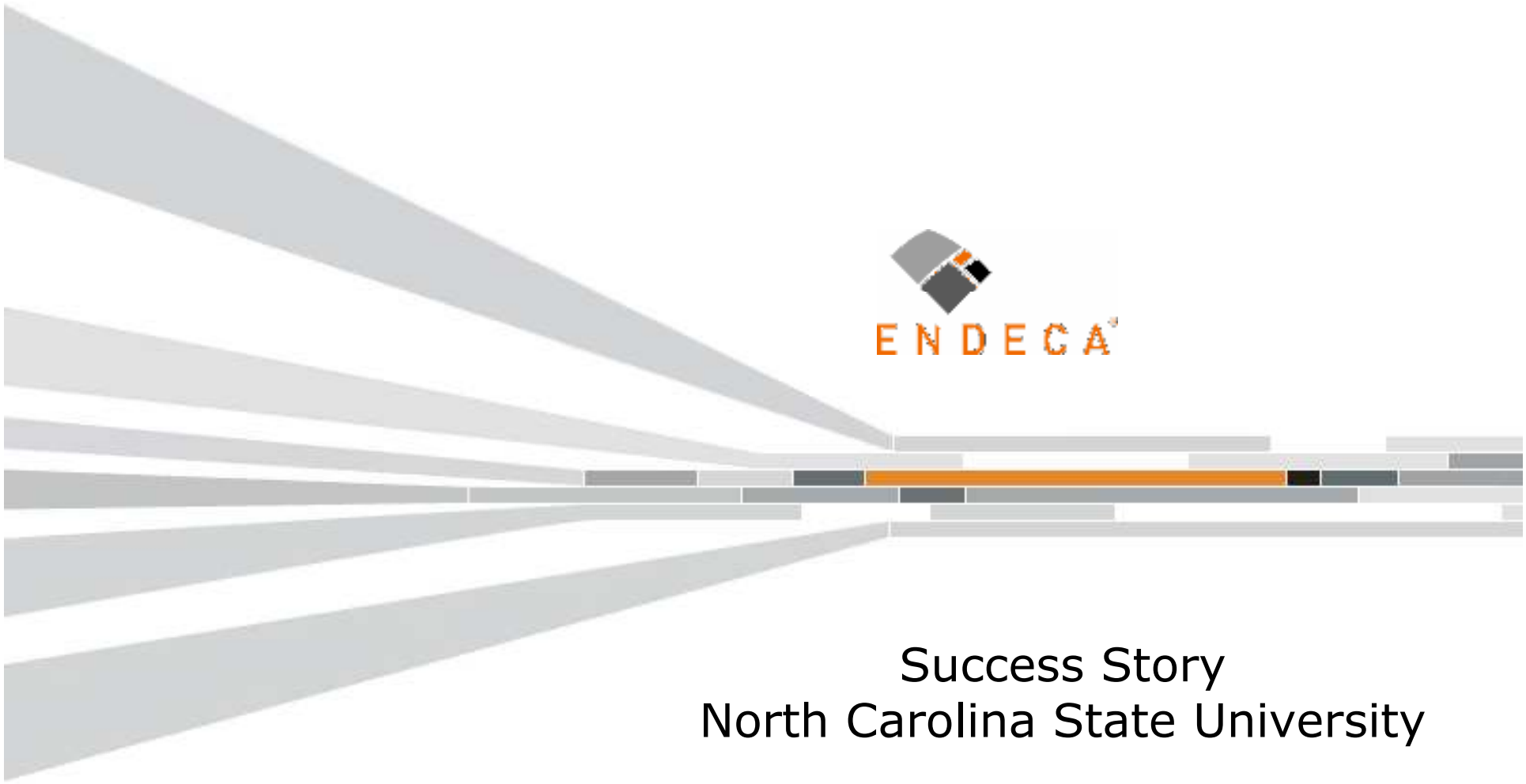

Success Story
North Carolina State University

Did you know?

A typical library of 1MM books spends approximately $20-30MM per year . . .

- To purchase them
- To catalog them
- To maintain/bind them
- To shelve them
- On systems that manage their circulation
- On real estate & building maintenance to house them
- On annual purchases to augment collections

How do we get a return on that kind of investment?

