Project Cover Sheet

Delivery Services

Formal Test of ILL/7-FAST/MITS services

Project

Interlibrary Loan (ILL) is a free document delivery service to borrow and lend materials that are not owned by the University of Michigan Libraries. The service is for UM students, staff and faculty.

7-FAST is a for-fee document delivery service to deliver books and other materials quickly to UM students, staff and faculty.

Michigan Information Transfer Source (MITS) is a for-fee document delivery service to deliver books and other materials to non UM-affiliated library patrons.

Usability Working Group

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Objectives

The goal for this test was to explore usability issues of new prototypes of the three delivery services and develop recommendations to help delivery services enhance learnability and usability.

Methodology

Method - Formal User Test

8 participants

Dates of study: July-August 2007

Results & Analysis

Test results revealed that users were confused trying to obtain basic information about the delivery services, particularly ILL and 7-FAST. The rates calculation for MITS was also quite confusing. ILL book loan request was fairly successful but 7-FAST book chapter request indicated several fields need improving.

Recommendations for ILLiad:

Indicate the eligible loan type of 7-FAST copy request

Add a "7-FAST Rush" option

Use "Required" in red instead of using asterisk for required information, and add "Recommended" field for ISBN

Potentially divide the fields into required, recommended and all other sections

Add side bar text that informs users how easy it is to fill out an ILL request using WorldCat

Make material types visible for both ILL and 7-FAST menus

Separate "Submit" button by placing it on the right bottom corner of the page, or use a different color for "Submit" and "Cancel"

Recommendations for Interlibrary Loan (ILL):

Recommendations

Add an "Hours" tab to the left navigation menu

Use more spacing between questions on the FAQ page under each question section

Recommendations for 7-FAST:

Add an "Hours" tab to the left navigation menu

Change background color of fee table and combine two tables on "Fees/Delivery" page

Recommendations for MITS:

Combine "Rates" page and "Shipping" page

Include "Payment Option" on combined "Rates/Shipping" page

Add "rush" in red to "book loans" table on the "Rates" page and use bold or colored font for "surcharge may apply" information

Add an FAQ page for MITS

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Introduction

Reason for Testing

The University of Michigan Libraries home page underwent a revision this past spring, with the result that many areas of the library decided to revise their existing web pages to match the new Library template. These revisions were also intended to make the pages more accessible and allow library patrons to more easily access the information they needed. In order to ensure that the pages were both informative and easy to navigate, the Library Usability Working Group (UWG) decided to undertake formal usability testing of several different library services over the summer so that we could make recommendations before they went live in Fall 2007.

Services Tested

The focus for the UWG this summer was intended to be delivery services and the MGet It service. The interns initially met with Anne Beaubien, the stakeholder for Cooperative Access Services (CAS), which include Interlibrary Loan (ILL), 7-FAST, and Michigan Information Transfer Service (MITS). They also met with Ralph Johnson, the technical support staff for these delivery services. The web pages for all three delivery services were being redesigned to use the new library web template, and the ILLiad service, used to book items through ILL and 7-FAST, was also being redesigned to make it more aesthetically pleasing and easier for library patrons to use.

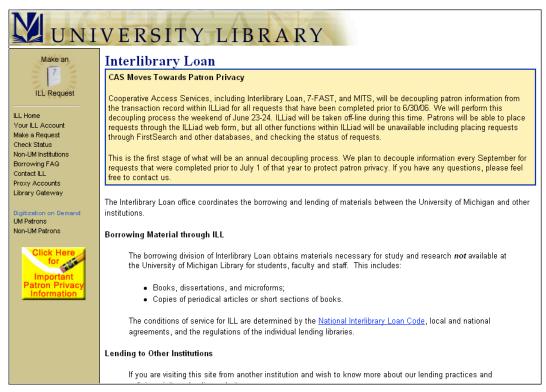


Figure 1: existing ILL front page

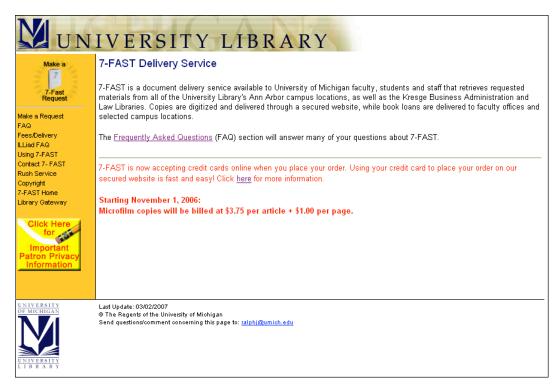


Figure 2: existing 7-FAST fron page



Figure 3: existing MITS front page

Testing Setup

Test Development

After interviewing the stakeholders, the interns performed a heuristic evaluation of the ILL, 7-FAST, and MITS web sites. Using this information we decided to create one test for each of the different delivery services web sites and one for the ILLiad interface.

To develop each test, a script was created that the presenter would use to lead the participant through tasks (Appendix B). We also developed an outline for the tasks that illustrated, using screenshots, the ideal route that a participant would follow to accomplish each task (Appendix A). If a participant deviated from this outline, it could indicate a problem with the interface. Questionnaires were developed for each task, and for the beginning and end of the test. Finally, the interns asked Ralph to connect web pages for each delivery services, as they were separated on the test server when the usability testing began. The interns also developed a prototype of the web pages for ILLiad that would be used for the test. This was also necessary, as the prototype of the ILLiad interface was not live.

Participant Selection

Participant breakdown for our tests was:

- 1 faculty member
- 1 staff member
- 2 undergraduate students
- 4 graduate students

To attract faculty members, faculty at the Schools of Nursing and Engineering were emailed. We received two responses from engineering faculty who participated in our study.

To recruit our other participants, we advertised digitally in three ways:

- An advertising flyer on Facebook was run for three days, at a cost of \$15 total
- An advertising listing was posted in the Facebook Marketplace for free
- A news item was post on the University Library home page

Both means of advertising on Facebook were shown only to members of the University of Michigan Facebook network. Preliminary analysis of server logs and feedback from our participants shows that the University Library news item was the most effective in recruiting users, followed by the Facebook Marketplace posting. The flyer, which was the only option that cost money, seems to have been the least effective. We also had several participants that indicated they had heard about us through word of mouth. In the future, we will post for participants in the Facebook Marketplace and on the University Library home page, and indicate that interested parties should feel free to have their friends and acquaintances contact us. Interested parties were asked to indicate their ideal testing location, either central, medical, or north campus.

We received 31 responses from University staff, undergraduate students, and graduate students. This included 9 graduate students, 10 staff members, and 12 undergraduate students. Participants were emailed a list of available time slots and asked to indicate their top three choices. We then assigned test dates and times to each participant.

We were fortunate to be able to compensate testers with \$15 Amazon.com gift certificates.

Testing Procedure

As previously mentioned, we gave our participants the choice between having the tests carried out on north campus, medical campus, or central campus. We did this even though it caused more work for us because we believed that we could entice a wider pool of applicants to participate if they didn't have to travel to a single location on central campus. Study rooms were used for the testing on each campus, and these rooms were ideal because they had a table, several chairs, wireless Internet connections, and doors that could be closed to block outside noise and give privacy to the test.

To carry out our tests across campus, we created a mobile usability lab for our equipment. We used a backpack and a 29" piece of rolling luggage to carry the equipment around. We used the following equipment in our tests:

- 1 Gateway 14" laptop with 1.6 Ghz Pentium M processor
- 1 USB optical mouse with scroll-wheel
- 1 web camera with microphone
- 2 Sony Handycam digital video cameras
- 2 full tripods

Typically, we would arrive 15-20 minutes before the scheduled test to set up. We would position two chairs next to each other on one side of the table. We would set up the laptop in front of the left chair, with the mouse and web camera set to the right of the laptop so that the interviewer could use the mouse to switch between tasks. This, of course, assumed that our participants were right-handed. One participant was left handed and moved the mouse to the left of the laptop, which caused a small amount of difficulty. In the future, we would ask participants whether they are right or left-handed so we could position the laptop and mouse so the interviewer could easily reach them. The web camera was used simply as a microphone, as the laptop we used was not powerful enough to record video, run our tasks, and run Camtasia to record the screen.

We also set up the two tripods and digital video cameras. One camera was positioned in front of the participant to capture the participant and interviewer's faces as the test was carried out. The other camera was positioned behind and to the left of the participant to capture the screen of the laptop. This video was to serve as a backup in the case that there was a problem with the Camtasia recording. As we did not have a problem with the Camtasia recording for any of our tests, this video proved unnecessary.

