Endeca Catalog Usability Test
Findings Report
Prepared by Sandy Littletree
February 2008

Background
Six participants, three undergraduate students and three graduate students at NCSU, participated in a round of usability testing for the library catalog during late January and early February of 2008. All sessions were conducted individually in the NCSU Libraries Usability Lab and the digital recordings are available for further review.

The participants' previous experience with the catalog varied. Three were regular users (two graduate students and one of the undergraduates) while the others were infrequent users or had used the catalog less than two times. The graduate students included one Ph.D. candidate and two Master's level students. The undergraduate participants included a sophomore, a junior, and a senior.

The goal is to test a catalog interface that includes recommended design changes from the NCSU Libraries Endeca Product Team. The test specifically looked at facet use, "Expand Your Search" (aka "Search TRLN"), the RSS button, Current Availability, and the Current Search box.

The tasks and task difficulty ratings can be found in Part I while a summary of usability issues can be found in Part II. Part III includes a discussion of tasks. Part IV focuses on the Search TRLN interface and a discussion of the Expand Search box label. A list of interesting comments from participants is included in Part V, Other Findings.

The test was based on a previous Endeca usability test created by Emily Lynema. This 2008 test was facilitated by Tito Sierra and Angie Ballard.

Part I: Tasks

Task Difficulty Key

<table>
<thead>
<tr>
<th>1</th>
<th>Easy</th>
<th>1st or 2nd try - no problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Med</td>
<td>1st or 2nd try - observed difficulty</td>
</tr>
<tr>
<td>3</td>
<td>Hard</td>
<td>2nd or 3rd try - expressed difficulty</td>
</tr>
<tr>
<td>4</td>
<td>Fail</td>
<td>Failed or gave up</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Task</th>
<th>Avg. Difficulty</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Your professor has suggested that your group begin your project on Conservation and Biological Diversity by looking up background information in a book titled <em>Firefly encyclopedia of trees.</em></td>
<td>1a. 1</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>a. Please find this title in the library catalog.</td>
<td>b. Where would you go to retrieve this book?</td>
</tr>
<tr>
<td>2. You are working your way through the Harry Potter books and are ready to read the next one on your list, titled “Harry Potter and the Goblet of Fire”.</td>
<td>2a. 1</td>
</tr>
<tr>
<td></td>
<td>a. Is there a copy of this book available to check out at NCSU Libraries?</td>
</tr>
<tr>
<td></td>
<td>b. How would you find out if any of the other universities in this area, like Duke or Chapel Hill, have a copy of this book available to check out?</td>
</tr>
<tr>
<td>3. You are researching deforestation as part of a Forestry course this semester.</td>
<td>3a. 1.67</td>
</tr>
<tr>
<td></td>
<td>a. Does the library have any books about deforestation?</td>
</tr>
<tr>
<td></td>
<td>b. For your part in the group project, you’ve been assigned to find information about the economic aspects of deforestation in particular. How would you narrow your search to this specific sub-topic?</td>
</tr>
<tr>
<td>4. Imagine you teach introductory Spanish and you want to broaden your students’ horizons by exposing them to Spanish poetry.</td>
<td>4a. 2.5</td>
</tr>
<tr>
<td></td>
<td>b. Find a recording of a poet reading his or her work aloud in Spanish that you can play for your students.</td>
</tr>
<tr>
<td>5. You’re trying to find some good references on using Ajax with Java for a web programming class. Since you need to finish your assignment by tomorrow, how would you find all the books that are available for checkout right now?</td>
<td>5. 2.33</td>
</tr>
<tr>
<td>6. Your cat is acting like he doesn’t feel well, and you are worried about him.</td>
<td>6a. 1</td>
</tr>
<tr>
<td></td>
<td>a. Please find 2 books that provide information specifically on cat health or caring for cats.</td>
</tr>
<tr>
<td></td>
<td>b. You are on main campus, and you notice that a lot of these books are located at the Veterinary Medicine Library. You don’t want to take the bus over there. How would you find all the books on this topic that are available to you at D. H. Hill Library?</td>
</tr>
<tr>
<td>7. Imagine you are taking an American history course that requires you to find published first-hand accounts from the Civil War period. How would you search for this information?</td>
<td>7. 1.33</td>
</tr>
<tr>
<td>8. You are studying attention deficit disorder (or ADD) in your psychology class.</td>
<td>8a. 2.17</td>
</tr>
<tr>
<td></td>
<td>a. Can you locate several books about attention deficit disorder?</td>
</tr>
<tr>
<td></td>
<td>b. What floor would you go to in order to find books about diagnosing ADD?</td>
</tr>
<tr>
<td></td>
<td>c. What floor would you go to in order to find books focusing on the challenges of educating students with ADD?</td>
</tr>
</tbody>
</table>
### Part II: Endeca Catalog Usability Issues