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NCSU Objectives

- Increase usage of university library by students, faculty, and other members of the community
  - Number of items in circulation at any given time
- Increase re-circulation
  - better return on investment in collection
- Increase usage of legacy collection
  - Most recent always at the top of results (although maybe not most relevant)
- Increase % of Successful Searches
  - Combat perceived lack of coverage
- Better control over application, relevancy; more flexibility
- Ease of maintenance

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NCSU - Pursuit of Features

Endeca	Unicorn / Web2
Speed	Speed?
Relevance Ranking	Last-in / First-out
Faceted Browsing	Authority index links
True Browsing (LC)	Query required
Data-driven spell-checking	Dictionary lookup only
Automatic stemming	No
"Did you mean…"	No
Hierarchical browsing	No
Browsing in CONTEXT of search	No
Scale & operational simplicity	No
Ease of use	No

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Implementation Resources

- One java-trained librarian (not a developer) working 30-40 hours per week for 14 weeks
- Worked with librarian from Digital Library Initiatives to do wireframing and fleshing out requirements (total of 40-60 hours)
- Project Management by Andrew Pace approximately 10 hours per week for 20 weeks
- Committee consisting of a cataloger for metadata issues and a reference librarian for interface issues – total of 2-4 hours per week over 12 weeks (combined)

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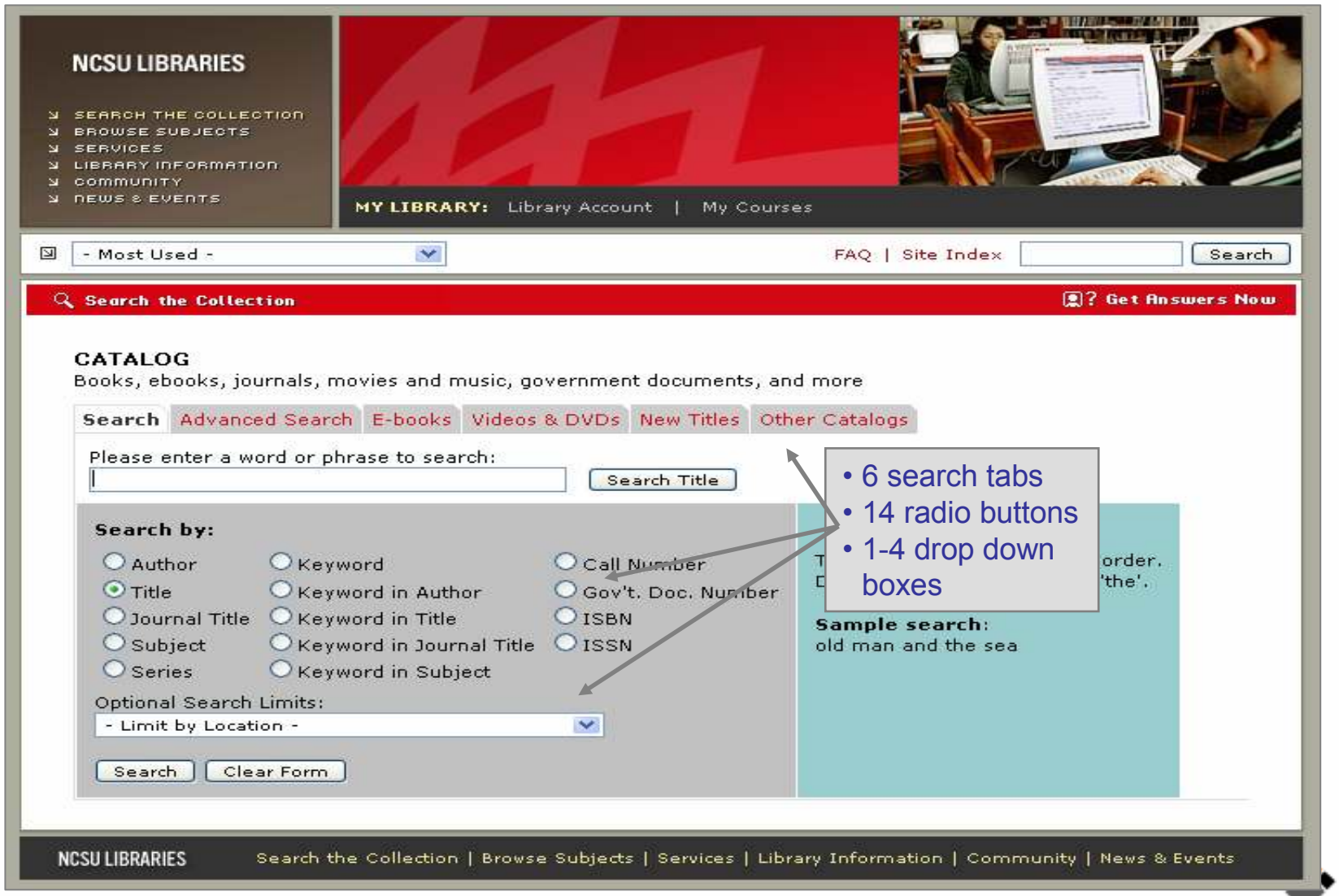
Pre-Endeca Catalog Search