The laptop was turned on and the wireless network connection was tested using the web browser Firefox. The interviewer logged in to the university wireless using his or her Kerberos credentials. The interviewer then logged in to Mirlyn and minimized the web browser, so that the participant could use Library services like Mirlyn and ILLiad without having to log themselves in. Firefox was set up to delete history items and cookies so that no user would have the advantage of seeing what other users had done in previous tests. Camtasia screen recording was also started at this point.

Once setup was complete, the non-interviewer would leave to wait for the participant and bring him/her to the meeting room where the test was taking place. The non-interviewer would then start the video cameras and leave the room. The interviewer would begin reading the script to the participant.

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Figure 4: our testing setup

Test Overview

Outline

The test we designed is made up of several tasks that our participants went through. These tasks are outlined in Appendix A, and the script that we read to participants is available in Appendix B. The basic order of the test follows:

- Greet the participant and make sure they are settled and comfortable.
- Read an overview of the test to participant, including their roles, and our needs.
- Ask the participant to sign an IRB approved consent form.
- Ask the participant to fill out a questionnaire containing demographic information.
- Take the participant through four different tasks using our laptop:
 - Open the initial webpage for the task on the laptop.
 - Hand the participant a copy of the task description.
 - Read the task description to the participant and ask them to write down answers they find to each question.
 - Allow the participant to accomplish the task using the webpage, taking notes and providing information to the participant if necessary.
 - Halting the task when the participant has completed or abandoned it.
 - o Give the participant a questionnaire about the task to fill out.
 - Take the completed questionnaire from the participant and begin the next task.
- Notify the participant that the test has ended.
- Thank the participant and give them their gift certificate.
- Answer any final questions the participant has.

The purpose and a short description of each task are outlined below. The first three tasks had a similar structure:

- The user began with the front page for each delivery services website.
- The user was told to obtain four pieces of important information within the delivery services website, including services hours, rates/delivery fees, services availability on certain days during the academic year, etc.
- The user was expected to write down the answer in the blank space on the task description sheet to complete the task.

The fourth task was to ask the user to place a book loan delivery request for ILL and a book chapter request for 7-FAST. The user was told to only work on the computer and complete the task within the revised ILLiad web pages. Two web pages with "request completed" information were displayed when the user filled out the request form to inform them the task was completed.

Task 1: Obtaining Information from ILL

This task was designed to be a "warm up" task that would be fairly easy to complete. We focused on tasks using the FAQ page for ILL and 7-FAST services and the Policies page for MITS, containing necessary information about how to use the service. We also wanted to observe how useful and straightforward the left navigation menu was by asking users to locate basic information about the service including service availability, rates/delivery fees, and payment options, etc. We were interested in how the new prototype of each delivery service could help different types of users obtain basic understanding of the delivery service.

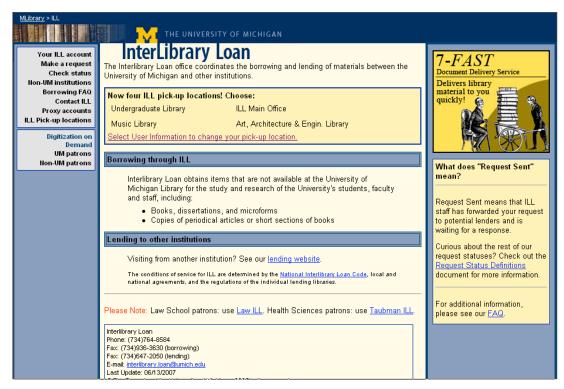


Figure 5: prototype of ILL front page

This task was designed to test three issues of the ILL web pages:

- 1) Whether the left navigation menu is straightforward.
- 2) Whether the ILL FAQ page is user-friendly, and
- 3) Whether the information about the service availability can be found under the "Contact ILL" page.

We asked the user to find ILL pick-up locations. Ideally, the user would look at the ILL front page or click the "pick-up location" tab in the left navigation menu to find the information. Next, we asked the user to find how soon the requested material will arrive. Ideally, the user will refer to the "FAQ" page and find it under the "I've made my request" grouping. Since we suggested the user would not need to find the information in order, the answer to the fourth question was also contained within the FAQ page and ideally the user would find the answer under "placing a request" section. The third question was to ask the user to find out ILL service availability on the day after Thanksgiving. This piece of information was supposed to be the most difficult to find since the current prototype put it under the "Contact ILL" page and there was no "Hours" or "Calendar" tab in the left navigation menu. Ideally the user would click on all links in the left menu and finally locate this information.

Task 2: Obtaining Information from 7-FAST

This task was designed to test how straightforward the 7-FAST's left navigation menu was and find out basic information including the relationship between 7-FAST and ILL, 7-FAST service availability, fees/rates and payment option. Ideally, the user would find the fact that ILL would be the automated forwarding service for 7-FAST, and that 7-FAST availability information was on the front page. Since the 7-FAST service is a for-fee service, we asked the user to calculate the

expense to copy a two-page microform article and find out the payment option. Ideally, the user would locate these two pieces of information by clicking on "fees/delivery" tab in the left menu.



Figure 6: prototype of 7-FAST front page

Task 3: Obtaining Information from MITS

In this task, the user was told he/she was an attorney who needed to have a copy of a 60-page article from a law journal owned by a British Law Library, and a large book on copyright law delivered to their law office. The user was also informed that they were placing the MITS request at:00 AM, and he/she had never used the MITS service before. We asked the user to calculate the expense of having the copyright law book delivered to his/her law office by the fastest method possible and having the journal article owned by British Law Library delivered by the next day electronically. We also asked the user to find out payment options and the methods for ordering the article and the book.

We focused on testing the fee calculation because the current fee page was not as straightforward as the developer expected, and there was no FAQ page within the MITS site. Out of all the tasks, this task was the closest approximation to the problem situation that we were principally concerned with.

Ideally, the user would click on the "Rates" page and understand how to calculate the fees for different types of delivery requests. For the payment option task, ideally the user would click on the "Policies" tab and locate the "payment option" information there. The user was also supposed to click the "Order" tab and understand what they needed to do to fill out the "new customer form".



Figure 7: prototype of MITS front page

Task 4: Book Loan request and Book Chapter request in ILLiad

In this task, the user began with a revised ILL page. He/she was told he/she was a very busy researcher who needed to check out a book to help with a research project. The user needed to use the ILL service to get the book since the book was not owned by the UM Libraries. The user was asked to place an ILL delivery request. For the second half of this task, the user was asked to obtain an electronic copy of Chapter 4 of a book. He/she was told to place a 7-FAST delivery request to obtain the copy within a couple of business hours.

Ideally, the user was supposed to click on "Make a request" and be directed to a revised ILLiad interface. He/she would fill out the "loan" request form under the ILL section (from WorldCat) and complete the "copy" request form under the 7-FAST section (in Mirlyn).