### Usability Issue Summary

This list is ranked by severity, then users affected, so the most critical usability issues are on top.

<table>
<thead>
<tr>
<th>Usability Issue</th>
<th>Severity</th>
<th>Users Affected</th>
<th>Possible Resolution(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Users don’t immediately see how to expand their search to other universities</td>
<td>Blocker</td>
<td>3/6</td>
<td>Change wording/design of the box</td>
</tr>
<tr>
<td>Users aren’t able to use the results list to find book retrieval information</td>
<td>Blocker</td>
<td>2/6</td>
<td>Use icons or color coding for branch library locations</td>
</tr>
<tr>
<td>Users’ first response is to use the drop-down menus (Sort-by and search field options) rather than look at the facets</td>
<td>Major</td>
<td>5/6</td>
<td>Make facets easier to see; find another way to label “Sort by”</td>
</tr>
<tr>
<td>Users do not understand how to effectively use the call number locations facet and subject: topic facet</td>
<td>Major</td>
<td>5/6</td>
<td>Perhaps incorporate a similar “What’s this?” type, mouse-over information for each facet</td>
</tr>
<tr>
<td>Users did not know how to appropriately use the different searches available: title, subject, and anywhere</td>
<td>Major</td>
<td>4/6</td>
<td>Search terms in the current search box could include what field was used; users could be prompted to reset their search so that they realize that they are still searching in a certain field</td>
</tr>
<tr>
<td>Users become confused about the differences between formats</td>
<td>Major</td>
<td>2/6</td>
<td>?</td>
</tr>
<tr>
<td>Users are unsure of an effective strategy to search for materials in other languages</td>
<td>Minor</td>
<td>5/6</td>
<td>?</td>
</tr>
<tr>
<td>Users don’t notice the current search box</td>
<td>Minor</td>
<td>4/6</td>
<td>Move current search terms so that they are in the same box as the search field</td>
</tr>
<tr>
<td>Users do not understand the functionality of the RSS feed for the current search</td>
<td>Minor</td>
<td>3/6</td>
<td>Use the Search TRLN label “What’s this?” and the mouse-over information for RSS feeds</td>
</tr>
<tr>
<td>User clicked on start over rather than “search” to begin search</td>
<td>Minor</td>
<td>1/6</td>
<td>Remove the word “start” from this phrase or move it further away from the search text box.</td>
</tr>
</tbody>
</table>

#### Severity Definitions

- **Blocker**: An issue that prevents users from using the catalog successfully in a general sense outside of test-specific tasks.
- **Major**: An issue that does not have an obvious workaround and generally led to task failure during test.
- **Minor**: An issue that causes annoyance or irritation, but generally not task failure.
Part III. Discussion

Current Search Box
A majority of the students did not notice or use the Current Search Box to complete the tasks or to answer a question about a current search scenario. When specifically asked to determine what the current search was based on sample search, a majority of the participants used the results list to make a guess as to what had been searched instead of noticing that the Current Search Box had these terms in it: ‘poetry’ ‘audio’ ‘Spanish’.

Only two of the six participants (one undergraduate and one graduate student) used the current search box and the “x” buttons throughout the tasks without prompting as well as during the task which asked them to broaden the search to include all Spanish poetry, not just audio. One participant consistently used the “x” buttons to clear his searches. Though he used this feature, he said that he expected each search keyword to be on its own separate line instead of being combined into one long search, with only one “x”. Another wanted to see these terms in a line under the search field.