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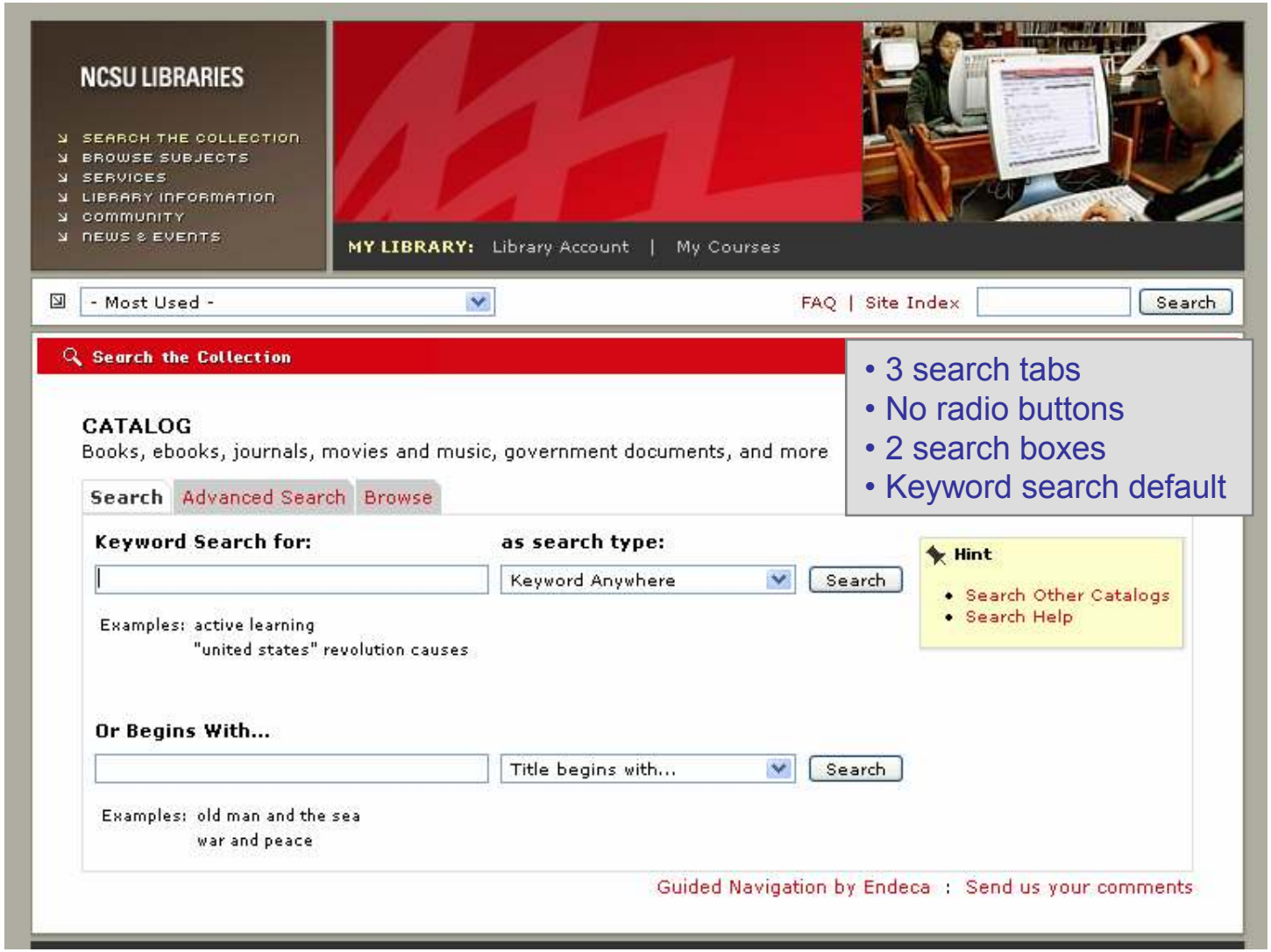
Endeca Catalog Search



