

A banner with the text "information@work" in purple and blue. The background features a globe, a satellite dish, a laptop, and a colorful nebula.

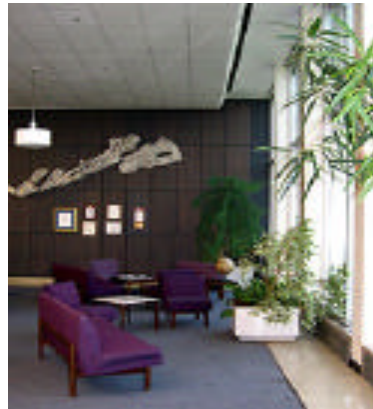
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Usability Testing: A tutorial and Case Study from the NASA Goddard Space Flight Center Library

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The Goddard Library Environment



- **Established 1959 in Greenbelt, MD**
- **Largest research staff in NASA with 6,000 scientists and engineers**
- **Building, designing and using research satellites in Earth's orbit along with the instruments and observatories they carry**
- **Includes such projects as Hubble and Landsat**

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A fine web site – aged 7 years



1998-2005

- Evolved with digital acquisitions
- It had never been subject to user testing
- New hires did not understand navigation
- Major revision needed

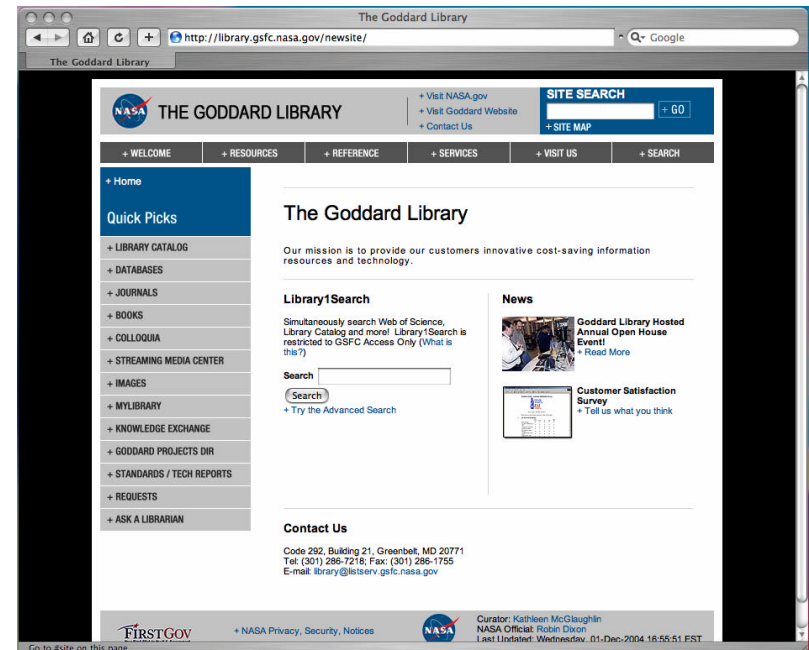


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The One NASA Look & Feel



- **Moved Content into One NASA Portal for testing**
- **Please administrators yet still please our users (not typically administrators)**
- **RESISTANCE**
- **Involve the users**
- **Put the Library's stamp on it**



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8 Easy Pieces



- **Get a Team**
- **Acquire space and capture technology**
- **Create Testing Instrument**
- **Provide Training**
- **Recruit & Schedule Users for testing**
- **Test & Revise: Instrument & Site**
- **Review & Report Out**
- **Select Launch Date for New Site**

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I. Team



- **Support from all directions –Management & Staff**
- **Team Leader**
- **Web Designer/Editor**
- **Audio/Visual Technician**
- **Librarians & non-librarians**
- **Testers**
- **Reviewers**
- **Report writers**

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II. Space & Technology



- **Designated space**
 - Flexible Access
 - Procedures, Instrument, files, etc one location
 - Comfortable
- **Capture Technology**
 - Pen and Paper
 - Video Camera
 - Camtasia and Tape Recorder (\$300)
 - SnagIt (\$40)
 - Morae (\$1,300)
 - Windows Media Encoder and a Microphone

III. Create a Testing Instrument



- **Variety of instruments**
 - Thinking aloud
 - Question asking
 - Co-discovery
 - Questionnaire
- **Question Asking & Thinking Aloud**
 - Do not seek reactivity
 - Jack Benny, “So how long have you been beating your wife?”
 - Natural honest responses
 - Jakob Nielsen latest Alertbox “User Testing is Not Entertainment”
 - <http://www.useit.com/>
 - About an hour of time

Our Instrument : The “It’s me not you” Speech



- The Library is planning on redesigning our web site, and we would like to know what is working, and what’s *not* working. So the objective of this meeting is for me to gather information from you about how well the web page works. I’m going to ask you to complete a series of tasks using the library web page. Along the way, I’m going to ask you a lot of questions about the choices you make. Don’t worry, I am not going to be judging your answers to my questions. Rather, I’ll use your answers to judge the library web page. Does that make sense? Do you have any questions?

Along the way, be sure to give me any feedback you have about the library web site.