This box did not catch the attention of all the participants. The one student who consistently used the box commented that this box “doesn’t stand out.”

Library Location Information in Results List
Participants were asked where they would go to retrieve a specific book, a book that is located at the Natural Resources Library. Half of the participants used the information on the results page to determine that the book had to be retrieved from the NRL. One student tried to use various pull down menus on the results page and then successfully answered this question after checking the detail page. Another participant gave the call number location, but did not see that it was in a branch library.

Expand Your Search box
Five of the participants were asked how they would find out if any of the local universities had a copy of a specific Harry Potter book available for check out. The Expand Your Search box was not recognized by all students right away as being a useful tool to find titles at local universities. Those who navigated away from the prototype page because they entered into the detailed record page, tried to use the Request Item service. Three of the participants who initially failed to see this box during their first attempt to complete a task noticed it later during the test. As soon as they recognized it, they realized that this tool would have helped them answer this question.

RSS Feed Button
The participants were asked what they thought would happen if they clicked on the orange button labeled RSS. This is what the participants saw on the screen:
Three of the participants' responses indicated that they had a general understanding that something would happen to let them know about new titles for a certain search.

One of the undergraduate students, however, was not able to come up with any guesses. Another undergraduate thought that it might do "some kind of search." One graduate student thought that it might bring back a list of "references" for a search, but did not indicate that it was for this current search.

None of the six students were previous users of RSS.

When shown the Search TRLN site with a similar box, two participants indicated that they liked the "What's this?" and the pop-up mouse-over box that Search TRLN uses. This is what the participants saw on the Search TRLN site with the mouse-over display:

### Call Number Facet Use to Browse Shelves

Only one participant correctly used the call number location facet to locate clusters of similar resources on the shelves. Another participant also used this LC facet to answer the question, but selected the wrong LC Class for the particular question. This participant may have thought that medical information would be included in a Social Science LC Class. She successfully used it for the second part of the question, indicating that she indeed understood that the Call Number location can be used to locate clusters of books of a similar topic.

A popular way to approach this task (4 out of 6 participants) was to re-do the search, adding the additional term to the search ("attention deficit disorder diagnosis"). The
participants would then scan the results list to make a guess as to what floor to find most of the resources on this topic.

Another participant also used the scan-and-guess approach after using the Subject: Topic facet to narrow down the original search.

Call Number vs. Subject: Topic
All of the participants were asked what they thought the Call Number Location facet function was. Their answers indicate that they have a general understanding of this concept, but may not be able to utilize it for practical purposes (such as browsing the shelves). For instance, one undergraduate stated that clicking on a call number would narrow your search to a particular library, but that clicking on a topic would be more useful because you may not know, for instance, if “it’s in Medicine or Social Science.”

Some answers indicated that they knew the call number would give information about how to locate books on a similar topic.

When asked to describe the difference between Call Number and Subject: Topic, participants’ answers were more vague. The graduate students seemed to have a better understanding of the overlap between Subject: Topic and Call Number. For instance, one graduate student specifically stated that he knew that clicking on a subject would give you information in other call numbers.

Students had a stronger preference for Subject: Topic, often stating that it was more specific and useful. An undergraduate student stated that Call Number is “too generic”, while a graduate student stated that “you can get more” from the Subject: Topic and that clicking this narrows the search even more than just to a “discipline”.

Facet Usage and Comments
Of the eight tasks given to participants, six of them were designed to determine if facets would be used to find the answer. Though there are many ways to approach a task, it was believed that the following facets would be most used:

- Subject: Topic (question 3b and questions 7b and 7c)
- Language (question 4a and 4b)
- Format (question 4b)
- Availability (question 5)
- Library (question 6b)
- Call Number Location (question 7b and 7c)
- Region (question 8)
- Era (question 8)
- and Subject: Genre (question 8)

Of these facets, the most used were Subject: Topic (6/6 users); Library (5/6 users) and Format (5/6 users).
Subject: Topic  All participants used the Subject: Topic at some point during their individual sessions, though the popular strategy when asked to narrow a search was to redo their search. Only two participants recognized the facet “slam dunk” in question 3b where the exact topic they were asked to find (economic aspects of deforestation) was at the top of the Subject: Topic list. The Subject: Topic facet was not always successfully used. For example, one undergraduate student tried to use this facet to find “first hand accounts” as a Subject: Topic after doing a search for “Civil War”. She did not notice “Personal Narratives” as a Topic or under the Genre facet. She ended up redoing her search and was successful.