- 3 search tabs
- No radio buttons
- 2 search boxes
- Keyword search default

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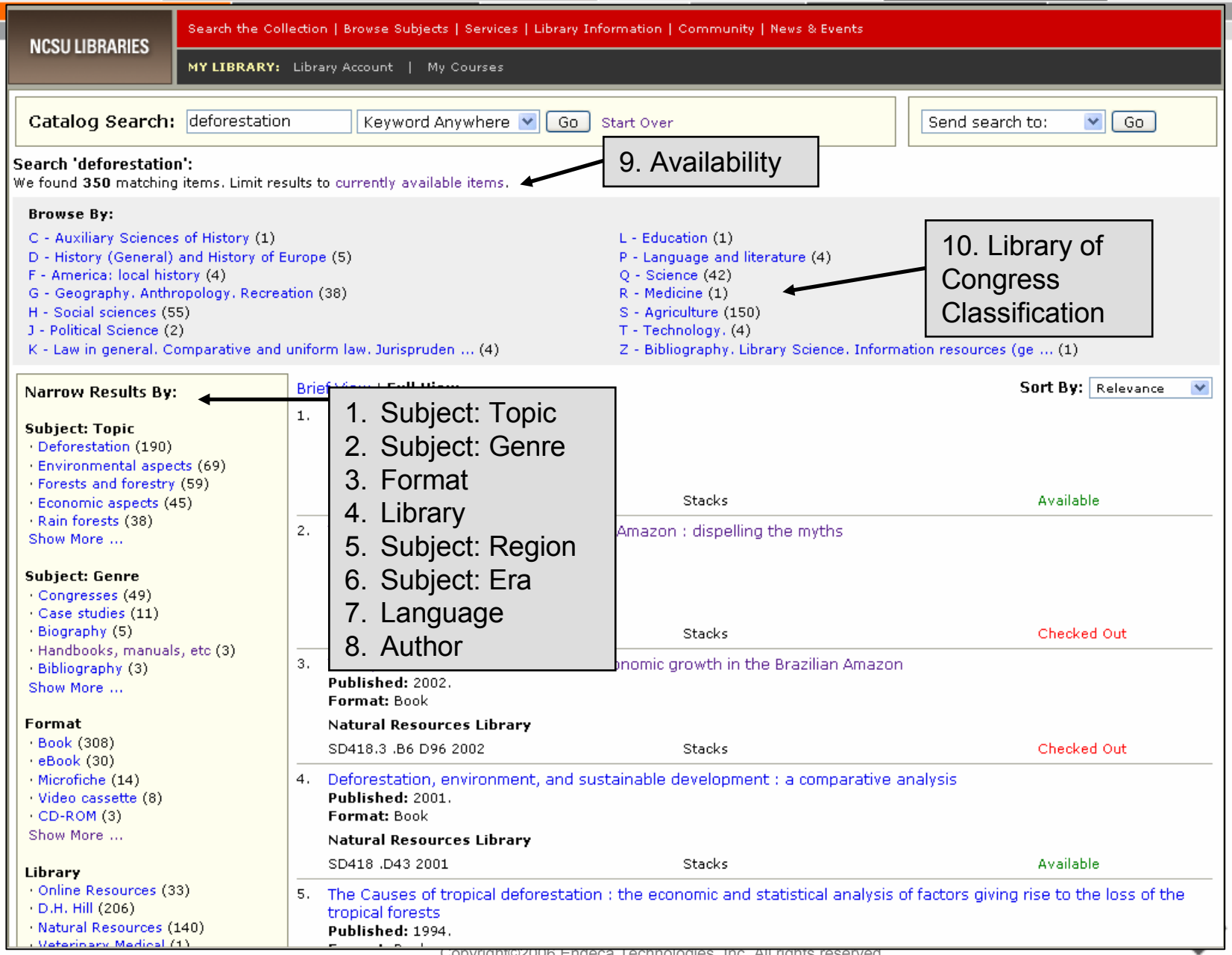

