genome.gov: Redesign Outcome Evaluation

National Human Genome Research Institute

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1. Executive Summary

In the fall of 2003 the National Human Genome Research Institute (NHGRI) sponsored a review of its web site (www.genome.gov) to determine how well it was serving its audience. The web team addressed the issues identified in that review with a major redesign that was released in June 2004.

This report summarizes the results of a follow-up evaluation performed in the last half of 2004 to determine the effectiveness of the redesign. Although the entire site was included in the evaluation, the RESEARCH and CAREERS & TRAINING tiers were specifically targeted for review since they received the most radical restructuring in the redesign.

Another key component to this evaluation was collecting feedback from internal visitors and stakeholders. Many internal staff members not only use the site regularly, they also provide the material for the site. Their participation in the on-going curation of the site's content is key to the success of the site.

The evaluation was conducted in two rounds. The first round collected data from external visitors, primarily in the form of informal usability tests. The second round concentrated on internal visitors. Complete details of the evaluation methodology are in the appendices.

Two separate summaries, one for each round, were delivered to the NHGRI web team along with presentations highlighting the major findings. This report summarizes the findings from both rounds of evaluation. It is important to note that, since the web team is in the process of responding to the issues listed in this report, some of the recommendations listed in this report have already been addressed.

1.1 Redesign Impact

Overall, the new site worked well for participants. Several navigation aids, designed to address issues identified in the fall 2003 evaluation, proved to be effective. The list below captures major points that had a positive influence on how participants navigated the site, though it is not an exhaustive list of the changes the web team implemented for the redesign in June 2004.

- **Persistent sub-navigation**

  The redesign provides context-sensitive sub-navigation within tiers (RESEARCH, GRANTS, HEALTH, etc.). This was a major change from the previous layout and proved to be effective for the participants. It made it easier for them to explore within a tier since they did not have to rely on remembering their navigation options; the options were always visible on the left.

- **SEE ALSO more prominent**

  The SEE ALSO section is more visible in the redesign, it is located at the top of the right side, and more readable because it uses black text on a white background. Participants were more aware of it than in the previous evaluation from fall 2003.

- **Off site links marked**

  Links to other sites are visually differentiated. They either show the target URL in square brackets, or they are in a separate box marked ON OTHER SITES. As expected, not all participants recognized the target URLs, but those that did found them useful. For participants that did not recognize the URLs, providing them was not a distracter.

- **CAREERS & TRAINING reorganization**

The reorganized CAREERS & TRAINING tier was a major success. Participants found the navigation by audience (PROFESSIONALS, GRADUATE & MEDICAL STUDENTS, UNDERGRADUATE STUDENTS, HIGH SCHOOL STUDENTS) to be extremely helpful. They also commented that the presentation of opportunities in a grid was easy to scan because they could quickly skip rows not relevant to their status.

- **Direct links to INTRAMURAL RESEARCH and EXTRAMURAL RESEARCH**

  In the last evaluation, visitors familiar with internal National Institute of Health (NIH) terminology had difficulty identifying the Division of Intramural Research (DIR) and the Division of Extramural Research (DER) because they were titled "Research@NHGRI" and "Genomic Research" respectively in an effort to accommodate visitors unfamiliar with internal NIH terminology. In the redesign, the HOME page has shortcuts directly to DIR and DER, and participants familiar with NIH often used those links to navigate from the HOME page.

- **RESEARCH reorganization**

  In the redesign, the RESEARCH page is intended to orient and guide visitors unfamiliar with internal NIH terminology. This page was somewhat successful in orienting the participants and helping them make navigation choices, but not a complete success. Details on improving it are included later in this report (section 2.1.4).

- **High quality content**

  Sections of the site that had previously received high marks (HEALTH, EDUCATIONAL RESOURCES, POLICY & ETHICS) received high marks again. Health professionals in particular were impressed with the organization and wealth of health information on the site.

  Several researchers visited the GENOME SEQUENCING PROPOSALS [10002154) and genome sequencing pages for specific organisms (e.g., CHICKEN GENOME SEQUENCING: *GALLUS GALLUS* [11008054), SEA URCHIN GENOME SEQUENCING: *STRONGYLOCENTROTUS PURPURATUS* [11008265)). They liked both layout and the amount of information that was provided on the organism pages. One researcher at a major sequencing center commented that now that he had viewed these pages he would send researchers to NHGRI organism pages rather than to National Center for Biotechnology Information (NCBI) because the NHGRI pages were easier to navigate, well organized, and provided the necessary links into the NCBI pages.

1.2 Weaknesses

Although the redesign generally worked well for participants, there were a few areas where external participants had significant problems, mostly in RESEARCH. In addition, the interviews with internal participants revealed curation issues. These items are briefly listed below with more details and recommendations provided in a later section of the report (section 2.1).

- **Confusing DER program pages**

  Participants often did not recognize the intent of the DER program pages. They missed the primary mission—to support external research—when they first visited a program page.

- **Poorly maintained public resources on research.nhgri.nih.gov**

  Several research-oriented participants visited RESEARCH RESOURCES FROM NHGRI and were initially impressed by the wealth of offerings, but quickly backed off when they discovered that the pages and tools were surprisingly out of date; many pages on research.nhgri.nih.gov show last modified dates from 2002. Also, many tools revealed

serious usability issues such as unintuitive interfaces, broken links, and poorly formatted pages.

- **Site curation responsibilities**

  The most common view of internal staff members was that curation of the site was the responsibility of the web team. During the evaluation interviews, when internal participants encountered a page with a problem (e.g., a missing link, an out of date staff title, an old program description) they expressed annoyance. They seemed to be unaware that the web team does not have the subject matter expertise to know when a page needs to be updated, and that the team must rely on the internal community to submit updates and corrections for web pages in a timely manner.

1.3 High level recommendations

The recommendations below cover the major points discussed previously. More detailed findings and accompanying recommendations are covered in later sections.

- **Highlight the purpose of the DER program pages**.

  Move the research objectives to the top of the OVERVIEW section, or move them into their own section titled "Research Objectives." [1]

- **Apply the same curation standards used on genome.gov to the public resources on research.nhgri.nih.gov.**

  Establish a review and curation mechanism for research.nhgri.nih.gov.

- **Publicize page authorship and lines of responsibility within the Institute**.

  Publicize the web team's need for universal participation in keeping the site accurate and up to date. This is especially important for general pages, such as CURRENT CLINICAL STUDIES or DER PROGRAM STAFF, where content curation responsibility may not be obvious.[1]

2. Detailed Findings and Recommendations

This section fully details the issues revealed during the evaluation. Each finding is accompanied by a discussion and recommendations for addressing the issue.

2.1 High Priority Findings

High priority issues uncovered during the evaluation are listed in this section. These problems substantially impacted either the participants' ability to use the site or the web team's ability to keep the site current.

2.1.1 DER program pages

Most participants had difficulty with the DER program pages because the intent of the page was not immediately obvious. There were several contributing factors:

- Although the programs in the left navigation are indented under the heading FUNDED RESEARCH PROGRAMS, most participants just read the link text (e.g., GENETIC VARIATION)

[1] The web team is in the process of addressing these recommendations.

when viewing the left navigation and did not associate the program name with the FUNDED RESEARCH PROGRAMS header.

- The purpose of the program (to support research in …) was not always at the top of the OVERVIEW. Many overviews begin with historical references or general descriptions.
- When participants scrolled down the page they lost their context. For example, when they were viewing the FUNDING OPPORTUNITIES or the PROGRAM STAFF sections, they did not remember which program page they were on and there was nothing on the screen to remind them.

Recommendation: [2]

- Add the word "Program" to the DER left navigation where appropriate. For example, GENOME TECHNOLOGY PROGRAM instead of GENOME TECHNOLOGY.
- Separate the program's history from its research objectives. Put the program's research objectives at the top of the OVERVIEW or into a separate section called "Research Objectives."
- Although it is repetitive, include the program title in the sub-headings on the program pages to provide context as visitors scroll. For example, GENETIC VARIATION PROGRAM STAFF instead of PROGRAM STAFF.

2.1.2 Public resources on research.nhgri.nih.gov

Participants visiting the tools and databases on research.nhgri.nih.gov were initially quite enthusiastic, but quickly lost interest because the pages and tools seemed to be out of date. Some examples:

- Participants noticed that most of the pages they were looking at had a LAST MODIFIED DATE from 2002. They expected pages from a major government research facility to be more current. As one participant (a researcher) put it, "two years is a long time in this field." Some other examples participants noticed:
  - The page for WEBBLAST 2 claims that

    "*WebBLAST version 3 is due for release in summer 2002*"

    However, the WebBLAST page only offered WebBLAST 1 and WebBLAST 2. There was no mention of WebBLAST version 3 even though it was August 2004.
  - The HOMEODOMAIN RESOURCE page listed the current release as VERSION 5.0, OCTOBER 2002.

  - There are two Microarray Core Facility websites linked from genome.gov that have similar titles. It is not clear what the difference between them is or why there are two

[2] Appendix B includes before and after screen shots that illustrate how some of these recommendations have been implemented.

of them. The table below compares how the two web sites are featured in various places on genome.gov.

MICROARRAY CORE FACILITY website	**MICROARRAY PROJECT website**
[http://research.nhgri.nih.gov/nhgri_cores/microarray.html] This one is linked from: (1) RESEARCH RESOURCES DEVELOPED AT NHGRI [10001504] Note: One investigator was surprised to learn that this website was public; he believed it was meant for internal use only.	[http://research.nhgri.nih.gov/microarray] This one is linked from: (1) Dr. Burgess's lab page [10000502] (2) The MICROARRAY CORE FACILITY website [research.nhgri.nih.gov/nhgri_cores/microarray.html]. The link is titled MICROARRAY PROJECT and is in the lower left corner. (3) The CANCER GENETICS BRANCH page [10000012]. Note: One investigator said that she uses this website as a resource for a course she teaches. Although it has not been updated recently, there is information on there that is still useful for her students.

Also, numerous tools and pages on research.nhgri.nih.gov have usability issues. Some examples:

- Portable Document Format (PDF) links are not differentiated. Visitors do not know the link is a PDF (requiring separate software to read) until they click on it.
- Some tools require registration or a login ID, but this information is not provided until a visitor tries to access the tool.
- The WEBBLAST2 DEMO does not provide any instructions for users. Participants did not know what to enter into the text entry area.
- The documentation page for WEBBLAST 2 DOCUMENTATION README page is poorly formatted.
- The WEBBLAST FAQ only covers WebBLAST1, not WebBLAST 2

Overall, the content on research.nhgri.nih.gov is not as well curated as the content on genome.gov. These pages are hosted on a different server, but the navigation between genome.gov and research.nhgri.nih.gov is seamless, since those pages use the same top navigation and breadcrumbs as genome.gov. Although it is beneficial for participants to be able to move freely between genome.gov and research.nhgri.nih.gov, the poorly curated content on research.nhgri.nih.gov reflects badly on the Institute as a whole.

Recommendation:

- Ensure that content and navigation on research.nhgri.nih.gov follows the same curation standards and usability guidelines as genome.gov.
- Review all pages served to the public on a regular basis to ensure that the material is up to date and complete.

2.1.3 Web curation

During interviews, internal users would sometimes bring up a page with minor errors (such as an incorrect address, an out of date staff title, or a missing link). When the internal users encountered these problems, they would express annoyance with the web team. Internal users did not understand that the web team relies on the expertise of the staff within the Institute to help them keep the web site accurate and current. Users did not know that they could and should contact the web team when they encounter these sorts of inaccuracies, and did not know how such errors should be reported. When asked about the ASSIGNMENT DESK, they associated it with making major changes to a web page or producing a new web page or section, not informing the web team about minor errors so that they could be addressed.

Internal users were also typically unsure who was in charge of the content for most pages. Some of them identified a few pages for which they were directly responsible based on communication with the web team, but were unclear about the authorship for most other pages, particularly overarching pages such as CURRENT CLINICAL STUDIES or NHGRI FUNDING OPPORTUNITIES: RESEARCH. For example, several internal users noted that the DER PROGRAM STAFF page was not current, but did not know the process for making it current or who within DER was responsible for it.

Recommendation:

The underlying content management system used by the web team associates an author and an expiration date with each page. When pages expire, the page author is contacted and asked to review the content on the page and submit edits as needed. This system is designed to ensure that pages receive regular reviews to keep content accurate and up-to-date. However, this system is not viewable by Institute staff outside the web team. The system could be augmented in the following ways to make it more effective.

- Publicize (within the Institute) page ownership and lines of responsibility. On the intranet, provide a means for staff to identify not only the pages for which they are the author, but also to look up the author for any page on the site. The latter is particularly important for general pages such as DER PROGRAM STAFF or DIR PUBLICATIONS AND REPORTS for which an owner/author is not immediately obvious.
- Publicize the web team's need for on-going staff participation to keep the site accurate and up-to-date. This is particularly important for pages that require subject matter expertise to curate, such as the CURRENT CLINICAL STUDIES or ELSI PROGRAM ACTIVITIES BY PROGRAM AREA. These pages must have appropriate and thorough internal staff review on a regular basis.
- Provide an easy means for staff to notify both the web team and page owners about errors on a page (missing, inaccurate, or out of date information).

2.1.4 RESEARCH page

Two of the primary recommendations for the RESEARCH tier from the previous evaluation round (Fall 2003) were:

- Accommodate visitors who know the organization of the Institute.
- Provide a unified research front to serve visitors who do not know the organization of the Institute and in particular, do not know the distinction between DIR and DER.

The shortcuts (INTRAMURAL RESEARCH, EXTRAMURAL RESEARCH) on the HOME page are designed to address the former recommendation and worked well. Internal participants used those as their primary means of locating the main pages for DIR and DER respectively.

The RESEARCH page was designed to address the latter recommendation. The expectation was that brief explanatory phrases - RESEARCH CONDUCTED AT NHGRI and RESEARCH FUNDED BY NHGRI - combined with a list of links exposing the high-level contents of the divisions would help visitors unfamiliar with NIH terminology to understand the difference between DIR and DER. However, most external participants who visited the RESEARCH page did not understand the difference between the two divisions. The headings RESEARCH CONDUCTED AT NHGRI and RESEARCH FUNDED BY NHGRI were too brief to clarify the distinction for them.

Recommendation:

- Add a brief description of each division under its respective header. Keep it succinct so that it is inviting to read (usability tests show that visitors skip large chunks of text while navigating). Consider the text from the first RESEARCH FAQ [12011002]; participants who visited the RESEARCH FAQ liked that text because it briefly but effectively clarified the difference between the divisions at a very basic level.

2.1.5 Sequences, Maps, and BAC Libraries [10001691]

Although the program objectives are clearly spelled out on the SEQUENCES, MAPS, AND BAC LIBRARIES page, at least one participant said that she found the title of the page confusing: "When I click on a link that says SEQUENCES, MAPS, AND BAC LIBRARIES, I expect to find data". It took her several minutes of reading and scrolling to determine that the focus of the page was to provide information for researchers looking for funding in that area.

Several links to the SEQUENCES, MAPS, AND BAC LIBRARIES page also do not meet a basic usability guideline: page titles and referring link text should match. Some pages on genome.gov, including the HOME page, use THE GENOME SEQUENCING PROGRAM as the text for links to the SEQUENCES, MAPS, AND BAC LIBRARIES page.

Recommendation:

- Determine the title of the program and then use that as both the page title and the link text for links to this page.