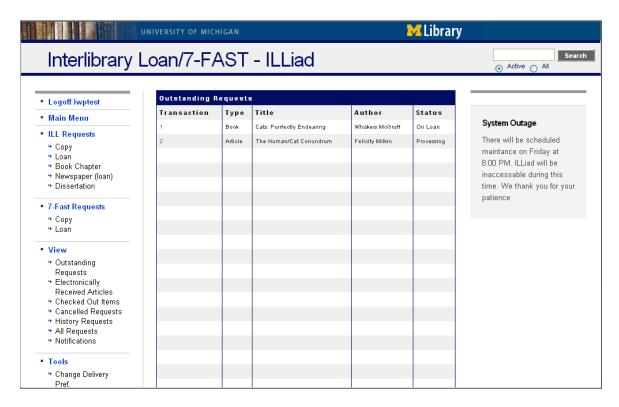


Figure 8: prototype of new ILLiad

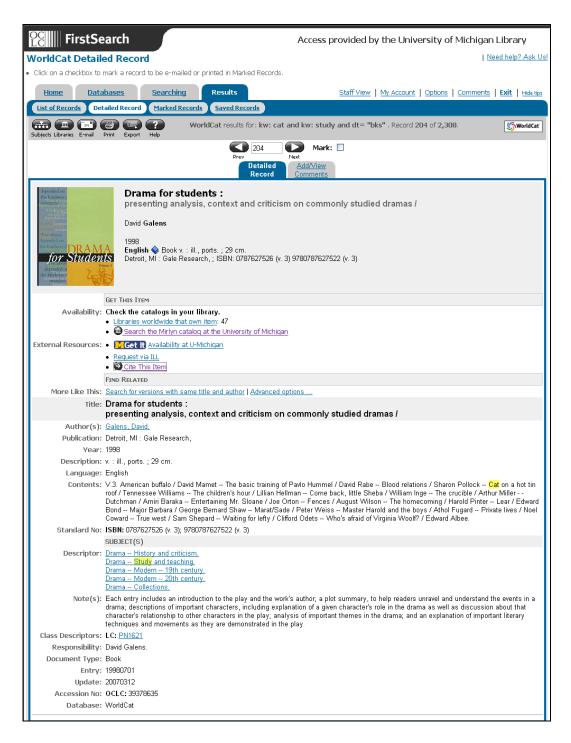


Figure 9: WorldCat record page for ILL request

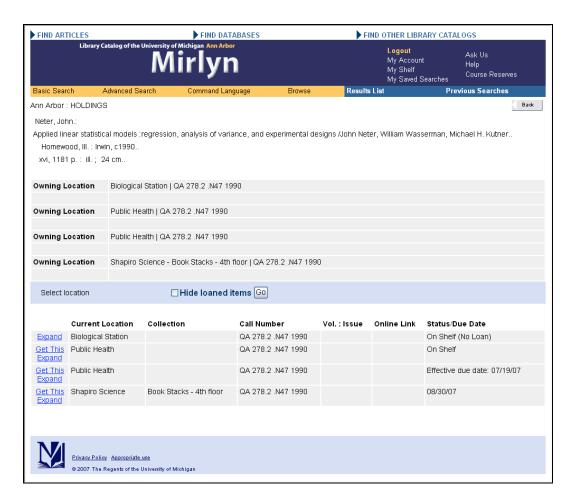


Figure 10: Mirlyn record for 7-FAST request

Results

Overview

We obtained a rich supply of data from our 8 user tests. Our findings will be organized by task. Quantitative information concerning the user's rating of each task and the number of users that completed the task successfully are listed at the beginning of each tasks' results section and summarized below. Complete information on quantitative results is available in Appendix F. Qualitative information is summarized below.

Task number	Average of Task Question 1	Average of Task Question 2	Average of Task Question 3	Average of Task Question 4	Number of users completing task
1	3.625	3.25	4.25, 4.25, 4.25, 3.875	N/A	7/8
2	4.125	4.125	4.375, 4.5, 4.25, 4.25	N/A	8/8
3	3.375	2.75	3.625, 3.625, 3.25, 3.25	N/A	5/8
4	3.875	4.5	3.75	4.5, 4.5, 4.5, 4.25	8/8

Figure 11: Quantitative test results (summary)

Task 1 Results

Task 1 had the second highest success rate of the four tasks, with 7 users successfully obtaining the required information from the ILL website. The quantitative scores for the task were the second lowest however, indicating that users felt that they did not effectively complete the task and that the ILL website was not helpful and friendly.

This likely resulted from the fact that 7 out of 8 users had problems with finding whether the ILL service is available on the day after Thanksgiving. Some users tried to use a keyboard short cut to search for keywords "hours", "calendar" and/or "holiday" on the Frequent Asked Question page; some users looked through the left navigation menu to find a tab named "hours". The remaining user who did not have problems with obtaining this piece of information was due to the fact that changes to the CAS/ILLiad pages had already taken place before the end of our testing.

Another reason the first task got the second lowest score is likely to be that users felt the FAQ page made it difficult to locate the information they were looking for. For example, most users opened the FAQ page, but some of them had a hard time locating the question "how soon will my material will arrive?". Currently the spacing between questions under each question grouping on the FAQ page is single line spacing and users had to spend some time to look through all questions to locate their desired information.

Task 2 Results

Task 2 had the highest success rate of the four tasks, with all 8 users successfully obtaining the required information from 7-FAST website. The quantitative scores for the task were highest in

question 1, indicating that users felt that they did effectively complete the task, and second highest in question 2 and highest in question 3, which indicated that the users find the 7-FAST website easy to navigate.

The major issue we found about the 7-FAST website was that most users had a difficult time finding 7-FAST hours of operation. As most users did in the first task, some of them tried to find the "Hours" tab in the left navigation menu. Even though 7-FAST displayed its hours information on the front page, several users missed that information probably because of the tiny font size or the position on the front page—nearly at the bottom of the 7-FAST homepage.

Task 3 Results

Task 3 had the lowest success rate of the fourth tasks, with only 5 users successfully obtaining the required information from MITS website. Also, the task had the lowest quantitative scores for all questions, indicating that the users did not feel they effectively completed the task.

Users had various problems with calculating the rates and shipping fee.

- 1. "Rush" in red in the articles table attracted the attention of users so that some of them calculated the cost for delivering a book;
- 2. Some users did not notice "surcharges may apply" information on the "Rates" web page;
- 3. The scale of surcharge costs of "Non-UM materials" and "Expedited Shipping" confused users—they didn't know how much exactly they would be charged and why there was such a large scale without explanation;
- 4. Information on the "Rates" and "Shipping" pages was a bit different, i.e., PDF delivery was free on the "Shipping" page but price varied on "Rates"—some users indicated that they were confused.

Also, since information about "payment options" was listed on "Policies" page, some users couldn't locate that piece of information as they assumed "Policies" would not include information about payment. Moreover, 7 out of 8 users had a difficult time figuring out how to make a request, particularly with how to fill out the "New customers" form.

Task 4 Results

Task 4 included two parts, with the first part to place an ILL request of a book and the second part to place a 7-FAST request of a book chapter. All users had no problem with completing part 1 to place a book loan request, except one user indicated that he/she was not sure whether "loan" means "book request".

Users had several common problems in the second part of task 4, placing a request to obtain a book chapter using 7-FAST. Three out of the 8 users opened the "chapter" tab under the ILL menu and filled out the request form without realizing they submitted the wrong request. When the users were actually in the 7-FAST request menu, they were confused by filling in "article title" and "journal title". The required asterisks were ignored by several users. Additionally, the ILL menu on the left uses both material type (e.g., newspapers) and type of loan (copy vs. loan), so that users didn't know what criteria they should use when placing a request.

Moreover, most users first moved their mouse to the "Cancel" button on the right bottom, then move back to the "Submit" button on the left. This mouse movement likely indicated that the users assume the "Submit" button be positioned in the right bottom corner of the page.

Recommendations

Overview

We have several major and minor recommendations as to how the delivery services can be improved, based on the results of our testing. Following recommendations are divided by delivery services and placed in the order of priority.

Recommendations for ILLiad

#1: Indicate the eligible loan type of 7-FAST copy request

Priority: High

We recommend adding "book chapter" and "article" options under the 7-FAST "copy" menu, or indicate separating required information to put in the request form when users ask for different types of deliveries. Since 7-FAST provides delivery of book loan, articles and book chapters, adding options for a copy request for 7-FAST delivery service would be necessary.

#2: Add a "7-FAST Rush" option

Priority: High

Add a separate option for using "7-FAST Rush" service under the 7-FAST menu, or add a column to fill in general 7-FAST request form, requiring users input desired receiving date and time if asking for "7-FAST rush" service. Since 7-FAST does provide "rush" service, it should be indicated in the request forms.

#3: Use "Required" in red instead of using asterisk for required information, and add "Recommended" field for ISBN

Priority: High

According to the results of testing, most users ignored the "required" fields or they did not notice them. Using "Required" in red would make those fields more visible than just using the asterisk. Also, the current ILL and 7-FAST request forms do not require users to fill in ISBN, but most participants did put in ISBN since they would like to include some information that can guarantee them obtaining the desired book.

#4: Potentially divide the fields into required, recommended and all other sections

Priority: High

The required and recommended fields ought to be divided into sections, to make it even more clear which fields users need to fill out, which ones will make it easier for the ILL staff to find the material, and which are not as useful.

#5: Add side bar text that informs users how easy it is to fill out an ILL request using

WorldCat

Priority: High

Most users are unaware that the easiest method for filling out an ILL request is to navigate to it from the WorldCat menu. An ILL button is provided in WorldCat that fills in all required and recommended fields in the ILL menu. Text in the right sidebar (where there is space) that is global across the site would make that information more widely known to users.

#6: Make material types visible for both ILL and 7-FAST menu

Priority: High

Based on the test results, users were confused between the material type and loan type when placing a request, so we recommend that to make sure that the type of materials is visible for both ILL and 7-FAST menu options. (e.g. Book Loan, Article Copy)

#7: Separate "Submit" button by placing it on the right bottom corner of the page, or use a different color for "Submit" and "Cancel"

Priority: Medium

According to the test results, users had an inclination to move their mouse to the right bottom corner of the page to find the "Submit" button, but the button there was the "Cancel" button. To avoid unnecessary request-placing errors, we recommend to separating the "Submit" button by placing it on the right bottom corner of the page, or using a different color for "Submit" and "Cancel".