In a later question, Subject: Topic was highly rated by four participants as one of the most useful facets.

Library  Participants were asked to find a cat health book located at the D.H. Hill Library. Though the Library facet was eventually used by most of the participants for this task, it was not immediately found and was never used by any of the participants on the first try. The first place five of the participants looked at was the Sort By drop-down box. The one participant who did not use the Library facet looked through the list of facets to try to answer the question, but never discovered it.

Library was twice included in the participants’ lists of most useful facets. It was also included in one participant’s list of least useful facets.

Format  Participants were asked to find a “recording” of a poet reading his or work aloud in Spanish. Five of the participants recognized that the Format facet would be useful, however four of the participants tried to use Videos/DVD rather than Audio (which only appears after clicking “Show more”). One of the participants realized that this Video/DVD search was not producing the right results, causing her to back out of the search using the back button. One participant who failed at this task tried other facets such as Subject: Genre: Readers and attempted to use the Sort By drop-down box.

Format was mentioned four times as one of the most useful facets. One participant said that it “should be brought closer to the top”. In a post-test question, a participant stated that “finding a video recording” was difficult because “it doesn’t stick out under format—an ‘other formats’ drop down would be easier”.

The following facets were used occasionally: Language; Subject: Genre; Call Number Location

Language  Participants were asked to find a book of poetry in Spanish. Most participants (4/6) entered a specific search (“Spanish poetry”) to locate this material. Two of the graduate students searched for “Spanish poetry” as a
subject and were immediately successful (without having to use a facet). Undergraduates tended to do a title search or anywhere search for "Spanish poetry" and struggled with their results.

Language was twice mentioned as one of the least useful facets.

**Subject: Genre** This facet was used once in the Spanish poetry question and twice for the Civil War first hand accounts question. A graduate student participant used Subject: Genre: Fiction to look for poetry written in Spanish Poetry. Two of the graduate students used Subject: Genre to locate first hand accounts by using personal narratives and biography.

Subject: Genre got four votes for being one of the three most useful facets.

**Call Number Location** Participants were asked to find which floor of D.H. Hill they would find a majority of the books on two separate topics: diagnosing ADD and teaching students with ADD. Only two participants used the Call Number Location to approach this task. The most popular strategy was to re-do the search and then scan the results list and make a guess based on the results.

Call Number Location was mentioned twice as one of the three most useful facets. Participants were not asked to numerically rate the three most useful facets (as in first, second, third), but it was mentioned third for these two participants. See below for further discussion of Call Number Location

The following facets were not used at all: Availability, Region, and Era.

**Availability** To determine availability, participants chose to count the number of available books on the results screen.

Although Availability was never used during the tasks, three participants rated Availability as one of the three most useful facets in a later question. One student stated that it should be closer to the top of the page. Another participant commented on the use of red and green text to indicate availability.

**Region and Era** Region and Era could have been used for the question about first-hand accounts from the Civil War period. However, most participants chose to search "Civil War first hand accounts" (or a similar search) and found their results without having to narrow the search.

These facets were consistently named as the least useful facets in a later question. One undergraduate student's reasoning for her low rating of Region was that "it's not important to know where a book is coming from." Another student, who rated Era as an unimportant facet said that "if all the results are from the 20th century, then it's just taking up space."
Facets were used occasionally by participants, but not consistently. The only student to immediately use facets was the Ph.D. candidate; however this participant did not use facets for every task that could have been done using a facet. For instance, this participant chose to count the number of available books rather than clicking on the Availability facet. Other successful strategies included using the Search within results feature or entering in a specific search, such as “attention deficit disorder diagnosis” or “civil war first hand accounts”.