2.2 Medium Priority Findings

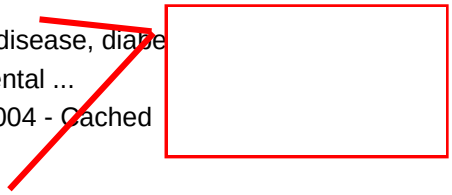
The problems listed in this section caused minor difficulties for the participants and should be addressed.

2.2.1 Search results

NHGRI recently switched to using GOOGLE as its search engine and that has been an improvement over the previous search engine. However, at the time of the evaluation, the search results all began with "National Human Genome Research Institute" and the

differentiating information at the end of the search result listing from GOOGLE was often ellipsed (…). Also, not every search result had a description. Both of these factors caused difficulties for participants who used SEARCH. The examples below show how the ellipsis made it more difficult to differentiate results (the first line of each search result comes from the TITLE field in the underlying page code).

National Human Genome Research Institute | Education Kit...
... in single genes to more common diseases like cancer, Alzheimer disease, diabe
and heart disease where several genes in interaction with environmental ...
www.genome.gov/Pages/EducationKit/booklet4.html - 10k - 11-01-2004 - Cached



National Human Genome Research Institute | Education Kit ...
... be tested to see whether they risk developing conditions like heart disease, diabetes,
or prostate cancer later in life. In many cases, this advance warning ...
www.genome.gov/Pages/EducationKit/booklet6.html - 14k - 11-01-2004 - Cached

Recommendation:

- Adjust the TITLE field in the underlying code so it is shorter.
- If possible, have the GOOGLE list the entire TITLE (no ellipsis) .
- Ensure every page has a description field (this is invisible code on the page which is displayed as part of the search results).

2.2.2 CAREERS & TRAINING

Several participants were considering masters or doctoral graduate programs and visited the CAREERS & TRAINING tier during their session. They found the organization by audience on the CAREERS & TRAINING tier to be extremely helpful. However, when they viewed a page for a particular program, they were not always able to locate the application because it was sometimes located in the SEE ALSO section (on the right), rather than in the primary content section in the middle.

Recommendation:

- Ensure that applications and other critical links are in the center section.

2.2.3 ELSI acronym

Participants did not know what ELSI meant, and commented on it.

Recommendation:

- Expand the ELSI acronym on the RESEARCH page and in the DER left navigation.

2.2.4 Active Grants Database [10001799]

In general, the participants who visited this page were pleased that they could search the ACTIVE GRANTS DATABASE, but wanted more search options. They were hoping to learn about NHGRI's funding patterns in their area of interest (e.g., amounts awarded, geographic hotspots of funding, etc.) and found the search capabilities offered by the ACTIVE GRANTS DATABASE too limited. Although there is an option for including the grantees' addresses in the search results, many participants either did not see that checkbox, or they simply did not associate it with their goal of learning which institutions had received grant awards.

Recommendation:

- Expand the search form to let visitors explore a wider variety of fields in the database. Allow them to search subfields in the grantee address such as the institution or state. If this is not possible, have the default for the INCLUDE GRANTEE ADDRESSES be on (checked) rather than off (unchecked) so addresses will show unless visitors explicitly uncheck the box.
- Keep the CHECK HERE TO INCLUDE GRANTEE ADDRESSES IN THE LIST checkbox with the rest of the form. Do not separate it from with a horizontal line.

2.2.5 Educational Resources

Some participants looking for training opportunities constrained their efforts to the EDUCATIONAL RESOURCES tier because they associated "education" with "training" and had not yet investigated the CAREERS & TRAINING tier. Once they visited the CAREERS & TRAINING tier, they were successful in locating training opportunities.

Recommendation:

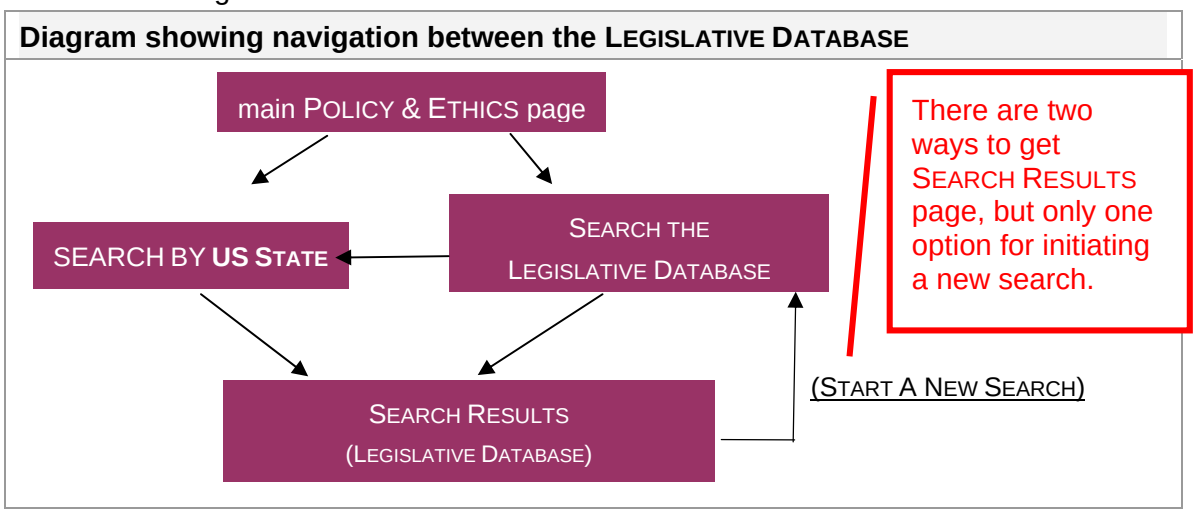
- Provide multiple cross-links to CAREERS & TRAINING pages from the EDUCATIONAL RESOURCES area, both in the center section and in the SEE ALSO section, to guide visitors looking for training opportunities to the CAREERS & TRAINING tier.

2.2.6 Legislative Database

Several participants used the LEGISLATIVE DATABASE during their session. All of them liked the ability to search for legislation in their state, but had difficulties with the navigation and the presentation of the search results.

- The link for START A NEW SEARCH ON the SEARCH RESULTS page always returned the participant to the LEGISLATIVE DATABASE page, regardless of whether the participant had come to the search results page from the US STATE page or the LEGISLATIVE DATABASE page. The following diagram illustrates the two paths to SEARCH RESULTS, and the single means of starting a new search from there.

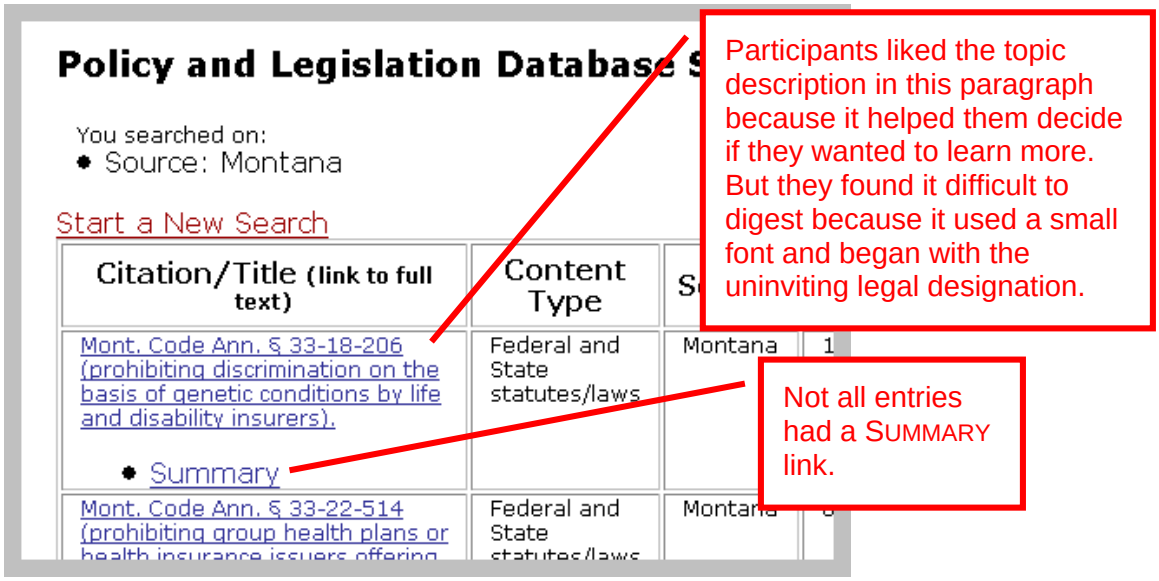
Diagram showing navigation between the LEGISLATIVE DATABASE



- The LEGISLATIVE DATABASE pages had different left navigation than the other POLICY & ETHICS pages even though they were in the POLICY & ETHICS tier.

- States that did not have anything available in the database (Pennsylvania and Mississippi at the time of the testing sessions) were not differentiated. The participants had to click to learn that there was no information available on those state.
- The text in the search results table, particularly the citation/title column, was difficult to read. The text was small enough that some participants had to lean towards the screen in order to read it easily. Once they were close enough to read it, participants found the combined citation and topic difficult to decipher and uninviting because it was one long paragraph. Another difficulty in this area was that not all results had a SUMMARY link. The screen shot below shows a combined citation and title.

Screen shot of a legislative database search results page



Recommendation:

- Provide links for both START NEW SEARCH and SEARCH FOR ANOTHER STATE on the results page so visitors can return to the same page they initiated their search from.
- Adjust the left navigation to match the other POLICY & ETHICS pages.
- Clarify the status of states with no legislation on the US STATE MAP page.
  - Do not link the state name when there is no legislation in the database for that state
  - Add "(no legislation available at this time)" after states with no legislation
- Provide summaries for all entries.
- Separate the citation title from the parenthesized topic. Put them in separate columns. For example:

Citation/Title	Topic
Mont. Code Ann. § 33-18-206	Prohibiting discrimination on the basis of genetic conditions by life a disability insurers

2.2.7 DIR branch pages

Participants looking for an investigator doing research in a particular area easily narrowed down to the pertinent branch, but once they arrived on the branch page, they ran into difficulties. They had to visit each investigator's page one by one because the information on the branch page was insufficient to help them narrow down further. For example, the top of the SOCIAL BEHAVIOR RESEARCH BRANCH page lists four primary areas of research:

- Testing risk communications
- Developing and evaluating behavioral interventions
- Using genomic discoveries in clinical practice
- Understanding social, ethical and policy implications of genomic research

However, the following list of investigators does not provide any information to connect the individual investigators with those areas of research. For example, on the Social Behavior Research Branch page it is not clear which of the investigators is developing and evaluating behavioral interventions.

Recommendation:

– Add a brief keyword list under each researcher to summarize her research focus to help visitors determine which investigators are likely options

Jane A. Doe, Ph.D.

Senior Investigator, xxx Branch
Head, yyy Section
Research Focus: keyword 1, keyword 2, keyword 3

The link will let visitors find complete details.

The keywords will help them decide which lab pages to visit.

2.2.8 Genome Sequencing Proposals [10002154]

Participants reviewing this section liked the table format; they found it easy to scan. However, only one participant understood the left column header ROUND.

Recommendation:

– Expand the column header so that it is more easily understood or provide an explanation in the paragraph preceding the table.

2.3 Low Priority Findings

These issues could be addressed, but fixing them is not critical.

2.3.1 List of diseases under investigation at NHGRI

Participants looking for disease specific information finished their half-hour sessions on genome.gov with highly different impressions of which diseases were being studied at NHGRI, depending on which pages they came across during their session. For example, the SPECIFIC GENETIC DISORDERS page and the CURRENT CLINICAL STUDIES each list diseases and disorders, but the lists are quite different. There is no single page on genome.gov that

provides an exhaustive list of all the diseases and conditions being researched by the Institute.

Recommendation:

- If this is important to the Institute, consider providing a complete list of all the diseases and conditions under investigation at the Institute.

2.3.2 List of projects/research at NHGRI

Some participants were looking for an Institute-wide listing of the projects/research being carried out at NHGRI.

Recommendation:

- Consider an Institute-wide list of projects and research. This may not be feasible given the size of the Institute, the number of projects, and the difficulty of keeping it current.

2.3.3 Tier-2 and Home page layout

Some participants viewed the site at 800x600 screen resolution. These participants were either using 800x600 screen resolution to make text on the screen looked larger, or they were viewing the site on a small monitor. On the HOME page and on the TIER-2 pages, they had to use horizontal scrolling to see the entire page.

Recommendation:

- Adjust the coding so that horizontal scrolling is not necessary when the screen resolution is 800x600.

2.3.4 Talking Glossary

Participants were looking for illustrations but did not try the TALKING GLOSSARY since the name did not suggest anything beyond audio recordings.

Recommendation:

- Rename the TALKING GLOSSARY to the ILLUSTRATED TALKING GLOSSARY.

2.4 NIH Roadmap comments

Several internal participants commented that they would like to see a stronger connection between the NIH Roadmap and NHGRI on the website. They thought it was important to publicize the Roadmap initiatives for which NHGRI is taking the lead role.

3. Appendix A

This section summarizes the recruitment and characteristics of the participants in two evaluation rounds, external and internal.

3.1 Round1 – External Users

This section outlines the recruitment effort and the evaluation methodology used for external users.

3.1.1 Participant Profiles

Recruitment was designed to locate participants who would have a natural interest in the site because of their profession or personal interest. One important element was locating participants who would be interested in the RESEARCH tier, since it received the most radical overhaul. The other primary focus was the CAREERS & TRAINING tier since it also received a major restructuring.

The participants' interests covered the web site well. Two of the participants were research scientists who were interested in exploring funding possibilities as well what tools and services NHGRI offered to outside scientists. Several other participants were also genetics/genomics researchers. A subset of the participants was students and used the CAREERS & TRAINING tier to explore graduate/training possibilities. Other tiers, such as HEALTH, POLICY & ETHICS, and EDUCATIONAL RESOURCES, did not have a major restructuring but lower level content was often re-worked and restructured. Many participants, particularly the nursing professionals and nursing students, explored these tiers as part of their session. The following list shows the spread of the participants' backgrounds.

- Nursing Research Faculty.
- Nurse interventionist/BS student in managed health care.
- Nurse interventionist/Master's Nursing student, planning on PhD.
- Research specialist 3 in genetics lab/Nursing graduate student starting doctoral program in the fall of 2004.
- PhD nursing student. Nurse interventionist.
- PhD psychology student. Doctoral in molecular genetics plus work experience in gene therapy.
- Administrative assistant for the Dean of the School of Nursing.
- Data manager for a research project.
- Lawyer with degree in molecular biology.
- Biologist with a biomedical corporation.
- Lawyer/consultant for companies seeking commercial applications of human tissue engineering and regeneration technologies.
- Biology professor at a research university with NIH funding. Lab focus includes gene networks.
- Researcher at a genome sequencing center.

3.1.2 Evaluation Methodology

Participants were introduced to the site and asked to identify what kinds of information they would seek on the site. After scanning the home page, all the participants quickly identified several sections of interest and in many cases specific information they wanted to locate. Participants were then asked to proceed and "think-aloud" (vocalizing their thoughts) as they located for their target information. Sessions were conducted at the participant's home or office except for two long-distance sessions that were conducted over the phone. When possible an audio and screen capture of the session was recorded, but this was not always feasible. Sessions typically took between thirty and sixty minutes.

3.2 Round 2 – Internal Users

This section outlines the recruitment and the evaluation methodology used for internal users.