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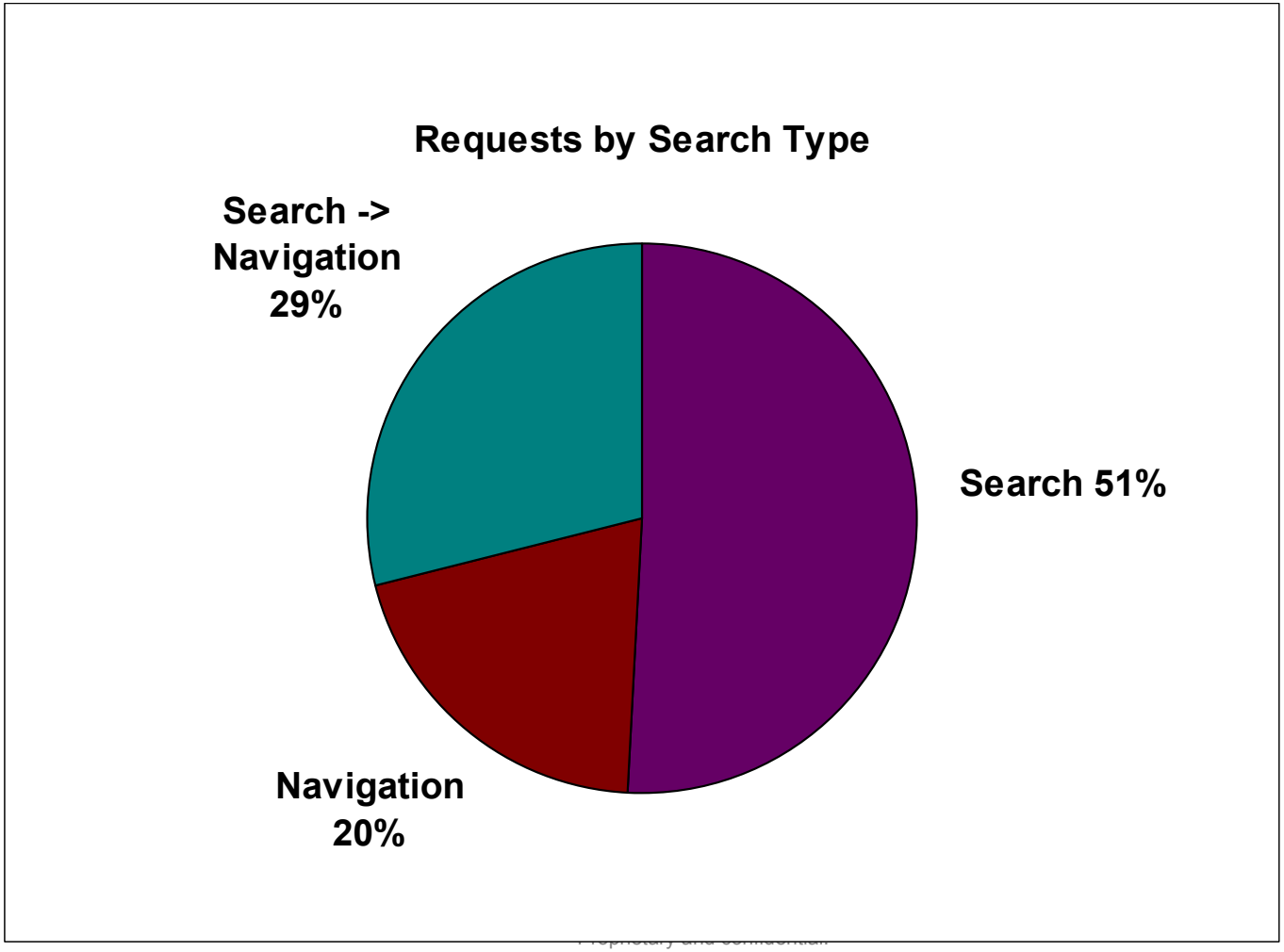
Usage patterns