Recommendations for Interlibrary Loan (ILL)

#1: Add an "Hours" tab in the left navigation menu

Priority: High

Add an "Hours" link in the left bar with closing information and include a link to direct users to the "pick-up location" page to check each location's availability in detail.

#2: Use more spacing between questions on the FAQ page under each question section

Priority: High

According to the test results, users had a hard time locating the desired information and spent a few minutes to look through all questions on the FAQ page. We recommend that more space is added between questions under each grouping.

Recommendations for 7-FAST

#1: Add an "Hours" tab in the left navigation menu

Priority: High

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Add an "Hours" tab in the left navigation menu and remove the "hours" information in the tiny sizes font near the bottom of most 7-FAST web pages. Based on the test results, many users first read the left navigation menu and it is likely to help users find out availability of the 7-FAST service.

#2: Change background color of fee table and combine two tables on "Fees/Delivery" page

Priority: High

Changing the grey background color in the second table on the "Fees/Delivery" page can reduce the probability that users miss that piece of information. Also, combining the first table (service fee) and second table (additional fee) together on the "Fees/Delivery" will make calculations easier for users.

Recommendations for MITS

#1: Combine "Rates" page and "Shipping" page

Priority: High

Unify the information on the "Rates" and "Shipping" pages, so that users do not have to go back and forth between the two pages when they need to calculate all the costs for delivery requests.

#2: Include "Payment Option" on combined "Rates/Shipping" page

Priority: High

Based on the test results, "payment options" information under the "Policies" page is not an intuitive place for users to look. We recommend including "payment option" information on the new combined "Rates/Shipping" page and removing the related information on the "Policies" page. Also, "payment option" needs more instruction about how to select the most eligible option and/or how to gather related information.

#3: Add "rush" in red to "book loans" table on the "Rates" page and use bold or colored font for "surcharge may apply" information

Priority: High

To make the 7-FAST rush service more visible, we recommend including "rush" in red for the "book loans" table and using bold or colored font for the "surcharge may apply" information.

#4: Add an FAQ page for MITS

Priority: High

Adding an FAQ page can help new users easily understand the MITS service. This can be achieved by revising the current "Policies" page. Also, we recommend that more instructions be added for filling out the "New Customers" form. A link to the FAQ page should be also added to that page.

Appendices

Appendix A: Test Outline

Task 1: Obtain Information from ILL

1. Hand the user a piece of paper with the information about what the user needs to find. Show the user the ILL front page and a separate piece of paper with the information needed and space to write it in.

The user will start at the ILL front page. Tell the user the following:

"In this task, you will need to find four pieces of important information using the Interlibrary Loan (ILL) website. All of the information available is contained within the ILL site. You don't have to find the information in order. Please write down the answers in the white space under each question."

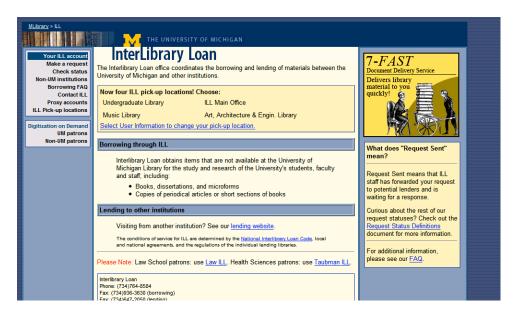


Figure 1 - ILL front page

2. Search 1: Where can I pick up ILL materials?

The easiest way for the user to find this information is to click on the "ILL pick-up locations" page and locate the information.

Answer: ILL Main Office, Undergraduate library, Music library, and AAEL

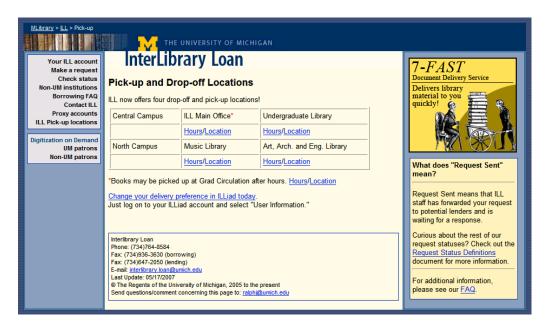


Figure 2 - ILL pick-up locations page

3. Search 2: How can I find how soon my material will arrive?

Answer: Information under the question "How soon will my material arrive?

This information could be located by referring to "Borrowing FAQ" page and clicking on the question "How soon will my material arrive?".

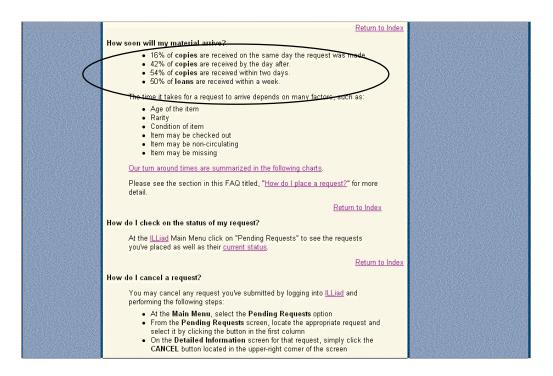


Figure 3 - "How soon will my material arrive?

4. Search 3: Is the ILL service available the day after Thanksgiving?

Answer: No

This information is available on the "Contact ILL" page.



Figure 4 - Contact ILL page

5. **Search 4:** How much does it cost to get a dissertation from Michigan State University (MSU is one of Big 10 universities)?

Answer: free of charge

This information could be located by referring to "Borrowing FAQ" page and clicking on the question "How do I get a dissertation?". Clicking on the link "following information" would direct the user to "Acquiring U.S. Dissertations."

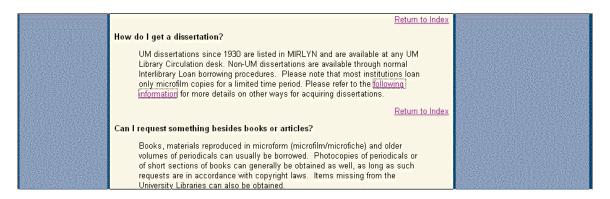


Figure 5 - How do I get a dissertation?

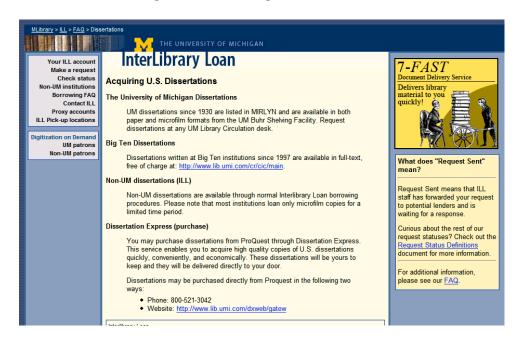


Figure 6 - Acquiring U.S. Dissertations page

Task 2: Obtain Information from 7-FAST

1. Hand the user a piece of paper with the information about what the user needs to find. Show the user the 7-FAST gateway webpage and a separate piece of paper with the information needed and space to write it in.

The user will start at the 7-FAST gateway. Tell the user the following:

"In this task, you will need to find out four pieces of important information using the 7-FAST website. All of the information available is contained within the 7-FAST site. You don't have to find the information in order. Please write down the answers in the white space under each question."



Figure 7 - 7-FAST front page

2. **Search 1**: If 7-FAST is unable to fill your request, what service will the request be automatically forwarded to?

Answer: ILL

Option 1: The easiest way for the user to find this information is to click on "Using 7-FAST" page.

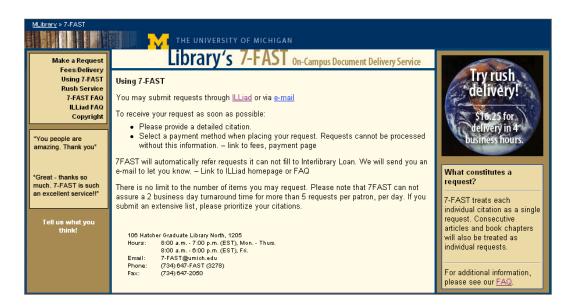


Figure 8 - Using 7-FAST

Option 2: If the user refers to 7-FAST FAQ and go through the questions, he/she may also find the information under the question "How soon can I expect my material?".



Figure 9 - How soon can I expect my material?

3. **Search 2:** How late is the 7-FAST service available on Fridays?

Answer: 6:00 PM

This information is available on several pages, including the 7-FAST homepage and the rush service page.