3.2.1 Participant Profiles

Recruitment was designed to include both critical stakeholders as well as a representative cross-section of staff from the Office of the Director (OD), the Division of Intramural Research (DIR), and the Division of Extramural Research (DER). Two of the interviews were repeat interviews for participants from the evaluation in fall 2003 who had expressed frustration with the previous design, to see how well the redesign was working for them. The interviews included eight staff members from DIR, six staff members from DER, and three staff members from the Office of the Director (OD).

3.2.2 Evaluation Methodology

The focus of this evaluation round was not formal usability testing but an investigation into the usage and attitudes about genome.gov by internal users. Interview sessions were primarily conducted over the phone and began by exploring the participants' personal use of the web site and then their perceptions about external use of the website. The latter portion primarily focused on sections of the site that were curated, influenced by, or important to the participant.

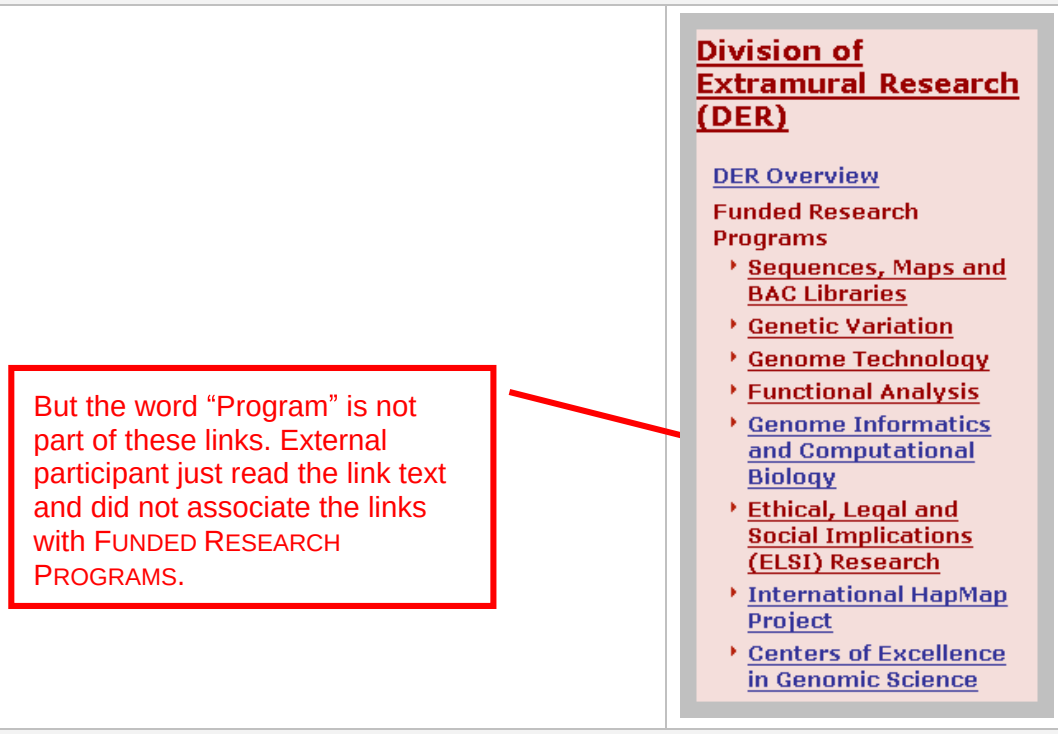
It was clear from the interviews that internal use of genome.gov varies considerably. For some internal participants, genome.gov is an integral part of their work; they frequently retrieve information from the site. These people typically have genome.gov as their default HOME page and are comfortable finding information on the site. Others do not use genome.gov regularly, but still keep it as their home page. They like to scan the HIGHLIGHTS, NEWS, and CALENDAR to stay in touch with what is happening at the Institute. They may read a news article, even if they heard about it long before it was published on the website, just to get the public spin on it. Other internal participants mentioned that because there is no information on genome.gov that they need, they rarely look at the site. They may have the intranet (inside.genome.gov) as their home page if they use it frequently, or they may have external websites that relate to their work as their home page. Almost all of the internal participants mentioned looking up people within the Institute as a frequent activity. Some use the STAFF DIRECTORY functionality on genome.gov while others use the PHOTO STAFF DIRECTORY on the intranet.

All internal participants mentioned receiving requests for information from people outside the Institute. In some cases, the requests are related to the staff member's job (e.g., first-time grant applicant checking details of an application). In other cases, they are unrelated (e.g., high school students seeking help with their homework). In all cases, internal participants said that they often responded to queries by sending out links to pages on genome.gov (e.g., sending students the link to the EDUCATIONAL RESOURCES page). It was clear that the internal participants viewed genome.gov as an important resource for the general public; they said that they list genome.gov on presentations and outreach materials even if they do not use the site themselves.

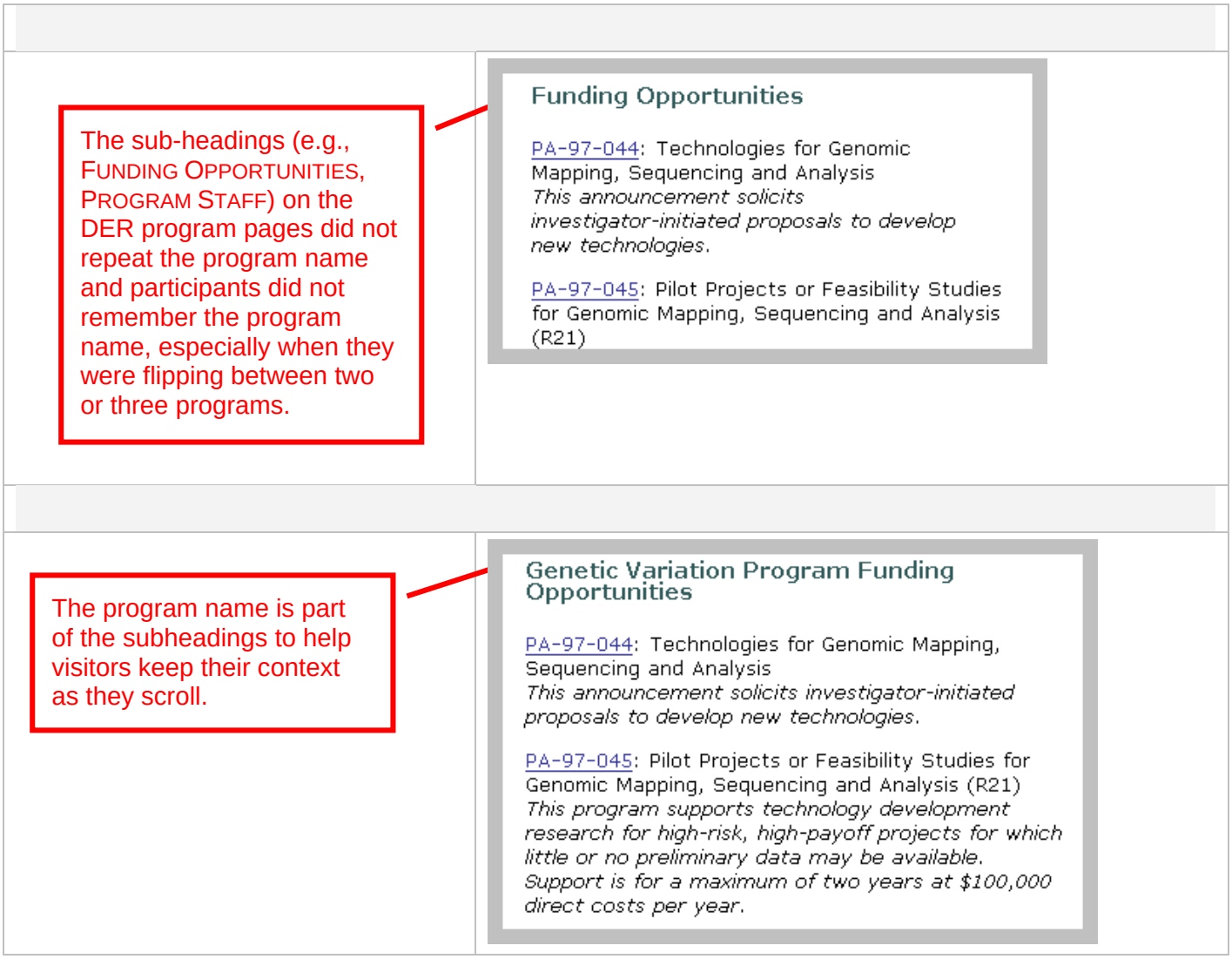
4. Appendix B – before and after screen shots

This section shows a small selection of before and after screenshots to illustrate how some of the recommendations described in this report have been implemented. The first two sets illustrations refer to the recommendations in section 2.1.1 regarding the DER program pages.

(Before recommendation 2.2.1 was implemented.



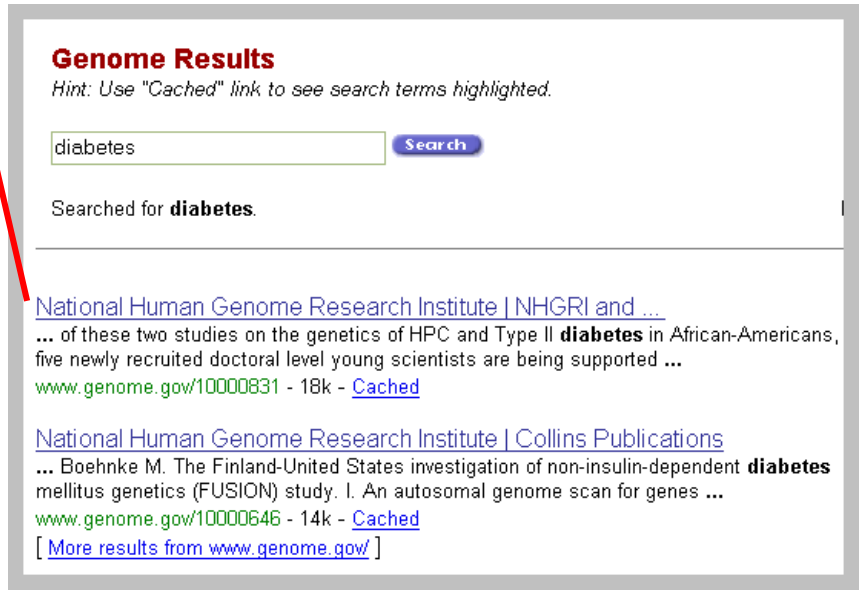
After recommendation 2.2.1 was implemented.



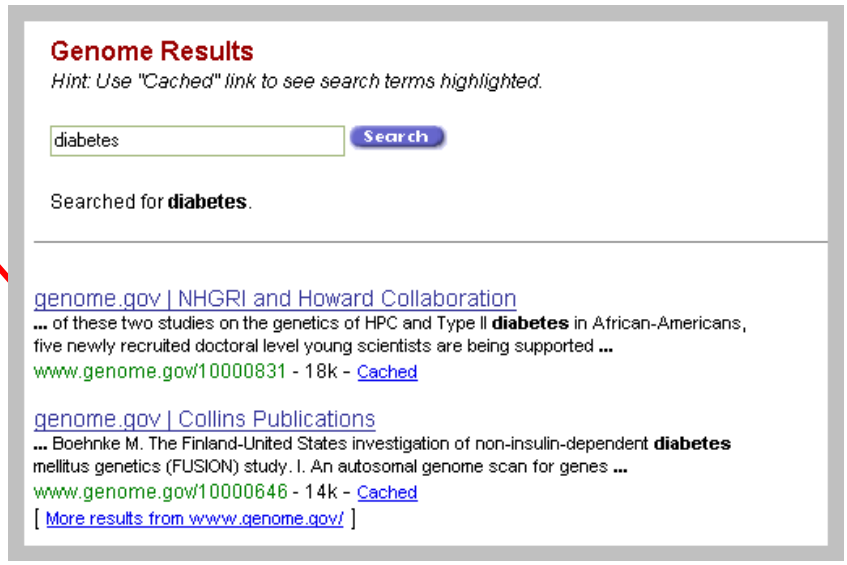
The next illustration refers to the recommendations in section 2.2.1 regarding search results.

Before recommendation 2.1.1 was implemented.

Search results used to begin with NATIONAL HUMAN GENOME RESEARCH INSTITUTE which caused the end of the line, with the differentiating information, to be ellipsed (…).



Now search results start with genome.gov which allows more of the differentiating information to show at the end of the line.



5. Project Timeline

The timeline for this project was:

- June 2004 – August 2004: data collection from external visitors (Round 1)
- September 2004: presentation of results from Round 1
- September 2004 – December 2004: data collection from internal visitors (Round 2)
- December 2004: presentation of results from Round 2
- December 2004: delivery of the final report (the initial 19 pages of this document)
- January 2005: delivery of an informal checklist of remaining recommendations to the webteam

6. Final Appendices

The remaining sections in this document contain data collection notes as well as two presentations delivered to the web team as the data collection progressed:

- Raw notes from interviews and informal observations with external visitors (Round 1)
- Slides from presentation to the web team with results from Round 1
- Informal checklist of recommendations to web team based on results from Round 1
- Raw notes from interviews and informal observations with internal visitors (Round 2)
- Slides from presentation to the web team with results from Round 2
- Supplementary presentation to the web team regarding navigation difficulties between the research server and genome.gov
- Final informal checklist of remaining recommendations to the webteam based on both Round 1 and Round 2

Raw notes from interviews and informal observations with external visitors (Round 1)

Raw notes: External users (Round 1)

Interview and informal observations with external users of genome.gov.

June 2004

General Observations

Research page very confusing to at least one participant (faculty researcher). She wanted that page to just explain the DIR/DER distinction. She was happy when she located the 1st question in the Research FAQ which provides that explanation. Before she located that she had serious misconceptions about how the two were related.

Many people hit the Research page and promptly scrolled such that the Research Shortcuts weren't showing and the DIR/DER section was at the top. They said that the larger text and graphics made it seem like that was the most important information on the page, so the scrolled to put it at the top. In some cases that handicapped them because the link they needed was in the Shortcuts.

- Possible solution - reduce the number of links in that area.
  - provide links to the agnostic pages
  - create an explanation pages that also has the other shortcut links

Careers & Training section was a big hit too. The tables organized by interest and background worked well. Also, laying out the different audiences on the left helped advertise that there are opps for many different audiences (including high school students) available.

Online Research Resources also a big hit for those that recognized what it had to offer.

Educational Resources needs more links into Careers & Training from the See Also section

A few people took a bit of time to start using the top nav, especially if their first click off of the Home page wasn't on the top nav, but using some other link. This behavior is expected.

Feature on Tier-2 pages still not great because of interest to a small percentage of visitors. Might be better to reverse Feature and Highlights.

Need rollover on the top nav buttons.

The more savvy testers recognized the [server.com] annotation and appreciated it.

Always put applications for training opps in the center section, it is a mix of being in the right and the center.

ELSI on Research needs to be spelled out

Why is the specific genetic disorders page so much shorter than the clinical trials page? The specific disorders page makes it look like there are very few diseases being studied at NHGRI.

DER left nav throws some visitors for a loop. Looks like a listing of projects. They aren't quite sure what they are seeing when they visit a particular program page.i.e. Program in this context has special meaning that not everyone understands.

There is no institute-wide listing of the kinds of projects/research happening at NHGRI. It's actually a bit tough to "learn about our science."

In order to learn what each reseracher is doing, a visitor must visit each of their individual pages. Would be helpful to have brief keyword list under each investigator's listing on both the Investigators page and the Branch pages.

Tier-2 pages are not 800x600 - they require horiz scrolling.

When asked "how would you print this page" - participants find the Print Version link.