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Our Tasks



- **Where on the library's website can borrowers find what the loan period is for books?**
 - Hours, under Visit Us and Welcome
- **If you could not find what you were looking for on the library's website using the links provided, what would be your next step?**
 - Site search

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Tasks Continued



- **Using the library's site, please find a contact to the Goddard Photo and Movie Gallery.**
 - Project Libraries (Reference page)
- **Please find a list of resources created by a librarian on “Chaos” or “Concurrent Engineering”.**
 - Subject Guides (Reference page)

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Leading Questions



- **What page would you use to answer this question?**
- **Look at all of the different links on this page. Which is the most likely one to help you find this information?**
- **Can you give me a reason why you decided to click on that link instead of another link on that page?**
- **What makes “visit us” a more likely place than “services”?**
- **Take your time and think about which category would be the best choice to go to for finding the answer to this question.**
- **Would you like to back up and start again?**

Follow-Up Questions



- **Would you use this page more often now that you know that it is here?**
- **Did you understand the terminology used?**
- **What do you think the purpose of this page is?**
- **Describe the types of resources you would expect to find on this page.**
- **What might have helped you find this information more easily?**
- **How would you change this page to make it clearer or easier to use?**

IV. Provide Training



- **Interviewers**
 - Interview Process
 - Equipment
 - Trial run before the trial run
- **Reviewers**
 - Ideally 2 per session
 - Create Guide for Analysis

Analysis Guide: Example



- ***Please find a list of resources created by a librarian on Chaos or Concurrent Engineering***
 - Was the “reference” button the obvious choice?
 - Did this term make sense to user for obtaining a bibliography?
 - Did subject channels or subject guides make sense to them?
 - Would other terms have been better?
 - Is this kind of information of any value to them?
 - Once they found out that such guides existed is it something they would use again. Or did the resource not make an impression?
 - How many clicks did it take to find it?
 - Other Comments

V. Recruit & Schedule Users for Testing



- **Recruit**
 - Representative Sample of the Population
 - 4 generations at Goddard
 - Fancy Letter & Hit people up in the cafeteria
- **How many?**
 - All you need is 5 according to Nielsen
 - We used 10 in total
- **Get on their Calendars**
 - Train at least 3 people to interview

VI. Test & Revise: Instrument & Site



- **Trial Run with a Real User**
- **Revise Instrument**
- **Test & Revise Site & Test Again**



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VII. Review & Report Out



- **2 Reviewers for each Session**
- **Compile the reviews**
- **Create a cohesive report for management**
- **Agree on approved changes**

VIII. Select Launch Date for New Site



- **New Website Release**
 - Good Timing
 - Work Backwards
 - Promotion
 - Create Mechanism for Feedback (criticism)
- **Goddard Approach**
 - Launched day of annual open house
 - Goddard Library Newsletter & Goddard News
 - Made old site available for 3 months after launch

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The Award Winning Website Redesign Process



- **Goddard Innovation Award for the Process and then Sharing the Process**
- **Streamlined Access Points**
- **Provided Access to our most frequently used and most expensive resources from the homepage**



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Lessons Learned from our Users - #1) Search is a BIG Problem



- **Almost everything requires search**
 - Site search, Subscription Databases, Catalog, Journals Page, eBook collections, In-house resources such as the IMAGES database, Goddard website archive, Streaming Video of Center Colloquia, Federated Search covering only 50 Databases
- **Included Navigation and Annotation**
 - Menus for Resource Type and Resource Subject in addition to the A to Z list
- **Need to Perform Usability Testing on In-house and Subscription products**

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#2) Library Information was Frustrating to Find



- **Information about the library was incomplete and scattered**
- **Users actually wanted FAQs**
- **Prime real estate given to “How do I...?”**

#3) Only Librarians Understand Librarians



- **“Reference” is meaningless to most people**
- **Our carefully crafted bibliographies are useless to experts**
 - “They are a shot in the dark”
 - “What could a librarian possibly know about chaos theory that I don’t already know?”
 - One Gen Y participant said “Google is the 21st Century bibliography maker”

#4) Top Navigation Bar Most Used and Recognized



- **Three Main Types of Information became three Main Top Navigation Buttons**
 - Side Bar not used or noticed
 - Library Information, Search, and Project Information
 - Search is used in place of Databases given that most of our users thought of Databases as containing actual data not information or literature
 - 508 Compliant Drop Down Menus
 - Access to information about Goddard Projects was more important than we realized

#5) Some things are universal



- **Ask-A-Librarian**
- **HOME on every page**
- **Site Search belongs in the top right corner**
- **News should be ephemeral**
 - News briefs available from homepage and easily refreshed
 - Added a RSS Feed
- **Customized Portals are too much work**
- **Wanted journal holdings to be a part of Google Scholar**

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Post Launch Feedback



- **Ready Reference Resources were missed**
 - The Goddard Library's version of LibrarySpot.com was greatly missed
 - Links to Search Engines had to be restored as well
- **A few people really hated it**
 - We invited them to meet with us to demonstrate their concerns to us
 - One person took us up on the offer

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Conclusion

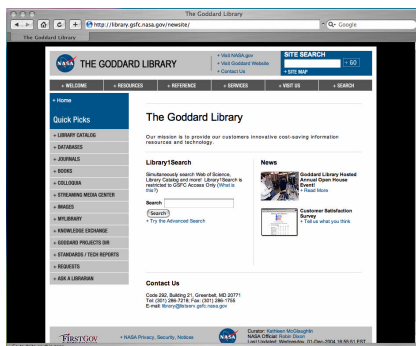


- **Most people really loved it**
- **Cleaned up site**
- **Improved process for updates to the site**
- **Created a separate public site**
- **Established a stronger connection between the users and the digital library**
- **Transformed the work of one person into that of a Team**

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Thank You & Questions

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