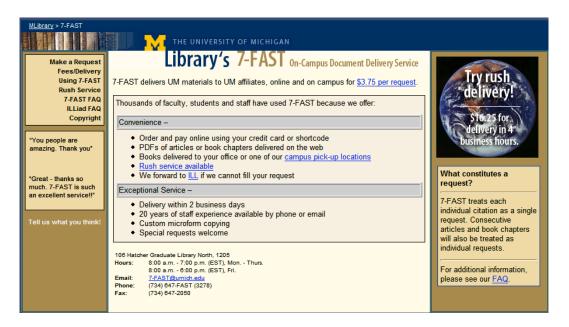


Figure 10 - 7-FAST gateway

4. **Search 3:** How much does it cost to copy a two-page microform article?

Answer: \$5.75 (\$3.75+\$1x2)

This information is available on the "Fees/Delivery" page.

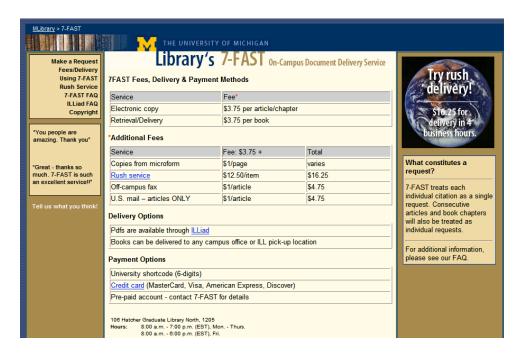


Figure 11 - 7-FAST Fees, Delivery & Payment Methods

5. **Search 4:** What methods can I use to pay for my delivery?

Answer: shortcodes, credit card, and pre-paid deposit account

This information is available on the 7-FAST FAQ page under the question "How can I pay?" and the 7-FAST "Fees/Delivery" page.

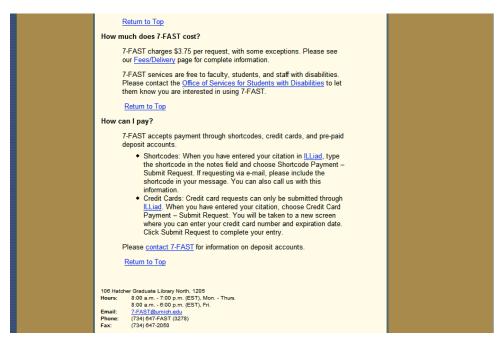


Figure 12 - "How can I pay?"

Task 3: Obtain Information from MITS

1. Hand the participant another task description printed on a separate piece of paper. Show the user the MITS gateway webpage and a separate piece of paper with the information needed and space to write it in.

The user will start with MITS gate way page. Tell him/her the following:

"In this task, you are an attorney who needs to have a copy of a 60-page article from a law journal owned by a British Law Library, and a large book on copyright law delivered to your law office (in the U.S.A.). It is currently 11:00 AM, and you have never used the MITS service before. Please find the following four pieces of information. All of the information available is contained within the MITS site. You don't have to find the information in order. Please write down the answers in the white space under each question."

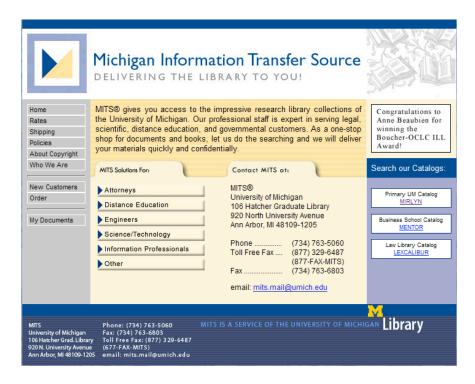


Figure 13 - MITS gateway

2. **Search 1:** How much would it cost to have the copyright law book delivered to your law office (in U.S.A.) by the fastest method possible? Remember it is currently 11:00 AM.

Answer: \$38, plus \$7-\$10 for shipping

The easiest way for the user to find this information is to click on the "Rates" page and locate the information for "same day" shipping, then click the shipping link to find the information for "UPS Ground".

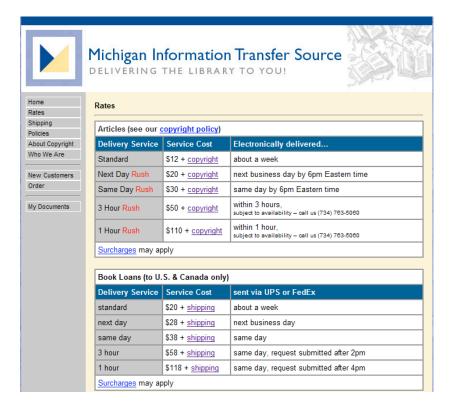


Figure 14 - Rates page

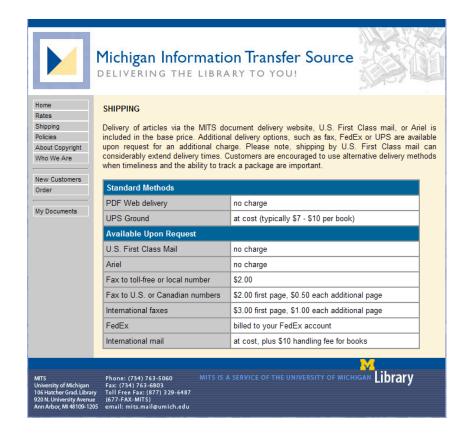


Figure 15 - Shipping page

3. **Search 2:** How much would it cost to have the journal article owned by British Law Library delivered by tomorrow as a PDF file?

Answer: \$20, plus \$23(average level) for copyright charges.

The easiest way for the user to find this information is to click on the "Rates" page and then click the copyright link in the "Next Day Rush" column.

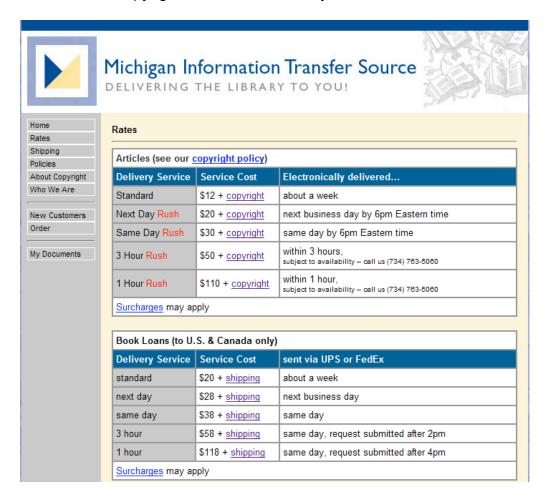


Figure 16 - Rates page

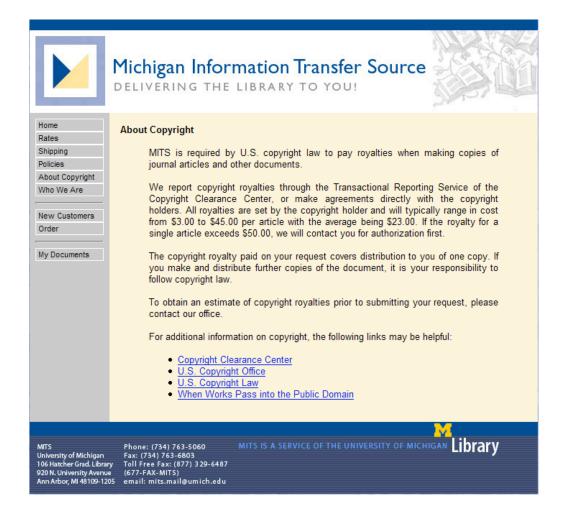


Figure 17 - About Copyright page

4. Search 3: What do you need to do to order the article and book?

Answer: Click the "New Customers" link to set up an account, and place a text request.

There is no simple way to get this information since no FAQ page is listed in the left bar. The user may click on "Order" then "click here" to locate to the "New Customers Information" page.

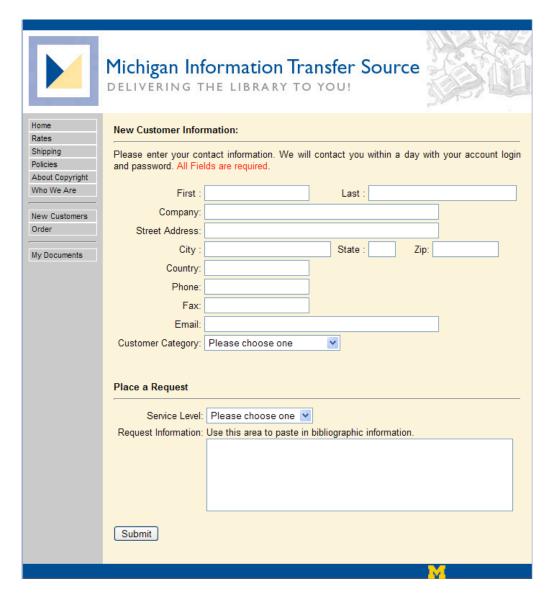


Figure 18 - New Customers page

5. **Search 4:** What methods can I use to pay for the deliveries?