Search results need to show more useful information -- the results all start with "National Human Genome Research Institute" and the pertinent information that might help a visitors is cut off. E.g., search for 'schizophrenia"

Only one participant who looked at the list of proposed genomes to be sequenced understood the header on the left column.

Active Grants Database . No current way to do a geographical search (you can fudge it by showing addresses, but most participants did not see the checkbox for address). Also no means of doing a keyword search. Can The Active Grants Database be expanded to include more search options?

Talking Glossary - primary repository of illustrations as well but that it not obvious from the name. Perhaps the Illustrated Talking Glossary? Or put a link 'bout illustrations on the left? Does every term have an illustration?

Possible to get numbers on how often links in Quick Links are clicked?

Online Research Resources from NHGRI- info appears to be WAY out of date and not attended to. One tool (e.g., WebBLAST) lists an Oct 2002 date. Also the demo on the WebBlast doesn't give any clue how to use it

P1

Background & current occupation:

Faculty, School of Nursing

Browing behavior:

Heavy reliance on Back button

Print Version not available at time of testing

Uses scroll bars to control her view of the page (both horiz and vert)

Observations:

Commonly used NIH sites: Clinical Trials, various institutes to find what they are doing, what's being funded, grant information

Of immediate interest on Home page : news releases on the right. Often views those (recent news articles) on a new site because they give her a sense of what the institute is "up to."

In the Newsroom section spotted the webcasts, said these were of interest. Said she would normally peruse the Recent News Articles (same goal as above, to get a feel for what the institute is doing)

Went to Grants and explored Funding Opportunities: Minorities & Special Populations -- she would find it helpful if the descriptions of the opportunities clarified whether the opportunities was to study those populations or for the investigator to be a member of those populations

When asked about Intramural versus Extramural, went to DIR home page from Home page . Her comment: "Where is this place?!" -- the small blurb was insufficient for her to understand what DIR was. Glanced at the Overview page and said that it was helpful (but didn't actually read much of it).

Research page - initial impression was that the left (DIR) showed research areas and the right (DER) was projects funded by the research areas shown on the left. Wanted/needed the explanation of DIR/DER that is the first item in the Research FAQ page. Very confused by the Research page. In the DER section, went to the About DER in the bottom left nav and said she liked that page BUT -- the initial paragraph on that page (the About DER page) is the same as the paragraph on the DER home page that she said didn't explain things well enough.

P2

Background & current occupation:

Nurse interventionist and student (has diploma, one course shy of a bachelor's in biz administration in managed health care). Personal interest in genetics.

Browing behavior:

Scroller

Uses top nav

Uses left nav sometimes, tends to concentrate on the center content

Uses some drop links

Scans links and when unsure looks around for text to help her decipher the links

Observations:

Spent first 15 mins in the Health section and loved it. The FAQs and pages of resources she thought were particularly well written and organized. Finds the inclusion of the URL for online resources helpful.

Also liked the information in the Educational Resources section. Thought that she could teach herself by using some of the material in the education modules. Likes the Talking Glossary.

Took a bit of time to locate Careers & Training section. Got to the Research Training Opps page through center navitaion, but didn't explore fully, because she never looked to the left. Her attention was focused on the center section.

8:36 "What is the NHGRI" when on the Research Training Opportunities page - just after scanning the Intro paragraph that expands NHGRI.

She left and explored several other sections. Was thinking that training opportunities would be in Educational Resources. Eventually relocated it with a hint from the facilitator.

18:00 Hits Research through Research button. Uses Quick Links instead of scrolling down like most people. Finds Calendar of Events (which she had previously located through opps for undergrads in the Research Training Opportunities section. Checks out Funding Opps from QUIck Links too, then Research FAQ. Likes the FAQs in

Pokes around Research for a bit but is just poking - not seeking any specific information.

23:45 (or so) checks out About NHGRI - kind of looking for bg info - looks at the History page

P3

Background & current occupation:

Full time student - finishing Master's in Nursing in December. Starting Doctoral after that. Works on HIV study at UPMC. Uses NIH sites to look up HIV information.

Browing behavior:

Uses See Also

Starts with top nav

Wants Print Version (not available at time of testing)

Scroller

Observations

First interest in Educational Resources . Finds HGP FAQ - wants to print “a bit much to read online”

Looks at vision paper (thinks this page is the printable version b/c left nav is gone)

Aware of writing levels (physician level versus consumer level, etc.)

Aware Fact Sheets provide nice overview in bullet format.

Health - looks up Progeria - finds the writing is consumer-level but still giving her useful information.

Looks at Current Clin Studies table - likes format of it.

Genetic Disorders - spots the link to Online Health Resources for conditions that aren’t listed - good to have that at both the top and the bottom

Notices the “Last reviewed” at the bottom of pages.

P4

Background & current occupation:

Research specialist’s 3 in Dr. Yvette Connely’s lab. Main job gathering data, sometimes uses databases

Getting ready to go to grad school for Phd -- primary interest in gene expression.

Looking for

Browing behavior:

Scroller

Doesn’t use top nav at first, but does a bit later

Sees drop-links, but prefers to scroll, especially on a new site

Observations:

First stop is Research, SBRB. Likes layout of investigator pages b/c it tells what their research interests are.

Likes the Overview (DIR) page

Uses the Org charg - finds it helpful

Finds Research Training Opportunities through Intramural Training Office (from the DIR org chart)

(Re-locates it through top-nav later)

Likes opps by situation/degree on the left.

IRTA page -- doesn’t know what IRTA stands for

Confused by application that is simply a letter -- she is expecting a PDF.

Back to Research page, looking for genome sequences, articles

Seqs, Maps, BAC Libs -- scrolls through, checks out Genetic Variation, and Genome Technology pages - decides these aer programs - but it takes her some figuring out

Seqs, Maps, BAC Libs “I’m expecting to see data, not an overview of a program or how to submit proposals”

Online Res Rrscs - likes it. Notices the [server.com] notation and finds it useful

Research unsure on intra vs. extra distinction, but puzzles it out

Grants - from her perspective of future grant-seeker, she likes seeing the Grants guide prominent.

Health - happy to see articles that she could point friends to

Loves the Learning About XXX pages in the Health Section “This is the type of questions we get all the time”

August 2004

General Observations

Quick Links are usually not the first place visitors to the Research page look. Most often Participants immediately focus further down on the graphics and larger headers, usually scrolling such that those sections are at the top of the screen.

Some participants are setting their font size quite large. Their screen resolution is set to 800x600, and their font size through the browser is has been increased. This caused one participant to have to use horizontal scrolling to see all of the Home page and Tier2 page content.

Navigation tendencies:

- Participants who move off of the home page via a link that is not a top nav (i.e. left, center, or left) are slow to start using the top links. Later on in the interview they would start using the top nav. This is not necessarily a problem - just interesting.
- Participants often scroll such that the top banner, including links, is off the top of the screen when they first visit a page so they can maximize the content they can fit on their screen. This is not necessarily a problem - just interesting.
- First area of focus is the center, then the left, then (sometimes, usually later) the right.
- Drop links: First time visitors prefer to scroll even if they recognize what the drop links are for so they don’t miss anything on the page.
- Careers & Training – there are drop links at the top of the page, but the raining table takes precedence because it is so visual and easy to scan. I.e., people weren’t using drop links - but not a problem that they aren’t.

News Releases get high marks - they are easy to read, informative, and provide "tendrils" (links) to related materials/reading. The HGP FAQ in particular several participants looked at -- and remarked on.

Health info gets high marks

Legislative Database gets mixed review. The ability to lookup by state rates well, but the satisfaction level on the results was mixed. Most participants thought the language wasn't helpful and the summary was insufficient. The summary provides high-level information on what items (testing, privacy, etc.) the law covers, but doesn't tell them what the law/statute says about those items. They wanted more in the summary - a full consumer-level interpretation of the law. "It tells me the law covers testing and privacy but doesn't tell me what it says about testing and privacy"

P5

Background & current occupation:

3rd year PhD nursing student. Primary interest in medication adherence. For job meets with patients, does cognitive testing over at hospital. Used to be a nurse interventionist.

Browing behavior:

Good scroller

Back button afficianado

Doesn't comment on Print Version - but wasn't asked about it either

Observations:

Research area - first area of interest

Intra versus Extra on Research not clear enough

Hoping to find list of studies at NHGRI -- didn't find. When visited an investigator page, did not scroll down past the blue box at the top. Thought list of Clinical Studies is the list of all studies happening at the institute. (not familiar with clinicaltrials.gov)

Doesn't use See Also immediately, but does later in the session

Conference - could find questions posed, but not the answers. "telling me what goals were" - expected conference summary

Many comments on Genome Sequencing Proposals - finds it off of a news release "organisms"

Careers & Training grad students table: likes it. The classification in the first column tells him which rows he can ignore

P6

Background & current occupation:

Did Molecular Genetics for 15 years and gene therapy. Took off 5 years for kids. Came back but wanted to work with people so no longer doing that.

Browing behavior:

Back button afficianodo

Notices Print Version

Doesn't use top nav

Doesn't use See Also right away - but does eventually

Notices that left nav is consistent.

Uses/notices TOC nav on the Seqs, Maps, BAC Libs page

Doesn't use breadcrumbs

Observations:

News releases get high marks. Easy to read but informative and followed up with "tendrils" links to give you more info if you want it.

Seqs, Maps, BAC Libs "introduction would be nice" - drops right into links

Genetics Vars - Funding opps doesn't seem complete, wonders where the rest of the funding opps. And likes the Funding Opps sections that provide more info (blurb, dates, etc.), like the ones in Genetic Tech.

Clinical Studies table gets high marks.

Educational Resources - likes it, poking around. Likes Talking Glossary

When asked about top nav says she prefers the Back button so she can keep track of where she is/has been.

Research - she already knows in-house versus out-house. Doesn't notice/scan Quick Links, rather focuses on DIR/DER.

When in DIR, she knew how to get back to DER and Genetic Tech when she wanted to.

Careers & Training table for grad students: Thinks table should be ordered by level of degree required. I.e. Phd/MD at the top down to everyone

P7

Background & current occupation:

Dean's Assistant

Frequently performs web searches, primarliy google, as part of her job

Browing behavior:

Very web savvy.

Checks carefully for all her navigation options.

Observations:

Delighted to see prominent Staff Directory - she is often looking for people as part of her job and that kind of feature is often buried on other sites.

She does a careful perusal of Home page before beginnning, comments on the connection between the left nav and the top nav

Wants to learn about the institute initially, goes to About and the a Fact Sheet. Scans the top level of several sections (DIR, DER, Grants, Health, etc.) in quick succession in this initial exploration of the site. Likes the persistence of the left nav.

Uses all nav elements, top nav, left nav, See Also, TOC. Understands droplinks but prefers to scroll. *** new users prefer to scroll so they don't feel like they are missing things - expect some would start using droplinks on subsequent visits once they felt they understood what was on the page.

Understands the breadcrumbs

Tries out the Active Grants Database -- wants to look up by university, the way she can on the CRISP search form. Does not see the "check this box to see addresses" option until it was helped by facilitator. R01, K01, K25, etc are meaningful to her.

Uses breadcrumbs

ERROR -- 12011099 - breadcrumb wrong??? Those items seem to be for post Baccealaureates, not undergrads?

P8

Background & current occupation:

data manager, research assistant

Browing behavior:

Scanning for the blue.

Not noticing the See Also much

Understands breadcrumbs.

Using left nav and top nav.

Observations:

At first he wants to get a handle on what kind of info he can get off of this website

Starts in About "good place to start" - looks down into Mission & Goals, them Mission Statement, then Goals and Planning

"wants to learn the focus of the insitute"

Then heads for Research button - goes for All About HGP - it's something he's heard of - he's wondering if he can learn more about it on this website

Gets to the Overview - he was looking to understand the org structure, he remembers it was a group effort, is wondering if NHGRI was the org that coordinated the group effort. The Overview tells him about the science, but not about the org structure of the effort to seqence the HG. Good information, but not quite what he was hoping for.

Checks into Grants,

Then Health.

Now he wants to understand what all the work that went into the HGP will be used for.

Reads Geneticss FAQ extensively - it is giving him info that he is interested in and can digest.

Doesn't know that NHGRI is part of NIH, but figures it out.

On the Legislative Database - wants more info -- wants the ramifications for statutes and laws rather than a list of topics covered by the law.

Research page - doesn't know Intra versus Extra but figures it out from the descriptive (Funded by, Conducted at) language.

Visits ENCODE page - expecting it to describe the research done by the project, not funding opps

DER left nav looks like listing of projects or categories of projects The language "program" only has meaning to a small subset of visitors. Expecting to visit projects and learn what kind of research people are doing.

P9

Background & current occupation:

Molecular bio background, lawyer. People in her firm do work with genetics and the law (particularly patents). Although she doesn't do that kind of work, she is familiar with what they do.

Browing behavior:

Resolution is 800x600 but her font size is very large. In order to read all of the See Also, she must scroll to the right

Adept at both horizontal (which is necessary on the Tier-2 pages) and vertical scrolling.

Uses top nav and some left nav

Observations:

She is primarily looking for educational material she can pass on to her son. Takes a look at the Legislative Database but doesn't comment on it much. Takes a brief spin thru Policy & Ethics and comments that if she had more time she might look over

some of that material but that there are other people at her firm who deal with that "stuff" more.

P10

Background & current occupation:

Biologist at biotechnology company with a substantial research and development program focused on genetic diseases, immune system disorders, heart disease, and cancer.

Browing behavior:

Notices Print Version

Uses top and left nav.

Takes awhile to notice See Also

Doesn't use breadcrumbs

Notices [server.com] notation, knows what it means, finds it useful

Observations:

Aims for Research first. Wants to learn if NHGRI is doing any research on schizophrenia.

Social Behaviorial Research Branch - reads the conceptual domains at the top but then doesn't see any (easy) way to learn which investigators are doing research addressing a particular conceptual domain. E.g., who is researching risk communications? In order to learn that he would have to visit each researcher page.

Medical Genetics - visits Ellen Sidransky (random choice). Finds the layout of the investigator page useful but still wants to see a brief keyword list on level up for each investigator to shorten his search time.

Reads the Overview of DIR

Heads back to Home

Searchs for schizophrenia -- the results aren't as useful as they could be because they all start with "national human genome research institute".

Now looks for parkinson's - locates an investigator doing research in that area through the search results. Locates the Learning about Parkinsons with prompt from facilitator asking if there is consumer level information on the research also available.

Finds Online Research Resources "this is good" - particularly happy with the [server.com] notation since that provides additional information.

P11

Background & current occupation:

Lawyer in private practice, also consultant for legal practices in early stage life signs companies - from diagnostics, medical devices, biologics. Companies interested in tissue engineering

Browing behavior:

Immediately aware of top nav and left nav on Home page

Careful browser - reads and looks around before settling on a link to pursue

Observations:

Puzzled by different routes to the Legislative Database - one goes to Query form (left nav), the other does to the US Map page (Policy & Ethics home shortcut link).

Finds the Content Type column to be superfluous - that maybe because most searches only return results of all the same content type “Federal and State statutes/laws”

What he would find useful is to have the Database deliver a compendium of how particular terms are defined in each statute since it is the definition that drives the legal interpretation.

Would like something that indicates the credibility/completeness of the Database . E.g. How current the Database is.

Would ideally like the Database to also list judicial interpretations of the statutes and laws.

Participant is considering applying for funding himself. Wants to learn what kind of projects have been funded. What is considered in an application? Would he be better off aligning himself with a university or academic for his submission? How often are first-timers awarded funding? How much is a reasonable number to shoot for?