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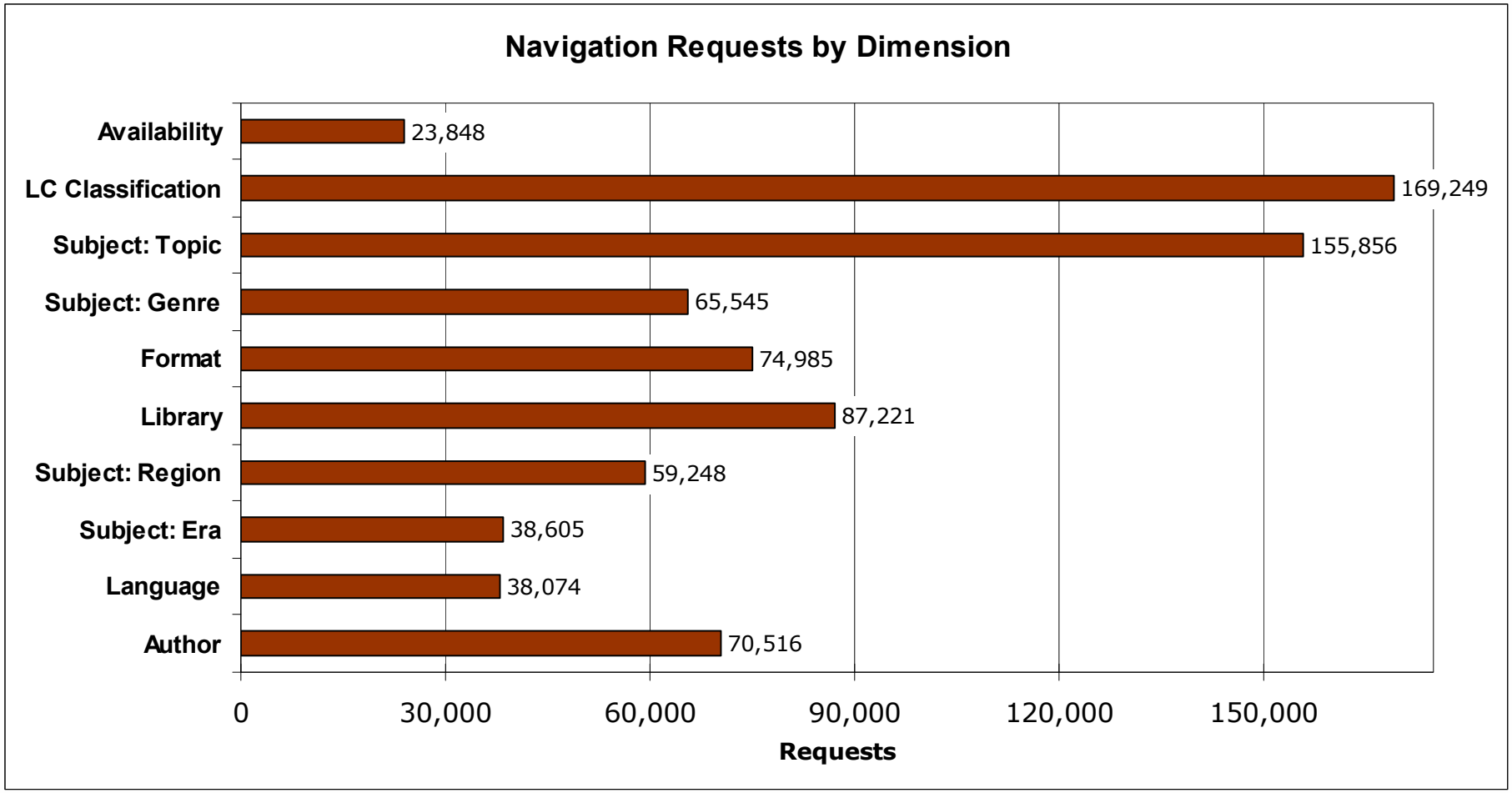
Usage patterns, cont.