Answer: Monthly invoice, credit card, or deposit account.

No related information is provided on "Rates" page. The easiest way to find this information is to click the "Policies" link and scroll to the bottom of the page locating "Payment Options" information.

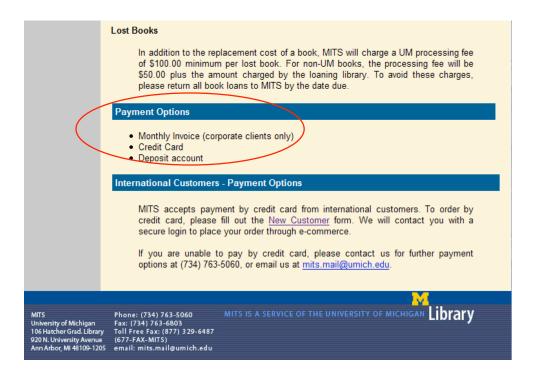


Figure 19 - Bottom of the policies page

Task 4: Book Loan Request and Book Chapter Request

Hand the participant the fourth task description printed on a separate piece of paper. Show the user the ILL front page. Two new browser windows will be open beforehand: one WorldCat record for ILL request and one Mirlyn record for 7-FAST request. Also, hand the user a separate piece of paper with the information needed and space to write it in.

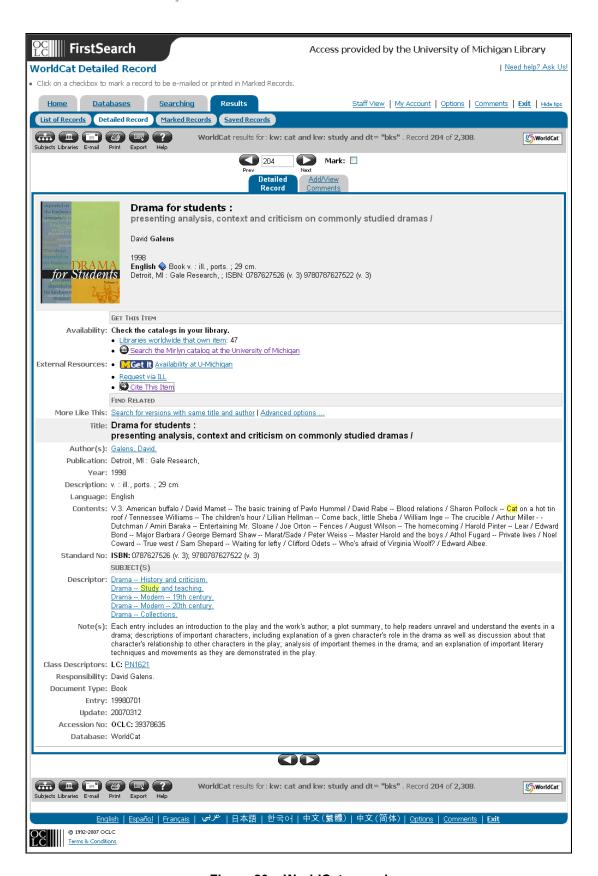


Figure 20 – WorldCat record

Direct the user to the ILL front page and tell the user the following:

"In this task, you are a very busy researcher. You need to check out a book *Drama* for students: presenting analysis, context and criticism on commonly studied dramas to help with your research project. This book is not owned by the UM Library so you need to use ILL service to get the book. Place an ILL delivery request."

Answer:

The easiest way for the user to make a request is to click on "Make a request" link in the left bar of ILL site. A revised ILLiad page will be opened (see below) and the user hopefully will click on "Loan" link under the "ILL Requests menu. The user may type in the book related information with provided record sheet, or copy and paste the information from the pre-opened browser window.

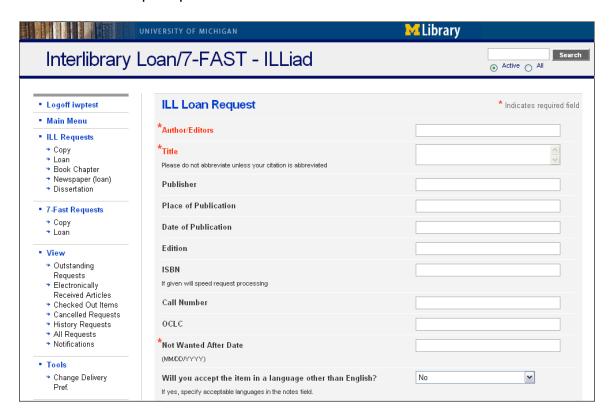


Figure 21 - ILL loan request page in new ILLiad

Show the user the browser window with one Mirlyn record and tell the user:

"Now you are willing to pay some fees for obtaining an electronic copy of chapter 4 of a book *Applied linear statistical models: regression, analysis of variance, and experimental designs*. You need the copy within a couple of business hours, so you need to use 7-FAST service. Place a 7-FAST delivery request."

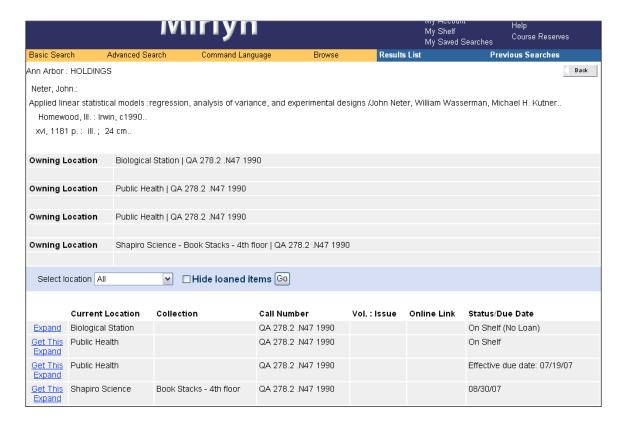


Figure 22 - Mirlyn record

Answer:

The user may click on the "Try rush delivery" figure on the right bar or choose the "Rush Service" from the left bar.

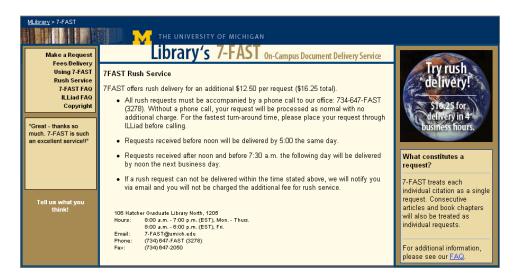


Figure 23 - 7-FAST Rush Service

The user will hopefully click on the "Make a request" link in the left bar. The revised 7-FAST ILLiad page will be open (see below) and the user hopefully will click on the "Copy" link under the "7-Fast Requests" menu. The user may type in the book related information from the provided sheet, or copy and paste the information from the preopened browser window.

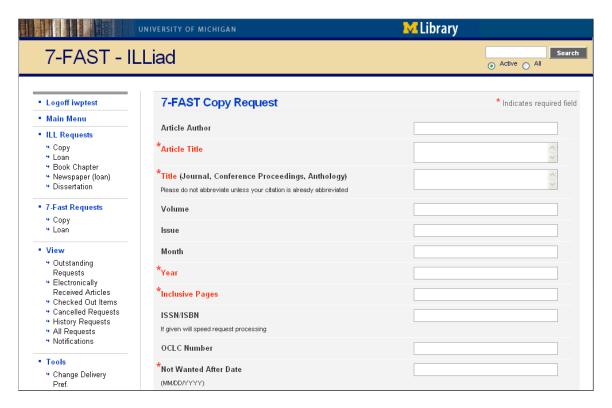


Figure 24 - 7-FAST copy request page in new ILLiad

Appendix B: Test Script

Greeting the participant
Location of the test:
[Meet the participant at appointed place.]

Hi, my name is ... and I will be working with you in today's session. Before we sit down, do you need to use the bathroom or get a drink of water?

[When the participant is ready, walk him/her into the usability testing place and sit him/her down in front of the computer being used for the study. The moderator should sit next to and slightly behind the participant.]

Pre-test procedures

[The following introduction will be read to all participants before starting the test session.]

Thank you for participating in this study. Let me first explain why we've asked you to come in today. I'll provide you with the exact same instructions that are provided to everybody else.