Active Grants Database - wants to use it to get a sense of what has been funded -- is it geographically spread out, or concentrated in certain areas?

Would like a means of searching geographically and a means of doing a keyword search

ELSI Grant Abstracts - would also like to know the amount of funding in addition to the abstracts. Would also like to see pubs associated with the grants that funded them.

Illustrations are useful to him when he does PPTs. Doesn’t notice “illustration” in the Talking Glossary blurb. (sees it when guided by the facilitator)

Suggest Genetic Art as an additional area that could be covered in Ed Rsrcs

Research -- understands DIR/DER distinction. Looks at Tech Transfer page.

Not clear why the page with the label: ELSI Program Announcement Institute and Center Contacts also has the other institutes listed.

Had to be prompted by facilitator to locate Program Staff - not thinking along lines of contacting a program director to get answers for his questions.

P12

Background & current occupation:

Biology Professor. Runs his own lab. Much of his work is on the Sea Squirt (Ciona). Funded by NIHCD.

Browing behavior:

Scans the blue, doesn't tend to read the blurbs

Glances at See Also, but dismisses it

Observations:

Looking at the site for things that can help him in his research, funding and/or tools.

Research Resources off of Home page

Then Res Rsrcs from DIR - unclear the left nav has appeared all of a sudden when the prev two pages (Home and Res Rsrcs) didn't have it.

When looking over the page(s) his main question is whether he as an outsider can use these tools.

Looks at Microarray Core Facility -

Homeodomain Resouces - out of date

WebBLAST lists Oct 2002 date - way too long ago for this field

In the end his impression of the DIR Res Rsrcs page is that is out of date & not attended to. In general he wasn't impressed.

Next wants to know is there a list of genes that have been linked to particular syndromes?

Looks for one in the search

Next looks at DIR

Also wants to know what can NHGRI do for me to help my research?

E.g., has medium size BAC library (imbedded with DNA of interest). Needs to have it sequenced. Given the size of the BAC library, having it sequenced by a commercial firm tends to be expensive. Wants to know if NHGRI can sequence it or suggest some new resources for sequencing BAC libs that he doesn't already know about.

BAC Lib Proposals - first participant who understood what the column header "round" meant.

Is cycling within the Seqs, Maps, and BAC Lib TOC but finds the actual Seqs, Maps, and BAC Lib page confusing. It isn't like the other pages in the TOC and he doesn't understand why that is the case.

Glances at See Also but doesn't register it Grants - interested in alternative grant mechanisms -- finds the page describing R01, R03, etc.

DER - Overview useful

Functional Analysis page - unsure of where he is since he arrived from the Grants/Funding Opportunities/Functional Analysis link.

Unclear on the difference between the Overview on the left and the Overview in the center. Likewise for Program Staff - figures it out. Thinks he would not have taken the time to puzzle it through he was on his own.

Slides from presentation to the web team with results from Round 1

Genome.gov redesign evaluation: Round 1

Who Participated
Starting Gambits
Common Behaviors
High Marks
Observations/Recommendations

Round 1: Who participated ?

- Nursing Research Faculty.
- Nurse interventionist/BS student in managed health care.
- Nurse interventionist/Master's Nursing student, planning on PhD.
- Research specialist 3 in genetics lab/Nursing grad student starting doctoral program in the fall of 2004.
- PhD nursing student. Nurse interventionist.
- PhD psychology student. Doctoral in molecular genetics plus work experience in gene therapy.
- Admin assistant for the Dean of the School of Nursing.
- Data manager for a research project.
- Lawyer with degree in molecular biology.
- Biologist with a biomedical corporation.
- Lawyer in private practice. Consultant for legal practices in early stage life signs companies (diagnostics, medical devices, biologics) and tissue engineering.
- Biology Professor at a research university. Lab focus includes gene networks.

Round 1: Who participated ?

- 5 participants with nursing backgrounds
- 6 participants with genetics/genomics backgrounds
- 2 lawyers
- 4 students
- 2 faculty
- 1 lawyer/consultant (and a current user of the site)
- 1 data manager
- 1 academic admin assistant

Observations: Starting gambits

- Learn about the institute
  - Home page News Releases
  - About NHGRI
  - Locate list of research projects
  - Cruise through the Tier2 pages

  - "Life in the Lab" reactions
    - A webcast will take too much time to sit through
    - *There's educational materials here*

Observations: Starting Gambits

- Look for something specific
  - Funding
    - Can I get money from this institute?
  - Research Resources
    - Is there anything here that will help me in my research/work?
  - HGP
    - What is the HGP?
    - Why did we sequence the human genome?
  - Legal implications
    - What the situation in my state?
  - Health
    - What public health information is here?
    - How does genetics affect me?
  - Research
    - What research is happening here?

Observations: Common behaviors

- Initial nav pattern depended on how the participant left the home page.
  - Top nav
  - Center
  - News
  - Left nav
- And personal browsing habits
  - Quick scan for the blue

  or
  - Careful perusal of the page

Common behaviors: Center section

- Primary focus for most participants
  - Center
  - Center
  - …
  - then the left, then maybe the right
- See Alsos working better than before but…
  - Ensure critical links are in the center section

High Marks

- New Releases
  - Easy to read, informative, provide links to additional material
- Health pages
  - Easy to read, answer questions, provide links to additional material
  - Nurses: like pages they can give to their patients

High Marks

- Careers & Training
  - Good guidance to appropriate opportunities
    - Audience levels in the left nav worked well
    - Tables were a big hit!
      - "The rows tell me what I can ignore"
- Educational Resources
  - Some participants interested in teaching themselves
  - HGP materials
    - The HGP FAQ (news release) was a big hit

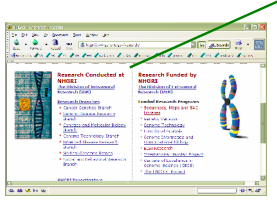
High Marks

- Grants
  - Grad students were quick to note the Grants Guide
- Legislative DB
  - Easy to use
- Online Research Resources
  - *"Someone went to a lot of work to put this together"*
  - *"I would bookmark this page"*
- [server.com]
- Print Version

Observation: Drop links

- Participants recognized the droplinks (because of the down arrow)
- Said they preferred to scroll until they were familiar with the site
- Expected they would use them once they knew the pages better

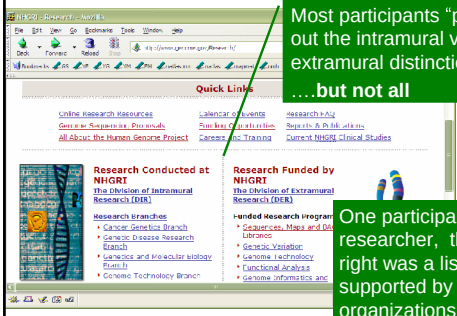
Observations: Res1.5



Many participants scrolled by Quick Links.

They placed the two column headers at the top before they settled in to decipher the page.

Observations: Res1.5



Most participants "puzzled" out the intramural versus extramural distinction

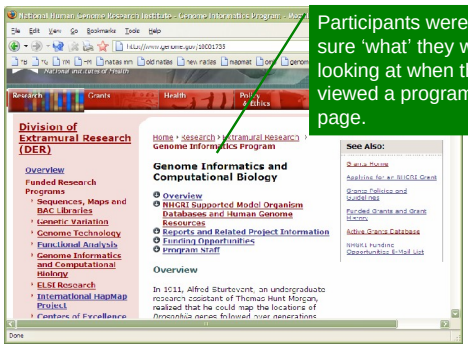
….but not all

One participant, a faculty researcher, thought the right was a list of projects supported by the organizations on the left.

Recommendations: Res1.5

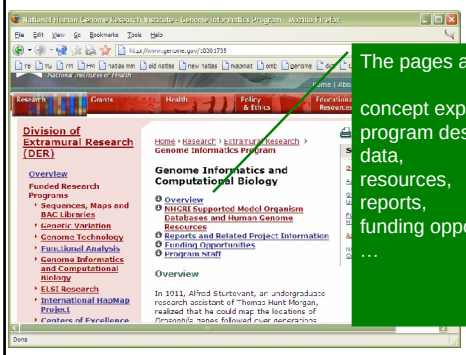
- Add concise explanations
  - Consider using the text from the first Research FAQ, or something equally succinct.
    - *That text unconfused the faculty researcher.*
- Track usage (collect data) on the Quick Links to fine tune them.

Observations: DER left nav and program pages



Participants weren't sure 'what' they were looking at when they viewed a program page.

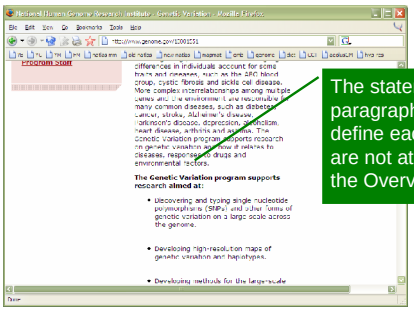
Contributing Factors: Inconsistent page content



The pages are a mix of:

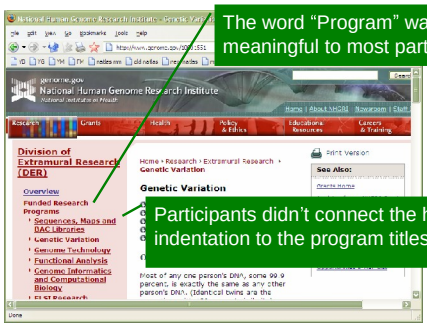
concept explanation,
program description,
data,
resources,
reports,
funding opportunities
…

Contributing Factors: Prog. definition not at top



The statements and paragraphs that define each program are not at the top of the Overview.

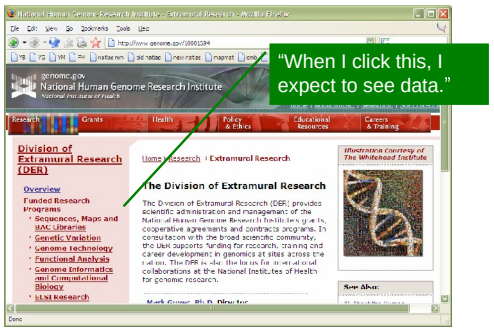
Contributing Factors: Program" not understood



The word "Program" wasn't meaningful to most participants

Participants didn't connect the header and indentation to the program titles.

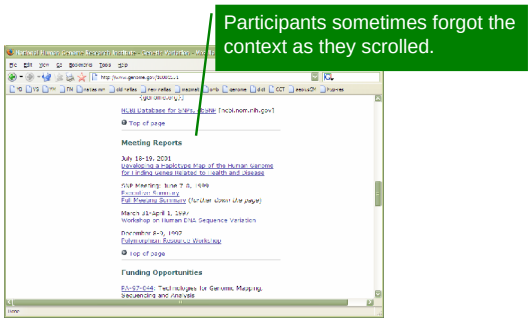
Participant remark



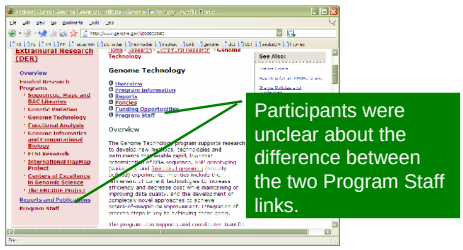
Recommendations: DER programs

- Add the word "Program" onto the top 6 titles in the:
  - DER left nav
  - DER section on the Res1.5 page
  - H3s
- Separate the explanatory materials and the program definitions.

Observations: DER program pages



Observations: DER left nav and Program pages



Recommendations

- Repeat critical words/phrases to maintain context both in the droplinks and in the H4s.
  - Genome Technology Program Overview
  - Genome Technology Research Objectives
  - Genome Technology Program Information
  - Genome Technology Reports
  - Genome Technology Policies
  - Genome Technology Opportunities
  - Genome Technology Program Staff

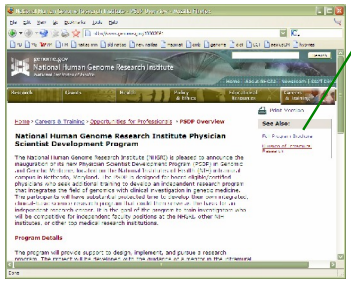
Observations: DIR Research Resources

- Optimistic and curious at first
- But soon backed off
  - Overall impressions were not favorable:
    - Pages are out of date
    - Tools are out of date
    - Demos provide no explanation
    - Can't tell which resources/tools require logins.
    - Tool interfaces are unintuitive

Recommendations: DIR Research Resources

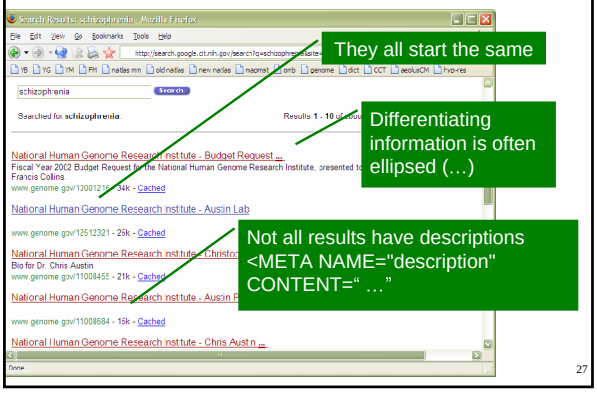
- Encourage DIR to curate their content
- Offer DIR the services of the web team to improve the navigation and layout of the public resources on research.nhgri.nih.gov

Observations: Careers & Training (See Alsos)



Participants didn't always look to the right…

Observations: Search Results



They all start the same

Differentiating information is often ellipsed (…)

Not all results have descriptions <META NAME="description" CONTENT=" …"

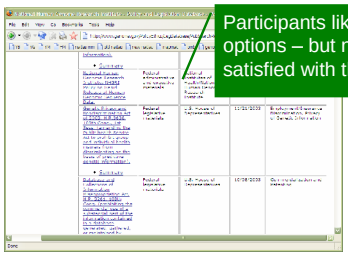
Recommendations: Search Results

- Show the full page title in the search results (no ellipsis)
- Provide descriptions in the meta tags on all pages

Observations: Legislative DB

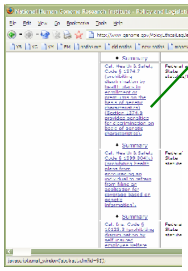
- Everybody wanted just a bit more
  - Lay visitors wanted more information than the summary provided
    - The tables on the old genome.gov provided a consumer-level interpretation of the law
  - Lawyers wanted more bells and whistles
    - E.g., links to follow-up judicial rulings
- A few participants were confused by the two multiple entrances into the database.
  - P&E Home goes to Search by US State Map
  - P&E left nav goes to Search Legislative DB
    - Which in turn goes to Search by US State Map

Observations: Legislative DB



Participants liked the different search options – but nobody was completely satisfied with the results

Observations: Legislative DB



Lay participants found these chunks off putting

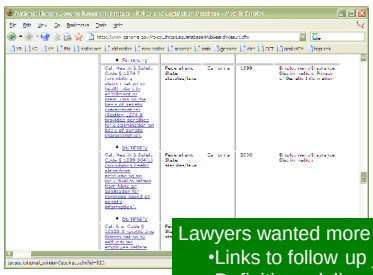
Cal. Health & Safety Code § 1374.7 (prohibiting discrimination by health plans in enrollment or premiums on the basis of genetic characteristics) (Section 1374.9 provides penalties for discrimination on basis of genetic characteristics).