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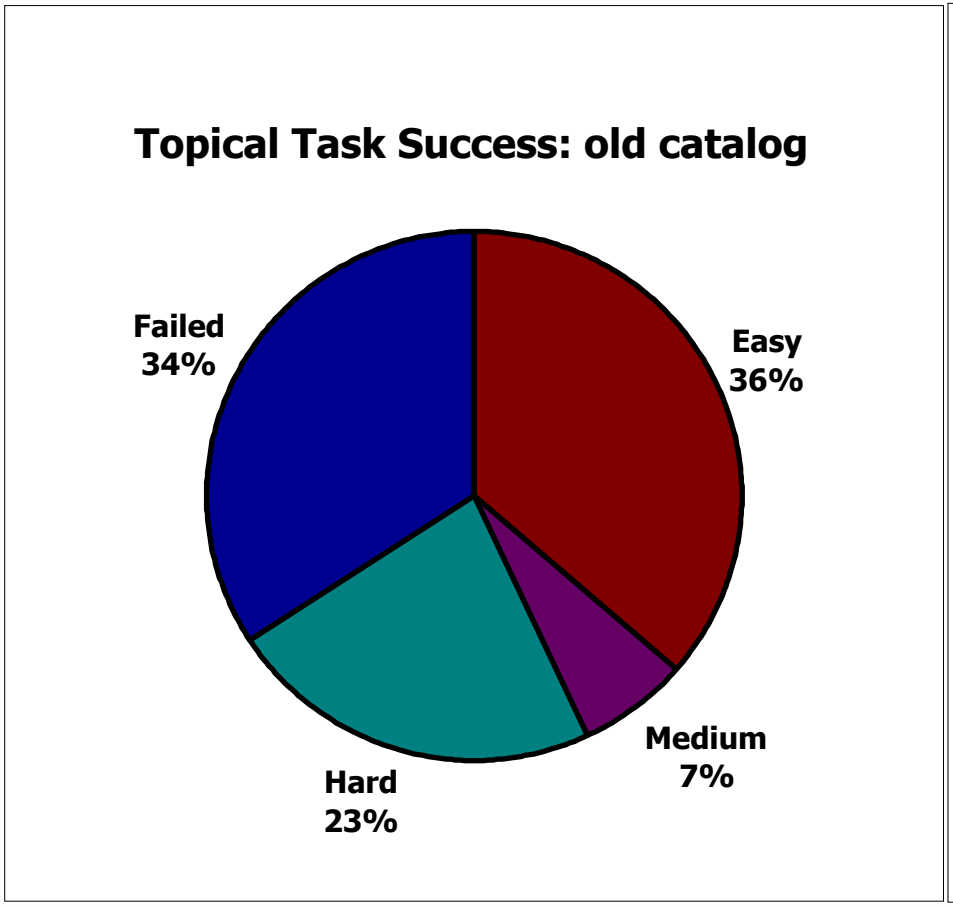
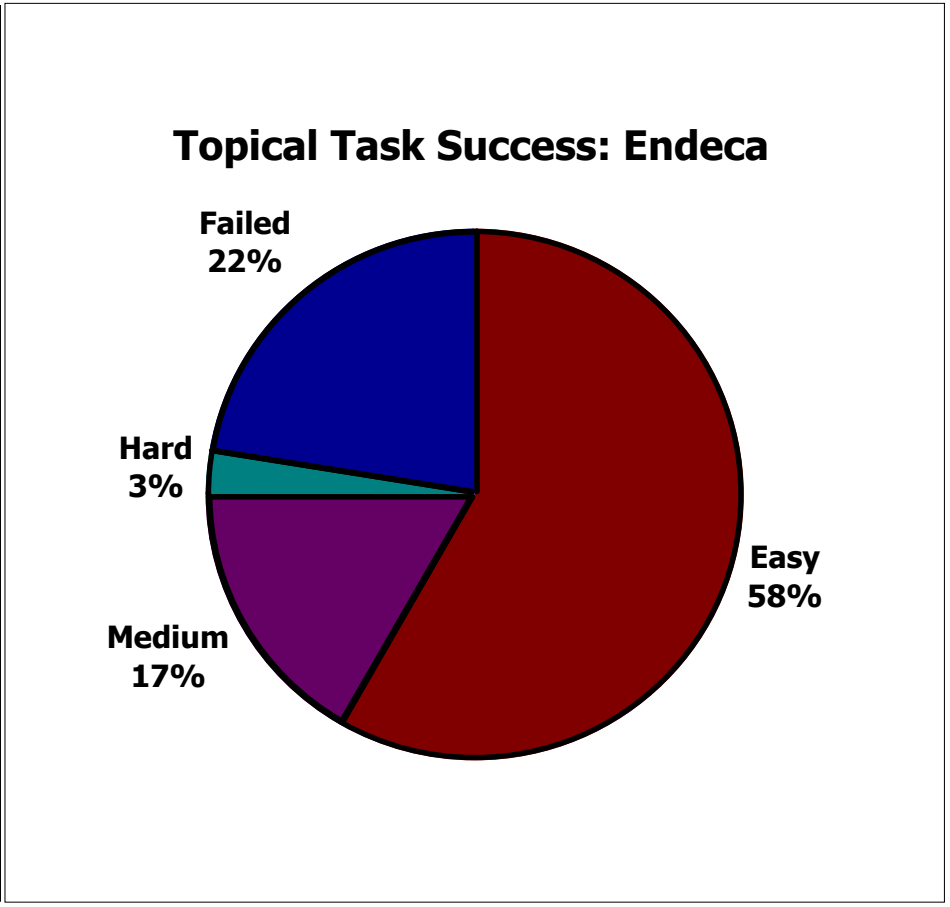
Usability test results





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Some User Reaction

"This is absolutely the coolest thing I've seen all century."
- Will Owen, Head of Systems (UNC Libraries)

"Also, I'm really digging the new NCSU library catalog. Very nice."
- Educause staff (non-librarian)

"The new Endeca system is incredible. It would be difficult to exaggerate how much better it is than our old online card catalog (and therefore that of most other universities). I've found myself searching the catalog just for fun, whereas before it was a chore to find what I needed."
- NCSU Undergrad, Statistics

And just a handful of librarian blog excerpts:

"The best library catalog interface I have come across to date."

"It's brilliant — faceted browsing and relevance ranking really improve access. It makes the search experience closer to what users expect when searching on the web."

"NCSU libraries butcher the pig. Andrew Pace of the NCSU Libraries, who has said that making minor changes to library catalog systems is like putting lipstick on a pig, has unveiled a revolutionary new interface to their catalog."