We're here to look at the University Library's Interlibrary Loan (ILL) and 7-FAST services. We're interested in observing how you complete some typical tasks with the university website, how easy the services are to use, and what aspects of the library services you like and dislike. Your feedback is greatly appreciated, because it helps us understand how to improve the service in the future.

We do want you to keep a few things in mind as we begin the study:

I want to emphasize that we are not testing you or your abilities - we are testing the service. We are here to learn from your experience, so please don't worry about how fast or well you perform the tasks.

During today's session, you will be performing some tasks that may or may not be familiar to you. We'd like you to perform as you normally would. For example, try to work at the same speed, and with the same attention to detail that you normally do.

I'll be sitting nearby taking some notes. You may ask for help clarifying what I want you to do at any time, but I may not be able answer questions about how to complete an activity, because I want to replicate, as closely as possible, how you would use the site if I were not here.

While you are working, there are two cameras [point to them]. The session will be videotaped and your keystrokes will be recorded, so additional evaluation of the interface can be carried out after this session.

I would really like you to constantly think aloud. That is, I want to know anything you can say about your reaction to the website that I can't tell from watching you. For instance, tell me whatever you are looking at, what you are thinking, why you are doing something, and what is confusing you as you work through an activity. Even things like "I'm typing a keyword into the search box," or "I'm moving the mouse to where" are very important to us. All these could help us keep track of your thought process of task completion rather than only the final product.

Finally, our session includes four tasks. The entire test will take about 45 minutes. You should know that you can let me know if you begin to feel uncomfortable during this study and wish to stop. You may leave at any time.

Do you have any questions before we begin?

If not, then let's begin by having you sign the Consent Form.

[Hand participant the Consent Form. Give him/her time to read it through, ask questions if needed, and sign the form.]

Introduction

During the next 45 minutes we are going to complete several activities. First, I will ask you to fill out a pre-test questionnaire, just to obtain some background information about you. Your answers will be anonymous, and will be used only for the purpose of data analysis.

[Pre-test questionnaire will go here.]

Next, I will give you several research tasks to accomplish and I will observe you as you work. Remember to talk aloud while you are working, so that I know what you're doing and thinking. Also again, we are testing the site not you, so please don't worry about how fast or well you perform the tasks.

For each of the scenarios we would like you to test for us today, I will read a short description of the tasks involved for that scenario. I will give you a copy of the tasks to accomplish. At the end of each task we will ask you to fill out a questionnaire, and at the conclusion of the test we have a final questionnaire for you to fill out.

Do you have any questions at this point?

Task Completion

Task 1: Obtain Information from ILL

[Hand the user a piece of paper with the information about what the user needs to find. Show the user the ILL gateway webpage and a separate piece of paper with the information needed and space to write it in.]

In this task, you will need to find four pieces of important information using the Interlibrary Loan (ILL) website. All of the information available is contained within the ILL site. You don't have to find the information in order. Please write down the answers in the white space under each question.

- 1. Where can I pick up ILL materials?
- 2. How can I find how soon my material will arrive?
- 3. Is the ILL service available the day after Thanksgiving?
- 4. How much does it cost to get a dissertation from Michigan State University (MSU is one of Big 10 universities)?

Task 2: Obtain Information from 7-FAST

[Hand the user a piece of paper with the information about what the user needs to find. Show the user the 7-FAST gateway webpage and a separate piece of paper with the information needed and space to write it in]

In this task, you will need to find out four pieces of important information using the 7-FAST website. All of the information available is contained within the 7-FAST site. You don't have to find the information in order. Please write down the answers in the white space under each question.

- 1. If 7-FAST is unable to fill your request, what service will the request be automatically forwarded to?
- 2. How late is the 7-FAST service available on Fridays?
- 3. How much does it cost to copy a two-page microform article?
- 4. What methods can I use to pay for my delivery?

Task 3: Obtain Information from MITS

[Hand the participant another task description printed on a separate piece of paper. Show the user the MITS gateway webpage and a separate piece of paper with the information needed and space to write it in.]

In this task, you are an attorney who needs to have a copy of a 60-page article from a law journal owned by a British Law Library, and a large book on copyright law delivered to your law office (in U.S.A.). It is currently 11:00 AM, and you have never used the

MITS service before. Please find the following four pieces of information. All of the information available is contained within the MITS site. You don't have to find the information in order. Please write down the answers in the white space under each question.

- 1. How much would it cost to have the copyright law book delivered to your law office by the fastest method possible? Remember it is currently 11:00 am.
- 2. How much would it cost to have the journal article owned by British Law Library delivered by tomorrow as a PDF file?
- 3. What do I need to do to order the article and book?
- 4. What methods can I use to pay for the deliveries?

Task 4: Book Loan Request and Book Chapter Request

[Hand the participant the fourth task description printed on a separate piece of paper. Show the user the ILL front page. Two new browser windows will be open beforehand: one WorldCat record for ILL request and one Mirlyn record for 7-FAST request. Also, hand the user a separate piece of paper with the information needed.]

- 1. In this task, you are a very busy researcher. You need to check out a book Drama for students: presenting analysis, context and criticism on commonly studied dramas to help with your research project. This book is not owned by the UM Library so you need to use ILL service to get the book. Place an ILL delivery request.
- 2. Now you are willing to pay some fees for obtaining an electronic copy of chapter 4 of a book Applied linear statistical models: regression, analysis of variance, and experimental designs. You need the copy within a couple of business hours, so you need to use 7-FAST service. Place a 7-FAST delivery request.

Post-Test Questionnaire and Debriefing

[Walk the participant to debriefing area and hand him/her the questionnaire.]

Thank you for you completion of the tasks. We have a final questionnaire for you. Please fill out this questionnaire and leave it there when you are finished.

[Post-Test questionnaire goes here. Leave participants in privacy to complete the questionnaire.]

[When participant returns with completed questionnaire, hand the gift to participant.]

Here is your gift. Thank you for participating!

Appendix C: Pre-Test Questionnaire

Please answer the questions below in order to help us understand your background and experience. (Circle the one that most applies to your situation.)

• · · ·		, , , , , , , , , , , , , , , , , , ,	о шастоот арри	or to your ontainering	
1.	. Please indica	ate your p	rimary affiliation t	to the University of Michigan (you	may select more
	than one):				
	• St	tudent:	Undergraduate	Graduate	
	• Fa	aculty:	Lecturer	Researcher	
	• Pr	hysician/N	Nurse		
	• St	taff (Pleas	se specify)		
	• Ot	thers (Ple	ease specify)		
2.	. Please indica	ate your a	cademic subject	area:	
	• He	ealth Scie	ences		
	• LS	S&A			
	• Er	ngineerin	g and Computer S	Science	
	• Ar	rt & Desig	gn		
	• Bu	usiness/L	aw		
	• Ot	ther (Plea	ase specify)		
^		4.			
3.			-	rate your experience using library	/ delivery services
			nterlibrary Loan?		
	1	2	3	5	
No	lo experience				Expert

- 4. How often did you use ILL (Interlibrary Loan) delivery service prior to this test?
 - 2 or more times a week
 - 2 or more times a month
 - 2 or more times a year
 - Less than 2 times a year
 - Never used it

5.	How often	did you use 7-FAST delivery service prior to this test?
	•	2 or more times a week
	•	2 or more times a month
	•	2 or more times a year
	•	Less than 2 times a year
	•	Never used it
6.	How often	did you use MITS delivery service prior to this test?
	•	2 or more times a week
	•	2 or more times a month
	•	2 or more times a year
	•	Less than 2 times a year
	•	Never used it
7.	microform	get books or articles for research purposes, do you prefer physical format (book) or electronic format (email, PDF)?
	1	5
ph	ysical copy	no preference electronic copy
0	Whon you	have library materials delivered to you, what is the most important factor?
0.	•	I don't have any materials delivered
	•	Time it takes you to make a delivery request
	•	Time it takes you to make a delivery request Time it takes you to receive the material
	•	Distance you need to travel to pick up the requested material
	•	Financial cost to have the materials delivered
	•	Others (Please specify)
		others (Fredse specify)
9.	What oper one)?	rating system(s) are you the most comfortable using (you may select more than
	•	Microsoft Windows
	•	Mac OS X
	•	Linux
	•	Other (please specify)

Delivery Services • Formal Test of ILL/7-FAST/MITS

	10.	Where did	vou hear the	information	about this	library stud	y opportunity	?
--	-----	-----------	--------------	-------------	------------	--------------	---------------	---

- Facebook Marketplace
- Facebook Flyer (banner ad at the side of the screen)
- Library website
- Other (please specify) ________

Thank you!