Recommendations: Legislative DB

- Separate the citation title from the parenthesized summary

Cal. Health & Safety Code § 1374.7	Prohibiting discrimination by health plans in enrollment or premiums on the basis of genetic characteristics • Detailed Summary
Cal. Health & Safety Code § 1374.7 Section 1374.9	Provides penalties for discrimination on basis of genetic characteristics. • Detailed Summary

Observations: Legislative DB

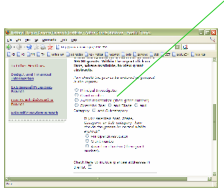


Lawyers wanted more bells and whistles
- Links to follow up judicial rulings
- Definitions delineated in the law

Minor Issues: Legislative DB

- The left nav on the two search page doesn't match the P&E left nav
- States with no data (MS and PA) are not differentiated.
  - hyperlinked (implying there is data)
- The links between the two search pages is not symmetrical.
  - Search by US State Map doesn't link back to the main search page
- Start New Search goes to the main search page, regardless of where the user launched the search from.
- Not all search results have a Summary

Observations: Active Grants DB



Participants wanted more search options.

And most missed the show addresses check box (didn't see it)

Recommendations: Active Grants DB

- Provide more search options
- Ensure the search form is a cohesive visual unit

Informal checklist of recommendations to web team based on results from Round 1

Genome.gov redesign outcome evaluation: Round 1 checklist

Checklist & recommendations for the web team following informal observations and interviews with external visitors.

Page/Section	Observation	Discussion/Recommendations	Priority
RES1.5	Few participants understood the distinction between intramural and extramural. Many participants scrolled the QUICK LINKS off the page, putting the DIR/DER column headers at the top before settling in to read the page.	• Add the respective text from the first RESEARCH FAQ to the respective columns, under the division headers. • Monitor QUICK LINKS usage	High
DER left nav	Most participants had difficulty with the DER section because: (1) Few participants noticed that the program titles were under the FUNDED RESEARCH PROGRAMS header (2) Even those that did notice, did not understand what the word "Program" meant in this context and they weren't quite sure what they were seeing when they visited a program page. Many figured it out after scrolling through a few program pages and scratching their heads, but it was not intuitive. For example, one participant expected to find data when she clicked on SEQUENCES, MAPS, AND BAC LIBRARIES. It took her several minutes of reading and scrolling to determine that the focus of the page was providing information for researchers looking for funding in that area.	• Add the word "Program" onto the top 6 titles in the: – DER left nav – DER section on the RES1.5 page – PROGRAM page H3s • Separate the explanatory materials and the program definitions. – Move the explanatory material into it's own section titled "Explanation of XXX" – Rename the OVERVIEW section to PROGRAM OVERVIEW, or RESEARCH OBJECTIVES	High

DER Program pages	Most participants had difficulty with the DER PROGRAM pages because: • The definition of the program was not always at the top of the OVERVIEW • The pages contain a mix of information that the participants had to sort through to understand what the program was. • When participants scrolled down they lost the context of the page. For example, when they were viewing the FUNDING OPPORTUNITIES or the PROGRAM STAFF sections, the screen wasn't reminding them what program page they were on.	• Put the program title (XXX) on the H4s on the page to keep the context clear even when the user scrolls. • Re-organize the program pages to separate areas that define the program. – XXX PROGRAM DESCRIPTION – XXX FUNDING OPPORTUNITIES – XXX PROGRAM STAFF And additional resources – XXX EXPLAINED – DATA – PAPERS – RESOURCES – Etc.	High
ONLINE RESEARCH RESOURCES FROM NHGRI Pages on RESEARCH.NHGRI.NIH.GOV	Participants visiting the ONLINE RESEARCH RESOURCES FROM NHGRI were initially quite interested, but eventually were a put off because the pages and tools seem to be out of date: • Two participants noticed that the pages they were looking at had a last modified date from 2002. They expected the pages for research tools to be more current. • The HOMEODOMAIN RESOURCE lists the current release as VERSION 5.0, OCTOBER 2002. As one researcher put it "two years is a long time in this field." • The README link on the GENEMACHINE page returns THIS DOCUMENT CONTAINS NO DATA.	Pluses: • Because the pages on RESEARCH.NHGRI.NIH.GOV use the same top nav and breadcrumbs as genome.gov, it is easy for visitors to move freely between these pages and GENOME.GOV. Minuses: • The content on RESEARCH.NHGRI.NIH.GOV is not as well curated as the content on genome.gov. This reflects badly	High

	And not well explained:
	• A login box appears from the RUN THE GENEMACHINE ON THE WEB link, but there is no prior mention of needing a login to use the tool.
	• The WEBBLAST2 DEMO page provides no instructions, just a dialog box with a waiting text entry area.
		on the institute as a whole.
		
		Ensure that content and navigation on RESEARCH.NHGRI.NIH.GOV follows the same curation standards as GENOME.GOV.
		Examples of poor standards:
		• The documentation page for WEBBLAST 2 is formatted poorly (it uses <pre>) instead of using conventional HTML formatting tags.
		• The WEBBLAST V1 FAQ says WARNING: THE FAQ HAS NOT BEEN UPDATED TO INCLUDE CHANGES MADE SINCE WEBBLAST1.
		• The breadcrumbs aren't accurate - the breadcrumb should be ONLINE RESEARCH RESOURCES FROM NHGRI, not ONLINE RESEARCH RESOURCES.
		In addition, the pages and tools provided by DIR should adhere to the same usability standards as GENOME.GOV.	

CAREERS & TRAINING	Some participants concentrated on the center section (because of the larger font and higher contrast between background and text color) and were not as attentive to the left navigation or the SEE ALSOS.	• Always put applications and other critical links in the center section. E.g., 10000219 has the application in the SEE ALSOS where a visitor might not find it.	High

Search Results	Some participants used the search box and were frustrated by the results; they all began with "National Human Genome Research Institute" and the tail end, which could have provided some differentiating information, was often in ellipsis. In addition, not every result was accompanied by a description.	Having the full NHGRI expansion in the page title helps the NHGRI pages in external search engine rankings so that should not be changed. However: • Show the full page title in the search results (no ellipsis) • Have a <meta name="description" content="…"> for every page.	Medium
LEGISLATIVE DB	Participants didn't find the chunks of text in the Citation title column inviting. The small dense text that starts with the citation number was off-putting. Other observations: SEARCH THE DATABASE page • Doesn't have the same left nav as the other POLICY & ETHICS pages. • States that don't have anything available in the DB (PA and MS) aren't differentiated (you have to click to learn that there is no data on that state). SEARCH RESULTS page • START NEW SEARCH returns to the SEARCH THE DATABASE page, even if the participant started on the US MAP page. Some participants found this disorienting. • Not all results have summaries.	• Separate the citation title from the parenthesized summary/title into their own columns. • Adjust the left nav to match the other POLICY & ETHICS pages. • Clarify the status of PA and MS – Un-hyperlink states (PA and MS) that don't have legislation. – Add (NO RECORDS AT THIS TIME) after states with no legislation • Provide links for START NEW SEARCH and SEARCH FOR ANOTHER STATE on the results page. • Provide summaries for all entries	Medium

	Navigation to the DB • The Legislative Database and Search the NHGRI Policy and Legislation Database by U.S. State links go to different pages. This confused a couple of participants who thought (from a quick scan) that these would go to the same place.		
ACTIVE GRANTS DB	Most participants who visited this page didn't notice the CHECK HERE TO INCLUDE GRANTEE ADDRESSES IN THE LIST checkbox. In addition, a couple of participants who visited this page wanted to do a geographical search. For example, searching for a particular university or state. These participants did not realize that they could show addresses in the results and then search the results for the particular university or state they were looking for. In general, the participants who visited this page were please they could search the ACTIVE GRANTS DB, but wanted more search options.	• Expand the form to let visitors search a wider variety of fields in the database. • Keep the form as a visual unit so visitors don't miss important options.	Medium
BRANCH pages RESEARCH INVESTIGATORS	Participants looking for an investigator doing research in a particular area had to visit each investigator's page -- the information on the BRANCH page was insufficient to help them narrow down. For example, the top of the SBRB page lists four primary areas of research, but the following list of investigators doesn't provide any information to connect the individual investigators with those areas of research. I.e., which of the SBRB investigators is developing and evaluating behavioral interventions?	• Add a brief keyword list under each researcher to summarize her research focus.	Medium

EDUCATIONAL RESOURCES	Some participants looking for training opportunities constrained their efforts to the EDUCATIONAL RESOURCES section because they had not yet investigated the Careers and Training section.	• Provide multiple cross-links to CAREERS & TRAINING pages from the EDUCATIONAL RESOURCES area, both in the center section and in the See Alsos.	Medium
RES1.5	None of the participants knew what ELSI meant.	• Expand ELSI on the RES1.5 page and in the DER left nav.	Medium
GENOME SEQUENCING PROPOSALS (10002154)	Only one participant understood the left column header "Round."	• Expand the title so it is more easily understood.	Low
Overall	Participants walked away with highly different impressions of which diseases were being studied at NHGRI based on which page they came across—the SPECIFIC GENETIC DISORDERS page or the CURRENT CLINICAL STUDIES page.	• Consider reconciling these in some manner.	Low
Overall	Some participants were looking for an institute-wide listing of the projects/research happening at NHGRI.	• This may not be feasible given the size of the institute, the number of projects, and the difficulty of keeping it current.	Low
TIER-2 and HOME page layout	Some participants viewed the site at 800x600. On the HOME page and on the TIER-2 pages, they had to use horizontal scrolling to see the entire page.	• Adjust the coding so that horizontal scrolling is not necessary when the screen resolution is 800x600.	Low
TALKING GLOSSARY	Participants were looking for illustrations but didn't try the TALKING GLOSSARY because of the name only hinted at audio recordings.	• Rename the TALKING GLOSSARY to the ILLUSTRATED TALKING GLOSSARY.	Low

Raw notes from interviews and informal observations with internal visitors (Round 2)

Raw notes: Internal Users (Round 2)

Interviews and informal observations with internal users of genome.gov

General Observations

(Interviews were conducted between September 2004 – December 2004).

New DER members not all that clear on the procedure for getting web pages updated.

Overall problem in DER: pages are not up-to-date. E.g., the Program Staff page. Everyone wants the website to be up to date, but it doesn't have top priority on anyone's to do list. There's a sense that it is a shared responsibility and that has the effect of having it not be anyone's baby and therefore is at the bottom (or maybe middle) of everyone's list.

Staff members that use genome.gov as part of their work tend to have genome.gov as their home page. They like to scan the Highlights, News, and the Calendar to stay in touch with what's happening at the institute.

All internals mentioned looking up people within the institute as something they use the web for. Whether they use genome.gov or NHGRInside for that depends on which of those sites they use more.

Everyone knows they should keep pages up to date, particularly the DER folks, but most confesses to not doing that job as well as they should. Note, there are exceptions -- some staff members stay in close contact with the web team and submit regular requests for page updates.

All staff members receive a mail from outsiders seeking information. In some cases it is related to the person's job (e.g., first time grant applicant checking details of an application). In other cases it is unrelated (e.g., high school students seeking help with

their homework). In the all cases, staff members are comfortable sending these people links to pages on genome.gov in response to their query (e.g., send the students the link to the Educational Resources page). I.e., staff members believe the genomeo.gov is a good resource.

When staff members examine the site during the interview they are looking at it differently. The feeling I get is that they don't do this kind of deep look very often – that it is only the impetus of the interview that is getting them really look at it and think about some of the pages that they have reason to care about. (the site is extensive enough that no single staff member can possibly keep track of them all). In some cases they take a good look at an entire section during the interview and note that the information doesn't reflect the Institute's current direction, but in other cases there is simply a link that should be added to a page, or a staff member listed with the wrong title. In the former case, getting a section of pages overhauled may take consensus from several staff members and a driving force to take charge of such a mini project and that may be why it doesn't get done. But even in the latter case of small edits, many people don't seems to realize that the web team relies on staff members to request changes to pages in their area so that the pages stay up to date. During interviews there isn't a strong sense of "we own this" that comes across from the interviewees. Rather there's a sense of it's the web team's job to keep the site up to date. Some say that they know that they need to tell the web-team when to update pages. But they don't go out of their way to notify the web-team of small fixes, they just get annoyed. Some interviewees are the exception, it is clear during the interview that they have regular communication with the web team about page updates, but that didn't seem to be the norm during the interviews.

PA (DIR)

New genome.gov (redesign) better than old genome.gov (old design).

She uses the site to see what DIR is doing in her areas and related, areas.

Primary audience: potential grantees

She receives phone calls from both experienced grantees who know it is a good idea to stay in touch with the program directors and from new grantees seeking basic information on how to begin the process. She points them to the information on the Grants page and tells them to call back if they have further questions. Typically they don't call back (implying that the Grants Guide area has the information those people need).

** She would like links for Applying for an NHGRI Grant and Grants Policies and Guidelines to be inserted into the center section under the Funding Opportunities header. (She thought that just putting a link to Grants Home would not work since that phrase might not be sufficient for new grantees). These could be under a secondary header of "Grants Management".

Audience is primarily from academia, but some industry participation now that there is a new focus on intellectual property. These audience members tend to have advanced degrees. However, there is another audience that is just looking up ELSI research (e.g., students doing homework, people learning about the field), and these folks may not have advanced degrees

Other institutes may also be visiting the site, especially those looking to set up their own ELSI program.

The structure of the ELSI pages (ELSI Research, About ELSI, Program Areas, etc.) is correct, but the content in those pages is dated and does not reflect the program as it is now. For example, the Program Areas and Program Goals don't reflect the current focus of the institute. Also, she would like to see the Grants and Contracts area also list the work (e.g., publications) that came out of the grants and contracts. In general she thinks the ELSI pages need a good overhaul-it's just a matter of it becoming a priority for the ELSI staff.

She also noted that the DER Program Staff page is also out of date.

PB (DER)

New genome.gov (redesign) better than old genome.gov (old design).

Primary audience: potential grantees, visitors from other institutes

He gets phone calls people wanting to run ideas by him, sometimes asking if he thinks the idea will fit a particular area, and from grantees new to the process asking where to start. He thinks the site has a good description of the program areas, but sometimes people want to talk about it as well. If his program isn't the right place, he is familiar enough with what's happening in his area in other institutes that he can point people to other institutes that might be better suited for their idea. He also sometimes gets calls from the press, especially when there is new endeavor. He points those folks to the public relations people.

Most of his audience is from academia, though there is some industry interest. He guesses most visitors to his area have a graduate degree; it is not an area lay people will understand.

** He would like to see links to CRISP and to the Grants and Funding Opps [on the NIH site].

Internal audience is folks interested in the workshops and scientific meetings he puts together. Works with OD to publicize and organize those.

** Would like to see the NIH Roadmap and NHGRI's connection to that roadmap on the site, perhaps on the home page. E.g., each institute is heading certain segments of the roadmap - both DER and DIR at NHGRI are taking the lead for some items--that should be publicized.

PC (DIR)

Uses genome.gov as his home page. Scans Highlights and News to see what's new. Also looks at the Seminar Series. Uses the org chart to remind himself of who's where. Also uses the site to look up people at NHGRI - e.g., look up titles. Also uses NHGRInside to do this, but less frequently.

Uses the page that lists the centers doing sequencing (The National Institutes of Health Bacterial Artificial Chromosome (BAC) Resource Network). That page is difficult for him to locate, perhaps because the name BAC Resource Network is not the label he is expecting. He thinks of it as the page of centers that are sequencing genomes.

Doesn't notice when links are under the On Other Sites section. I.e. he sees the link but is not aware that it will go off-site.