One interesting use of the facets occurred when a participant did not even attempt to try to use the search box to answer the Spanish poetry question. Instead, the participant’s strategy was to first use these facets: 1.) Genre: Fiction, then 2.) Language: Spanish, then 3.) scanned the Subject: Topic list for poetry.

The following are a sample of some of the comments made about the facets:

- You don’t know to scroll down—collapsible menu would be better
- I’m not familiar with using the left side—it’s a lot of info—you’d have to play with it
- Once you get used to the layout...
- Oh, I didn’t notice Availability...Oh, there’s Spanish...Oh, here’s the current search box [comments from the same participant]

Participants were asked to name the three most useful facets and the three least useful facets, based on their work at NC State. The following is a visual representation of their votes (see above for a discussion of individual facets):

![Most Useful Facets](image1)

![Least Useful Facets](image2)

**Part IV. Search TRLN**

**Search TRLN Interface Impressions**
Most of the participants said that the Search TRLN site was what they expected. One participant called it a “generic” catalog and another said that it would probably have something to do with Interlibrary Loan. One participant expressed surprise upon arriving
at the Search TRLN site, stating, “At first it looked dramatically different, but then I realized that it is the same set-up.”

Several participants were specifically asked about their impressions of the Search TRLN interface and how its design compared to the NCSU Libraries catalog. The following are a sampling of their comments:

- Likes the RSS help link labeled as “What’s this?” on Search TRLN site—more noticeable
- Likes that you can close options (facets) on Search TRLN site
- Likes current search box in Search TRLN (but this student didn’t notice it or use it on our site)
- Likes that titles in Search TRLN are bold
- Likes format icons (Book, CD Rom, etc) in Search TRLN—makes scanning easier
- Likes Suggestions/Questions option in Search TRLN
- Thinks that TRLN banner is dominating too much
- Likes that NC State site is limited on the sides (as opposed to the white space in Search TRLN)

All students indicated that they would use this feature. However, most emphasized that they would only use it under special circumstances, such as when in “a time crunch” or “only if I really needed a book”. An undergraduate stated that he would use it because, “sometimes things are available in PDF format and you could use this to get it.” Only one student, a graduate student, stated that she would use this because, “often NCSU doesn’t have what I’m looking for and I use materials from other libraries.”

Labeling of Expand Search box
Four options were given to the participants, asking for the preferences for the wording of the Search TRLN link. The following is the breakdown of the votes given to the four options.

<table>
<thead>
<tr>
<th>Label</th>
<th>Votes for Most Liked</th>
<th>Votes for Least Liked</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Find more at triangle area universities</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>B. 1024 results at triangle area universities</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>C. Find more at local universities</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>D. 1024 results at local universities</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Comments on the number of results vs. no number given:
Although one participant did not understand what the number represented, all of the others gave a strong opinion regarding whether they liked the number or not. The two options that included the number of results were preferred over remaining options that did not include a number. One participant who indicated a preference for the numerical description gave this reason: “My eyes are drawn to the number without having to do a
lot of reading”. Four participants used the word “specific” when describing their preference for knowing the number and called the labels without the number “least specific” or “less specific. It is clear that a majority of the participants preferred the number.

It should be noted that one participant said that the number was “not relevant.”

Comments on “triangle area universities” vs. “local universities”

Though there was no majority vote for a preference for this part of the label, there were stronger opinions in favor of “triangle”. Comments included; “I like triangle because it lets me know the general area”; “triangle is better”; and “local universities isn’t appealing to me.” One participant had a negative reaction to triangle area universities: “triangle doesn’t help you—it’s too specific”.

Part V. Other Findings

The following are other comments that caught the attention of the facilitator(s) and/or the observer.

- There is too much scrolling
- Searching for abbreviated journal titles is frustrating in the catalog
- I didn’t think they had fiction here
- The Webmail link [at the bottom of the page] is random
- It might be a good idea to alert the user if you are going away from the NCSU Libraries site. [Navigating away from the NCSU Libraries site]
- I’d like to see an advanced search option like Academic Search Premier (referring to ability to do “and/or” searching)
- White letters on the top should be bolded
- Colors are good—nice not to have a lot of red
- I like the quick search box—it’s how I usually start
- The hardest part was searching in another language
- The interface is clean and easy to use