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Future Plans

- Ongoing tweaks:
  - Continued usability testing
  - Relevance ranking algorithms & spell correction thresholds
  - Display fixes/enhancements
  - Additional browsing options

- Endeca 2.0 ideas
  - FRBR-ized display
  - Discussions with OCLC regarding FAST (Faceted Access to Subject Terms)
  - Patron-generated refinements
  - Build detail page in Endeca with live item data from Oracle
  - Shopping cart functionality for email/export of records
  - Enrich records with supplemental content – more usable TOCs, book reviews, etc.
  - The death of authority searching (?)

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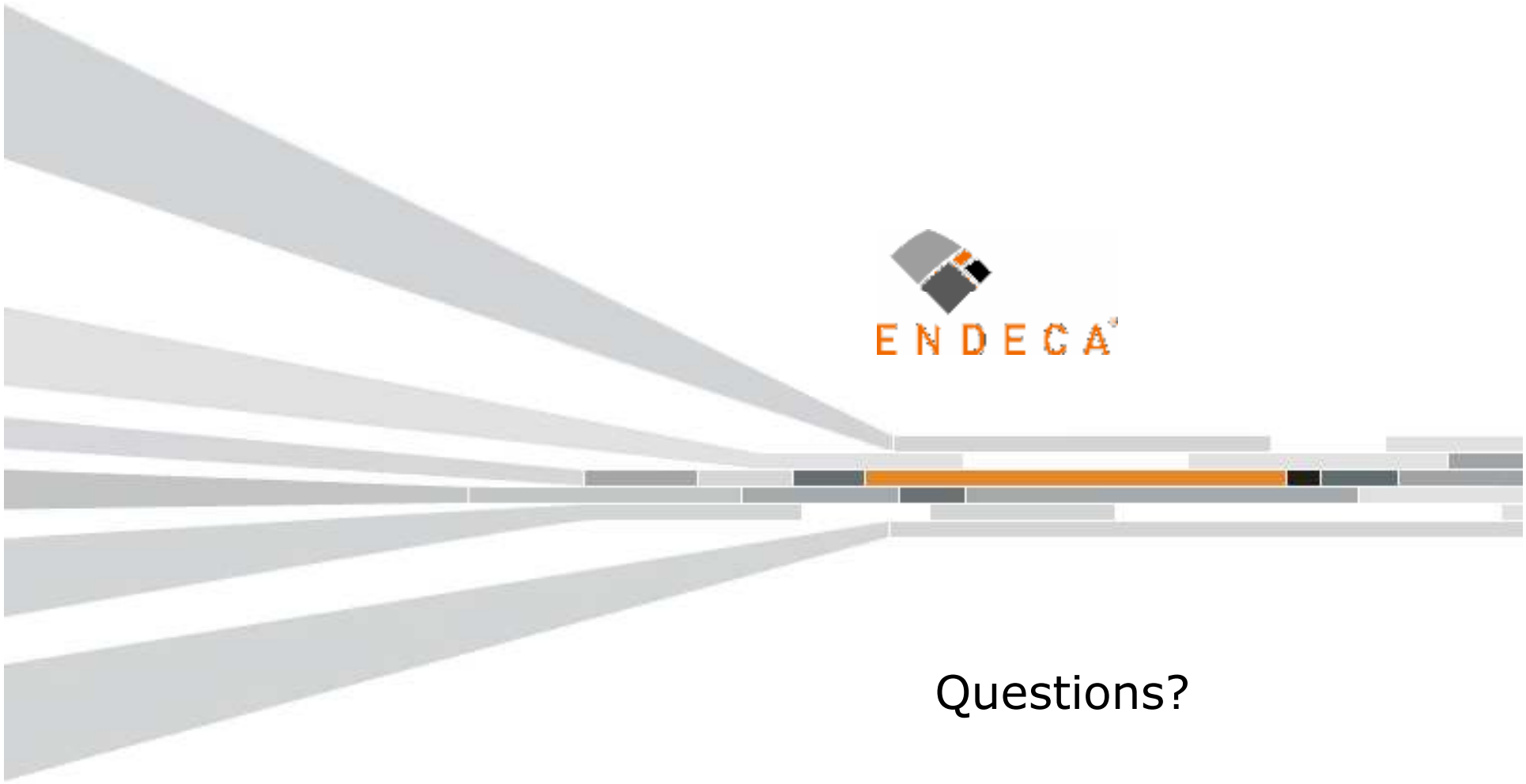

Questions?

Thank You

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