*** BAC Library Quality Assessment Standards (10001738) may have a problem - it has no parent, or rather, what is listed, as the parent is a page that has it only in the See Also's.

Looks at the Sequences, Maps, and BAC Libraries page for papers, resources, and generally tracking what is happening in that area.

Also looks at the HapMap pages since he is involved with it.

The only page he is responsible for that outsiders access is his own personal page.

Hears from undergrads looking for summer positions. He can send them to the NHGRI Careers & Training page or to the NIH summer internship page.

PD (DIR)

90% of personal use is locating IRB information and forms, several times a month. Says that he always has difficulty locating them but when he goes to find them, succeeds in 3 clicks (DIR, Clinical Studies, IRB) off of the home page.

Also says that he uses the site for manuscript submission process (but that is on NHGRInside).

Does talks/presentations for outside groups, gets material from genome.gov. [interviewer asks about illustrations for PPTs]. Says would like to use illustrations from the site but doesn't know where they are. [gets hint from interviewer to check out Educational Resources]. Does not see the word "illustrated" in the blurb for Talking Glossary.

** Suggests that an image index would be useful

Looks for his program (Physician Scientist Development Program) and is able to locate it quickly, BUT -- the application is not available in the center area so he has difficulty locating that.

Responsible for Pallister-Hall Syndrome tool on research.nhgri.nih.gov - knows it is out of date but it's not a top priority for him.

PE (OD)

Cross-organization person: One foot in DIR, one foot in DER, both hands in OD.

Genome.gov is his home page. Scans the highlights and news releases to keep in touch with what is happening at the institute. Also checks highlights and new releases that are pertinent to him to see how they were written up.

Uses website to look up people in the Institute. Could use internal staff directory, but prefers to use genome.gov b/c it is not password protected and in DIR at least, he gets the full CV on the person.

Also looks at seminar series in lower right to see what is happening there.

Sometimes uses the Legislative DB, but not looking up anything in particular, just reviewing it. He is glad it is there -- good information for the Institute to be providing to the public.

Has been looking at program pages in DER for HapMap and ENCODE because he is in the process of putting together his own pages for the NCGC (National Chemical Genome Center) and wanted to see how those pages (in DER) were constructed. There has been some controversy over having a page for a Center in DIR that uses different navigation from the other DIR pages. That is still being worked out. [interviewer showed him the sub-sub nav (TOC horizontal navigation) that is used on the ELSI pages as a reference point]. The Center will be the primary communication point with collaborators. This center is a part of the NIH RoadMap. There are on-going questions about where project pages that are part of the roadmap and hence multi-institute should be housed. At the moment they tend to be housed with the Institute that is spearheading the project. In addition, there are on-going difficulties with the web team that handles the roadmap website itself. That web team (roadmap) has not been responsive and hence the pages on the roadmap site are inaccurate and out of date.

Responds to 5 - 10 external questions (via phone or email) per week (press, educators, etc.). Typically the question is something too specific to be answered on the web or the person hasn't been to the web yet. He knows the site well and typically provides additional information for them by giving them a URL to appropriate page on the site. These questions aren't restricted to any one section of the site.

Overall - likes the site. Helps him stay in touch with the Institute as a whole. Also pleased with the web team. Feels he can trust them to put up information in a way that outsiders will be able to locate and digest, and that they will respond in a timely manner to getting information updated.

PF (DIR)

Uses genome.gov at most once a month. Has NHGRInside bookmarked.

Works with Genetic Counseling program at John Hopkins University. Most students don't learn about the program thru NHGRI, instead they typically find if off of the NSGC (national society of genetic counselors) website. In addition, that website points to the program description on John Hopkins's site, not genome.gov.

Would like the counseling program to be the top item listed in the table on the Opportunities for Graduate & Medical Students but understands that everyone wants their program to the first one in the table and that they can't all be first in the table. [interviewer let her know that the graduate students that she had observed using the site were "good scrollers" - they used the scroll button on their mouse to move down the pages they were reading.]

Gets many contacts (email) about summer internships in genetic counseling. She sends them to the Careers & Training page.

Also gets requests for help on homework - sends those to the Educational Resources page

Give lectures to outside groups but doesn't use genome.gov as a source of material for those. Used to teach and prefers to put together her own material.

PG (OD)

Doesn't use site on a daily basis. Primary use is looking up program information (background info, programmatic implications, funding issues, program staff) on the center and program pages.

Finds it easy to locate the program and center pages.

Responsible for the info on the Budget and Financial Information page. He is listed there but when a query comes in, he refers to Tim Lenshan to make the official response.

PH (DER)

Most common use of website is to access the text of an RFA. (He can find those quickly - Grants, Funding Opps, and RFAs.) Typically he is answering a question from an applicant, mostly first-timers. Questions such as where to send it, how many copies to send, what should be address in the application. Sometimes he is responding to an inquiry from a reviewer.

Sometimes gets information off of the The National Institutes of Health Bacterial Artificial Chromosome (BAC) Resource Network page.

Sometimes gets questions about who is on the roster/review list (about once a month). That information is over on the NIH site.

** says Jerry Roberts runs CIDR and that it is difficult to locate using Search. A link to CIDR used to be on the home page, but is no longer there.

Responsible for the Scientific Review Page - responds to requests from Judy to review it and update it.

Looks at flyers that are handed out at council about new programs. Often goes the URLs listed in the flyers just to stay in touch with what is happening.

Uses the News on the right and the Highlights section to stay in touch with activities at the institute.

Doesn't use the Calendar as much now that he is off-campus.

No use of Health, Policy& Ethics, and Educational Resources

Likes how the site looks.

PI (DER): re-interview from evaluation in fall 2003

Re-interview from previous evaluation round. Is finding site easy to use but not sure he can attribute that to the re-design or more familiarity with it on his part.

Has genome.gov as his home page. Glances through News on the right. Less interest in Highlights.

Uses site to respond to a query (phone call or email). Often these queries are from people who haven't been to the site yet and are just figuring out which institute within

NIH is the right place to focus. He is able to direct them to the appropriate pages on genome.gov. Would like the Active Grants DB to be able to pull out grants in one particular area (e.g., just CEGS grants). Partly because CRISP pulls out grants from other institutes as well if you request CEGS grants.

On a related note, the CEGS page (0951) needs a link to the CEGS program page (1771) because that's where the list of currently funded grants is. He will request this change through the Assignment Desk.

Formatting on the CEGS page is a bit odd. This is legacy formatting but not to worry about updating it since there will be a new program announcement soon that will probably go on the NIH site.

Whether or not a program has a genome.gov page (e.g., PA-97-044, PA-97-045, PAR-12-221) or just links straight to grants.nih.gov depends on the complexity of the program. If it was complex and hence a need for more explanation than the precise formatting of the NIH grants would allow, and the program officer had the time, it got its own genome.gov page.

Also looks up policy information - easy to find since listed in left nav.

PJ (DIR)

Mostly uses NHGRInside. Not much "world-accessible" information on genome.gov that he needs.

On NHGRInside he uses the Bioinformatics Core. There's a page on NHGRInside that has all the internal cores/tools available to DIR.

*** Issue: There are two MicroArray Project websites. Unclear which is meant for public use and which one is up to date.

He was surprised to see the public link to this website from genome.gov - he thought this website was for the internal use of NHGRI, NINDS, and NIHM. Are the services offered to "investigators" on this web site available to researchers outside the institute?	**MicroArray Core Facility website** http://research.nhgri.nih.gov/nhgri_cores/microarray.html This one is linked from the Research Resources developed at NHGRI page (10001504)
He believes this one was built as the public face for the MicroArray Core Facility when Jeff Trent was at DIR. He suspects that this one has not been maintained and is out of date.	**MicroArray Project website** http://research.nhgri.nih.gov/microarray/ This one is linked from (1) Dr. Burgess's lab page (2) The MicroArray Core Facility website (look in the lower left corner of the home page for "MicroArray Project")

Gets emails from students looking for positions, but typically, these are people who have already applied and are trying to bring attention to themselves so they stand out, rather

than people who haven't yet done their homework and found either the NIH of NHGRI training opportunities pages. He sends them to researchers who may have open positions.

Gets reminders about seminars and other calendar events via email updates.

PK (DIR)

Genome.gov is his home page. Glances at news & seminar series.

Uses the site to look for people - read their pages to see what they are doing research-wise. Also uses Research Resources - but from NHGRInside

Post docs are the outside community he is concerned about. Important to him that his page listed the open post-doc position. Was unaware that is was also cross-linked from Working at NHGRI under Careers & Training (didn't think a post-doc would be looking under Working at NHGRI for open post doc positions)

Keywords on Investigator page: thinks will make that page too long but seemed manageable on the branch pages since there are fewer people listed on those

Concerned that the URL doesn't have NIH in it. Thinks people won't notice the banner. Also concerned that the home page is research-oriented, that it doesn't have much information for the public. I.e., the highlights are all about research. Thinks the home page should have a section for the general public. Used cancer.gov as an example of a home page that is geared towards the public. Thinks home page should say why genetic research is important - not just that NHGRI does it.

PL (OD)

Genome.gov is his home page. Uses the site ~6 times/day. Looking up information about the Institute or staff members. E.g., contact information, research areas, research endeavors, program descriptions, news releases, legislative DB (to get summary of policy), who is on the advisory council, glance at Calendar, occasional use of Talking Glossary, what research has been funded (mostly ELSI) - uses ELSI Grant Abstracts for that. Occasionally will look up a clinical question - but more likely to use outside sites to look up that information.

Gets 1-2 emails a week from "random" outsiders. Tends to send them specific URL on genome.gov as the response.

Does 1-2 press interviews per month. Gets questions from reporters before, during, and after - usually sends them a deep URL.

Does ~2 talks/week to outside audiences. Will pull information, figures, and screen shots from site to incorporate into those slides.

Doesn't "own" any page except his own. People below him "own" pages and keep them up to date. Does tell the Assignment Desk when he sees something that looks out of date.

PM (DER)

Does not use genome.gov much. Google is her home page. Primary use is grabbing a URL to send in response to a question. Works with conference grants (PAR-03-176). Was having difficulty locating it when the interview started (was looking under DER, I pointed her to Grants). Eventually located it under ELSI. Would also like to have it under Genomic Research (I suggested that she submit that as a request to the Assignment Desk).

Wants link from genome.gov to NHGRInside. (has genome.gov memorized, can't remember URL for NHGRInside.) Could bookmark but already has huge number of (unorganized) bookmarks.

Also would like to talk to web team member when they are working on a page for her. I.e., sometimes what she submits to the Assignment Desk is a bit complicated and she thinks she can clarify on the phone if she knew who to talk to. Would like the confirming email from the Assignment Desk to tell her "your request is being handled by X. "You can reach X at YYY". (note from interviewer: talked with the web team and they said that the Assignment Desk does in fact send a confirmation email letting people know who is handling their request)

Photo Staff Directory: Good, but has people who are no longer at NHGRI.

General comments on DER section

Finds many pages are out of date in the DER section. Especially the DER Program Staff page. The titles and staff listings are not current.

- **** Particularly comments that the web team should know to put new staff on both the DER Program Staff page as well as their particular program pages.
  - Michael Shi is on the HapMap page but not the DER Program Staff page.
- Gary Temple, recently put in charge of the Mammalian Gene collection is not listed on the DER Program Staff page or on the Functional Analysis page (so someone trying to determine who to talk to about the Mammalian Gene collection wouldn't know who to go to).
- HapMap - Two new published papers aren't listed on the HapMap page. (She is working with Lisa Brooks to get that page updated)
- ELSI - has a new program analysis who isn't listed

DER left nav:

- What is the reasoning behind the order? (Note: Not yet a problem since the list is holding around 10, but the unordered aspect of it could be a problem if the list
- The ordering doesn't show that HapMap and ENCODE, are under Genetic Variation and Functional Analysis respectively.
- Why aren't all the sub-projects listed. I.e., why do HapMap and ENCODE get their own designation but Mammalian Gene collection doesn't?

PN (DIR): re-interview from evaluation in fall 2003

Genome.gov is her home page. She uses glances at the Highlights, News, and Calendar (easier to look on the web than sifting through her email to find the notice that tells her who is speaking next)

New Staff Photo Directory “incredibly helpful”. Also uses Staff Directory on genome.gov (easy to locate).

Really pleased with changes from previous design. “Dramatically improved”. Likes that things are underlined and bolded - makes it easy to see what is a link. More organized, easier to read.

Org Chart in DIR is useful.

Confident about sending prospective students to the DIR section (via Home, upper left) so they can look over the research faculty to determine which faculty match their interests. Feels the site is working well. Her perspective prospective trainees are finding researchers on their own - they used to need more help from her. That means they require less of her time and that is good.

Knows that her pages aren’t quite up to date, knows she needs to get them updated and how to do that.

Also teaches at John Hopkins. Points her students to the MicroArray Core Facility (http://research.nhgri.nih.gov/microarray) website. Even if the site isn’t maintained anymore, much of it is still relevant and good teaching material. The basic concepts are there and sufficient for students to learn from.

Would also like to see link to NHGRInside on genome.gov. Less critical for her than others that have mentioned it, but still would be nice.

PO (DIR)

Has 3-4 machines (Mac, Sun, Windows) using different browsers (Safari, NS, Firefox, IE). The site renders well on all of them.

Uses NHGRInside once or twice a week. Less than that for genome.gov. When he does visit genome.gov, eyeballs the Highlights and NewsRoom

Photo Staff Directory is “really nice”. “many people are familiar by sight and with that I can connect the faces to the names”. Intends to use it as a refresher before the DIR retreat.

Does fair amount of outreach, lecturing/presenting at high schools. Points teachers and students to the Educational Resources area. Gets much of his material from Eric Green who keeps“huge collection” of slides from not only Eric’s own presentations but also other people’s talks as well.

NISC moved but his page still lists the (old) Gaithersburg rather than the (new) Rockville address.

Web casts valuable for telecommuters such as himself.

PP (DER)

Her use of genome.gov goes in spurts. Likes re-design, likes top and left nav. Sometimes goes there to check a fact or look something up. Will use to look up staff. Pays attention to news about DIR since she doesn't hear as much about them as she does about DER. Usually hears about new happenings at staff meetings (before it gets to be a news release). Occasionally visits website to locate specific page she can send someone as an answer to a question. Genome.gov is her home page on NS but not IE.

Her mom teaches elementary school & middle school teachers how to better use technology in the classroom. Her mom uses NHGRI's site as a good example of a site with material both teachers & students can use.

Helps draft content that ends up on web page but doesn't write final copy often. Involved in recent revamping of the Func. Anal. Page.

Not much contact with public, Elise and Bettie tend to handle queries from outside.

Works with Func. Analysis and Genome Technology programs

Her sense (when asked) was that there isn't anyone in DER taking a look at the more global pages in DER (e.g., DER home page, DER Program Staff, Reports & Pubs). The program analysts keep track of the information in their particular programs, but not the global pages

*** NIH RoadMap not prominent

PQ (DIR)

Little use of genome.gov. Maybe once every six months. No information she needs from the site and can't find anything anyways.

InsideNHGRI: also difficult for her. She can never find anything because "she doesn't think like the people who put the site together"

Genome.gov and NHGRInside: "too hard for me to read the mind of the people who build these pages"

Example of something she might look for on genome.gov: IRB forms/information

No idea where it might be: "not Research, not Grants, not Policy & Ethics, not in any of those top buttons, and the ones on the side just repeat the top, that's not helping me"

Once guided to the Research page, did not expect to have to scroll, did not expect to find it under Clinical Research. Once she located the page she commented "what I envisioned is the IRB information on the public site was more in the ELSI vein, for people who wanted to learn about genetic consent." I.e., straddling Policy & Ethics, Education Resources, and Research for people interested in consent issues in genetic studies.