UM University Library Usability Working Group

Appendix D: Post-Task Questionnaire

1.	On a scale of 1-	5, how effective	ely do you feel you ac	complished th	is task, with 1 being
	not well and 5 b	eing very well?	?		
	1	2	3	4	5
	Not Well		Average		Very Well
2.	On a scale of 1-	5, how easy did	d you feel it was to ob	tain informatio	n within the
	Interlibrary Loa	n (ILL) website	, with 1 being very diff	ficult and 5 bei	ng very easy?
	1	2	3	4	5
,	Very Difficult		Average		Very Easy
3.	Using the rating feel about the Ir		please circle the numb n (ILL) website.	er that closely	matches how you
	Complex	1.	234.	5	Simple
	Difficult to us	e1	234	5	Easy to use
	Unfriendly	1.	234.	5	Friendly
	Dislike	1.	234.	5	Like
4.	What did the ILI	_ website do w	ell, if anything, to help	you obtain the	e information?
5.	What did the ILI information?	_ website do po	oorly, if anything, that	made it difficu	It to obtain the

1. On a scale of 1-5, how effectively do you feel you accomplished this task, with 1 being						
not well and 5 bein	g very well?					
1	2	3	4	5		
Not Well		Average		Very Well		
	2. On a scale of 1-5, how easy did you feel it was to obtain information within the 7-FAST					
website, with 1 bei	ng very difficult	and 5 being very easy	?			
1	2	3	4	5		
Very Difficult		Average		Very Easy		
-	_	ease circle the number	that closely r	natches how you		
feel about the 7-FA	ST website.					
Complex	1	234	5	Simple		
Difficult to us	se1	234	5	Easy to use		
Unfriendly	1	234	5	Friendly		
Dislike	1	234	5	Like		
4 What did the 7 E	AST wahaita da	well, if anything, to he	do vou obtoin	the information?		
4. What did the 7-1	A31 Website do	wen, ir anything, to he	sip you obtaili	the imormation:		
5. What did the 7-F information?	AST website do	poorly, if anything, th	at made it diff	icult to obtain the		
ormanom:						

1.	I. On a scale of 1-5, how effectively do you feel you accomplished this task, with 1 being not well and 5 being very well?					
	1	2	3		4	5
	Not Well		Average			Very Well
2.		•				tion within the MITS
	website, with 1 b	eing very diffic	cult and 5 being	y very easy	?	
	1	2	3		4	5
•	Very Difficult		Average			Very Easy
	feel about the MI		23	4	5	Simple
	Difficult to use	1	23	4	5	Easy to use
	Unfriendly	1	3	4	.5	Friendly
	Dislike	1	3	4	5	Like
						in the information?
Э.	information?	o wensite do t	ooriy, ii aliytiii	nig, tilat illa	iue ii üi	inicuit to obtain the

1.	On a scale of 1-5, how effectively do you feel you accomplished this task, with 1 being not well and 5 being very well?					
	1	2	3	4	5	
	Not Well		Average		Very Well	
2.	On a scale of 1-5	, how easy did	you feel it was t	to place an ILL de	livery request for	
	getting the book,	with 1 being v	ery difficult and	5 being very eas	y?	
	1	2	3	4	5	
	Very Difficult		Average		Very Easy	
3.	On a scale of 1-5	, how easy did	you feel it was t	to place a 7-FAST	delivery request for	
	getting the book	chapter, with 1	being very diffi	cult and 5 being	very easy?	
	1	2	3	4	5	
	Very Difficult		Average		Very Easy	
4.	Using the rating feel about the ILL	_	ease circle the r	number that close	ely matches how you	
	Complex	1	23	5	Simple	
	Difficult to use	1	23	45	Easy to use	
	Unfriendly	1	3	45	Friendly	
	Dislike	1	3	45	Like	
5.	What did the ILLi requests?	ad website do	well, if anything	, to help you plac	e the delivery	
6.	What did the ILLi delivery requests		poorly, if anythi	ng, that made it d	lifficult to place the	

Appendix E: Post-Test Questionnaire

Please answer the following questions to the best of your ability based on your experience with today's tasks. We appreciate your participation to help us understand your experience with using library services.

- 1. a) Which task was the most difficult to accomplish (circle below)?
 - Task 1 Obtaining information from ILL
 - Task 2 Obtaining information from 7-FAST
 - Task 3 Obtaining information from MITS
 - Task 4 Book Loan Request and Book Chapter Request
 - b) Why was this task difficult?
- 2. Are there any other questions or comments you would like to share?

Thank you!

UM University Library Usability Working Group

Appendix F: Quantitative Results from Test Questionnaires

Results of Task 1:

User	Q1: On a scale of 1-5, how effectively do you feel you accomplished this task-obtaining information from ILL, with 1 being not well and 5 being very well?	Q2: On a scale of 1-5, how easy did you feel it was to obtain information within the Interlibrary Loan (ILL) website, with 1 being very hard and 5 being very easy?	Q3: Using the rating chart below, please circle the number that closely matches how you feel about the Interlibrary Loan (ILL) website. Complex1
1	5	5	5, 5, 5, 5
2	5	4	5, 5, 5, 4
3	3	3	5, 5, 5, 5
4	4	4	4, 4, 5, 5
5	3	3	4, 3, 4, 4
6	3	3	4, 4, 3, 2
7	3	2	3, 4, 4, 4
8	3	2	4, 4, 3, 2
Ave/Tot	3.625	3.25	4.25, 4.25, 4.25, 3.875

Results of Task 2:

User	Q1: On a scale of 1-5, how effectively do you feel you accomplished this task-obtaining information from 7-FAST, with 1 being not well and 5 being very well?	Q2: On a scale of 1-5, how easy did you feel it was to obtain information within the 7-FAST website, with 1 being very hard and 5 being very easy?	Q3: Using the rating chart below, please circle the number that closely matches how you feel about the 7-FAST website. Complex1
1	5	5	5, 5, 5, 5
2	5	5	5, 5, 5, 5
3	5	5	5, 5, 5, 5
4	4	4	5, 5, 5, 5
5	3	4	4, 4, 4, 4
6	5	5	5, 5, 4, 4
7	3	3	3, 3, 3, 3
8	3	2	3, 4, 3, 3
Ave/Tot	4.125	4.125	4.375, 4.5, 4.25, 4.25

Results of Task 3:

User	Q1: On a scale of 1-5, how effectively do you feel you accomplish this task-obtaining information from MITS, with 1 being not well and 5 being very well?	Q2: On a scale of 1-5, how easy did you feel it was to obtain information within the MITS website, with 1 being very hard and 5 being very easy?	Q3: Using the rating chart below, please circle the number that closely matches how you feel about the MITS website. Complex1
1	4	4	4, 5, 5, 5
2	2	2	4, 3, 4, 2
3	4	5	5, 5, 5, 5
4	4	2	3, 4, 3, 3
5	3	3	4, 3, 2, 3
6	4	4	4, 4, 4, 4
7	3	1	2, 2, 1, 2
8	3	2	3, 3, 2, 2
Ave/Tot	3.375	2.75	3.625, 3.625, 3.25, 3.25

Results of Task 4:

User 1	Q1: On a scale of 1-5, how effectively do you feel you accomplished the Book request and Book Chapter request, with 1 being not well and 5 being very well?	Q2: On a scale of 1-5, how easy did you feel it was to place an ILL delivery request for getting the book, with 1 being very hard and 5 being very easy?	Q2: On a scale of 1-5, how easy did you feel it was to place a 7-FAST delivery request for getting the book chapter, with 1 being very hard and 5 being very easy?	Q3: Using the rating chart below, please circle the number that closely matches how you feel about the ILLiad website. Complex15Easy Difficult to use15Easy to use Unfriendly15Friendly Dislike15Like
1	3	5	•	4, 4, 5, 5
2	3	5	3	5, 5, 5, 4
3	5	5	5	5, 5, 5, 5
4	4	4	4	5, 5, 5, 5
5	3	4	4	4, 4, 4, 4
6	5	5	5	5, 5, 4, 4
7	3	4	4	4, 4, 4, 4
8	5	4	4	4, 4, 4, 3
Ave/Tot	3.875	4.5	3.75	4.5, 4.5, 4.5, 4.25

Results for the Final Questionnaire:

User	Which task was the most difficult to accomplish?
1	Task 3
2	Task 3
3	Task 1
4	Task 3
5	Task 2
6	Task 1
7	Task 3
8	Task 2
Total	Task 3: 4/8
	Task 2: 2/8
	Task 1: 2/8