Also expected that visitors looking for Clinical Research would leave because it is not listed on the Home page. Did not expect they would dig into the Research section to find it.

Home page - "lots of jargon" - "people won't know what GARD is - it should say rare diseases"

Home page - lots of blank space in lower right -- “why not list upcoming events to fill that space”

In charge of ALPSbase - “should be available on the public site” but no idea how she would find it. *** Noted that ALPS in the search engine doesn’t turn up the ALPSbase page.

*** Current Clinical Studies -- purpose of the page is not clear

- If it is to encourage enrollment then it doesn’t help because how to enroll from the clinicaltrials.gov page is not obvious
- If it is to list all the current clinical studies at NHGRI, then it is incomplete. Many are missing. To get it up to date, the web team should coordinate with the IRB coordinator. E.g., Collin’s diabetes study is not listed.

Slides from presentation to the web team with results from Round 2

Genome.gov redesign evaluation: Round 2

Who Participated
Methodology
Personal Use
Perceptions of External Users

Round 2: Who participated ?

- DER
  - Jeff Schloss (re-interview)
  - Vivian Wang
  - Bradley Ozenberger
  - Lynn Zacharia
  - Ken Nakamura
  - Allison Peck
- DIR
  - Jim Mullikin
  - Les Biesecker
  - Barb Biesecker
  - Shawn Burgess
  - Sarah Anzick (re-interview)
  - Paul Liu
  - Gerry Bouffard
  - Jennifer Puck
- OD
  - Chris Austin
  - Eddie Rivera
  - Allan Guttmacher

Methodology

1. Asked about personal use
2. Asked about pages/sections used by people outside the institute

Personal Use

Re-interviews

- Happier with the site!
  - Easier to find information
  - Less confusing

Home page: genome.gov?

- Many have genome.gov is their home page
  - Typically scan
    - News Releases
    - Highlights
    - Calendar
  - Use Intramural/Extramural links on left

Typical uses

- Learn about / Look up
  - People
    - Photo Staff Directory (on Inside)
    - Staff Directory (on genome.gov)
    - DIR investigator pages
    - Org chart
  - Institute
    - Research
    - Programs
    - Reports
    - Conferences
    - etc.

Workflow

- Not part of workflow
  - "I hear about what the institute is doing in staff meetings and through colleages"
  - "I get email telling me about the seminar series"
- Part of workflow
  - "I glance at the home page to see what news releases are out. Even if I've heard about it in meetings a while back, I might still read the official news release"
  - "It's easier to glance at the Calendar on the home page then sift through my email to find out what the talk for this week is"

Can't remember InsideNHGRI URL

- Some requests for a link to Inside from genome.gov
  - Genome.gov easy to remember
  - InsideNHGRI not so easy

Outreach

- Perception
  - "good web site"
  - Not embarassed
- Outside presentions include genome.gov links
- Send URLs as answers to questions received through email

Additional Comments

- NHGRI connection to the NIH Roadmap
  - Not prominent enough

Pages/sections used by externals

Curation : Assignment Desk

- Perceptions
  - Good response time
  - Good people to work with
  - Contact for
    - Creating new content
    - Major re-work of a page or section
      - E.g., the Genome Sequencing Proposals page

Curation : Attitudes

- High expectations for the web-team
  - Propagate changes to ALL necessary pages
    - For example, new program staff to
      - Program page
      - DER Program Staff page
      - Etc.
    - Update addresses on investigator pages when a group moves

"They should know to percolate these changes to the appropriate pages"

Curation : Attitudes

- Priority
  - Send regular updates to web team
- Not a priority
  - *"I should be better about making sure this page is up to date but…"*

Ownership: DIR

- Clear
  - Branch pages
  - Lab pages
  - Publication pages
  - Some research resources, e.g.,
    - ALPSbase, Pallister-Hall Syndrome Research
- Fuzzy -> everything else
  - Online Research Resources
  - Online Research Resources from NHGRI
  - Current Clinical Studies
  - Books and Publications
  - etc,.

Example: Current Clinical Studies

- Purpose of the page unclear
  - Encourage enrollment?
    - Not clear how to enroll – clinicalTrials.gov pages don't make it obvious
  - List all current clinical studies?
    - List is incomplete, missing Collin's diabetes study

Ownership: DER

- Clear/Fuzzy
  - Program pages -> depends on the program
    - Some know
    - Some aren't sure
- Fuzzy -> other DER content
  - DER Program Staff
  - DER Home page
  - Funding Opportunities
  - Etc.

Attitudes

- Mild annoyance
  - "This page should have a link to X on it"
  - "Why doesn't this page list Y?"
  - "Who decides what goes on this page?"
  - "This person no longer works here"
  - "That person isn't a senior analyst anymore"
- But not
  - "I'll ask the Assignment Desk about this"
  - "I'll tell the Assignment Desk about this so it can get fixed"

Recommendations

Recommendations

- Develop strong sense of ownership
  - What pages I am responsible for?
  - How often should these pages be reviewed?
  - Who looks at these pages? (audience)
  - What other pages should link to these page? (audience)

Recommendations

- Make page ownership and responsibilities more transparent
  - Provide an easy (internal) means of determining a page's owner

Recommendations

- Knock down the "us" (internal staff) versus "them" (web-team) wall.
- Get staff more engaged with maintaining content on genome.gov

Supplementary presentation to the web team regarding navigation difficulties between the research server and genome.gov

Research.NHGRI.nih.gov

Re-visit

Externals

- Optimistic and curious at first
- But soon backed off
  - Pages are out of date
  - Tools are out of date (e.g., WebBLAST)
  - Demos provide no explanation
  - Can't tell which resources/tools require logins.
  - Tool interfaces are unintuitive

Prominent

- Linked from
  - Lab pages
  - Research Resources at NHGRI (10001504)
  - Branch pages

Example: MicroArray confusion

- MicroArray Core Facility: linked from

  (research.nhgri.nih.gov/nhgri_cores/microarray.html)
  - 10001504
- MicroArray Project: linked from

  (research.nhgri.nih.gov/microarray)
  - Dr Burgess's lab page
  - MicroArray Core Facility
  - Genome Technology Branch
  - Sarah Anzick's teaching materials

Internal Attitudes

- Unaware that part of it is public
- Keeping the public portions up to date not a priority

Final informal checklist of remaining recommendations to the webteam based on both Round 1 and Round 2

Genome.gov redesign outcome evaluation: Final Action List

General Observations

The table below lists items detailed in the final report delivered in December 2004 that require attention from the web team.

Page/Section	Finding	Recommendations	Priority
PHYSICIAN SCIENTIST DEVELOPMENT PROGRAM [10002061]	Application information is available only in the SEE ALSO section of the page.	This is a critical link, not supplemental information. Move it to the center section. Consider building one page, rather than two pages, to provide all the relevant information on the program. Currently the information about the program is split across two pages [10002061 and 10002060].	High
PRE-DOCTORAL INTRAMURAL RESEARCH TRAINING AWARDS [10000219]	Application information is available only in the SEE ALSO section of the page.	This is a critical link, not supplemental information. Move it to the center section.	High
SUMMER INTERNSHIPS AT NHGRI/NIH [10000218]	Application information is available only in the SEE ALSO section of the page.	This is a critical link, not supplemental information. Move it to the center section. Consider moving other critical links such as the FAQ to the center section as well.	High
SEQUENCES, MAPS, BAC LIBRARIES	Home position not marked in the TOC section	Use “Sequences, Maps, and BAC Libraries Home” as the link text in the TOC links instead of just “Sequences, Maps, and BAC Libraries”. (The ELSI section is a good example to mimic).	Medium
ONLINE RESEARCH RESOURCES	• Most of the page is categorically organized, but the top layer is not. At the top-most	Remove the top-level organization by source (From NHGRI, Beyond NHGRI). Group the entire publications/journals together, group all	Medium

	layer, the organization is by source -FROM NHGRI and BEYOND NHGRI. Typically, organization by source is not useful for outside visitors since they are unlikely to know what tools, resources, papers, etc., would be available from NHGRI versus which ones would come from another source. • This page also uses too many layers of drop links. – The top layer by source (From NHGRI, Beyond NHGRI) – The result is a confusing layout at the top of the page (the Content section) and it takes more clicks to get to information than it used to. • The formatting is inconsistent. Some annotations are italicized, but not all.	the software, tools, and databases together, etc., regardless of the source (internal or external). Organizing this page will require subject matter expertise. Request help from Tyra Wolfberg, or someone else from Andy Baxevanis's team, in re-organizing this material as well as reviewing it for completeness. Keep the annotations, they help visitors make navigation decisions, but format them consistently.	
RESEARCH	DIR and DER each need a descriptive sentence that clarifies the distinction at a very basic level.	Use the text from the first RESEARCH FAQ. Participants who read that paragraph found that clarified the distinction nicely.	High
GENETIC VARIATION PROGRAM	The purpose of the program is buried in the OVERVIEW section.	Make a RESEARCH OBJECTIVES section. Move the objectives to that section. Keep the background and historical info in the OVERVIEW section. Put the RESEARCH OBJECTIVES first on the page.	High
GENETIC TECHNOLOGY PROGRAM	The purpose of the program is buried in the OVERVIEW section.	Make a RESEARCH OBJECTIVES section. Move the objectives to that section. Keep the background and historical info in the OVERVIEW section. Put the RESEARCH OBJECTIVES first on the page.	High
FUNCTIONAL ANALYSIS	The purpose of the program is buried in the	Swap the order of the RESEARCH OBJECTIVES	High

PROGRAM	OVERVIEW section.	and OVERVIEW (put the RESEARCH OBJECTIVES first).	
GENOME INFORMATICS AND COMPUTATIONAL BIOLOGY PROGRAM	The purpose of the program is buried in the OVERVIEW section.	Make a RESEARCH OBJECTIVES section. Move the objectives to that section. Keep the background and historical info in the OVERVIEW section. Put the RESEARCH OBJECTIVES first on the page.	High
ELSI PROGRAM	The purpose of the program is buried in the paragraph.	Move the second sentence (the objectives) to the top of the paragraph. Keep the historical reference in the current first sentence, but don't lead with that information.	High
GENETIC TECHNOLOGY PROGRAM	The purpose of the program is buried in the OVERVIEW section.	Make a RESEARCH OBJECTIVES section. Move the objectives to that section. Keep the background and historical info in the OVERVIEW section. Put the RESEARCH OBJECTIVES first on the page.	High
ACTIVE GRANTS DB search form		Check "include addresses" as the default. Don't separate it from the rest of the form with a horizontal line. Highlight CRISP	med
ACTIVE GRANTS DB	Visitors wanted to search on more fields	If this is not feasible, highlight CRISP more strongly since CRISP can provide the same information but allows for more options in its search form.	med

Individual Observations/Requests

The table below lists specific observations and requests from interviewees that emerged during individual interviews with internal staff members.

Focus	Comments from interviews	Recommendations

(interviewee)		
DER PROGRAM STAFF *(Lynn Zacharia, Vivian Wang, Allison Peck)*	Everyone who visited this page commented that it was out of date (incorrect titles, missing new hires, staff who were no longer at the institute) but there was little sense of who was in charge of the page or had the authority to decide what information should be on there.	• Determine who is in charge of this page and request help keeping it current
New DER members	New hires were uncertain how web page updates were handled.	• Provide this information to new hires and make it prominent on INSIDE
ELSI section *(Vivian Wang)*	Vivian noted that many of the ELSI page pages aren't current. The structure of the section (ELSI RESEARCH, ABOUT ELSI, PROGRAM AREAS, etc.) is correct, but the content in those sections don't reflect the current focus of the institute.	• Contact the Vivian about this.
Funding Opportunities *(Vivian Wang)*	Vivian would like to have links for Applying for an NHGRI Grant and Grants Policies Guidelines inserted into the center section under the Funding Opportunities header on the main ELSI page.	• Discuss with Vivian and have her submit a request to the Assignment Desk if she would still like this change.
Wants more cross-links to CRISP from the Grants section. *(Brad Ozenberger)*	Would like more cross-links to CRISP. E.g., on the Grants page and the Active Grants DB.	• Discuss this with Dr. Ozenberger to see what he needs
BAC LIBRARY QUALITY ASSESSMENT STANDARDS [1001738] (observation)	This page has no direct parent. The page that is the parent in the breadcrumbs only shows this page in the SEE ALSO section.	• Look at how this page is parented in the CM (content manager).
BAC Resource Network [10001844]	Dr. Mullikin had difficulty locating this page because he thought of it as the page that has the centers doing sequencing.	• Consider re-titling this page.

(Jim Mullikin)		
New audience in CAREERS & TRAINING *(Paul Liu)*	Paul is concerned that post-docs will not expect to look under WORKING AT NHGRI in the CAREERS & TRAINING tier.	• Consider a new audience, "Post doc", in the left nav since this audience of particular interest to DIR.
Additional links to PAR-03-176 *(Lynn Zacharia)*	Lynn Zacharia would like additional links to PAR-03-176. From Research Funding Opportunities: Research [10000991] From the ELSI RESEARCH PROGRAM FUNDING OPPORTUNITIES section of ELSI RESEARCH [10001618]	• Discuss with Lynn and have her submit a request to the Assignment Desk if she would still like this change.
Gary Temple (in charge of the MAMMALIAN GENE collection) *(Lynn Zacharia)*	Lynn commented that Gary should be listed on: • The DER PROGRAM STAFF page • Under the FULL-LENGTH CDA PROJECT on the FUNCTIONAL ANALYSIS PROGRAM page. Because the page on mgc.nci.nih.gov does not make it easy to learn who to contact about the Mammalian Gene collection, she would like to provide that information on this page.	• Discuss with Lynn and have her submit a request to the Assignment Desk if she would still like this change.
Indentation in DER left nav *(Lynn Zacharia)*	Lynn thought that consideration should be given to placing HapMap and ENCODE under the Programs that support them in the DER left nav. For example: Move HAPMAP under GENETIC VARIATION PROGRAM and indent it. MOVE ENCODE under FUNCTIONAL ANALYSIS PROGRAM and indent it.	• Consider this suggestion.
Unfamiliar acronym used on Home page. *(Jennifer Puck)*	Dr. Puck noted that GARD is listed on the Home page left navigation short cuts but that people are unlikely to know what that is.	• Her observation is correct. GARD is not likely to be an acronym that people will know. – Use one of the other top-level Health sections (CLINICAL RESEARCH FAQ?) as a HOME page shortcut.

		– Alternatively, use “Rare Diseases Center” as the text link.
ALPS database *(Jennifer Puck)*	Dr. Puck noted that putting “ALPS” into search does not locate the page for the ALPS database.	• Look into the reason for this. It would be nice if Search listed the Online Research Resources at NHGRI page (1001504)
CURRENT CLINICAL STUDIES *(Jennifer Puck)*	Dr. Puck noted that purpose of the page is unclear. The text preceding the table talks about enrollment but does not provide instructions on how to enroll in studies. Nor is enrollment information easy to locate on the study pages on clinicaltrials.gov. If the purpose is to help people locate and enroll in clinical trials than there needs to be more information provided. In addition, the list is incomplete. It is not a complete list of the clinical trials at NHGRI.	• Discuss how to handle this page with Dr. Puck since she is the Clinical Director and she had concerns about it.
Search turns up pages on Hyperion *(observation)*	Should Hyperion should be showing up in the search results?	• Check this with web team