# NIH.gov Web Site Usability Testing

October 8, 2001 version

#### *Prepared for:*

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#### Prepared by:

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**Human Factors International** 

1-800-242-4480

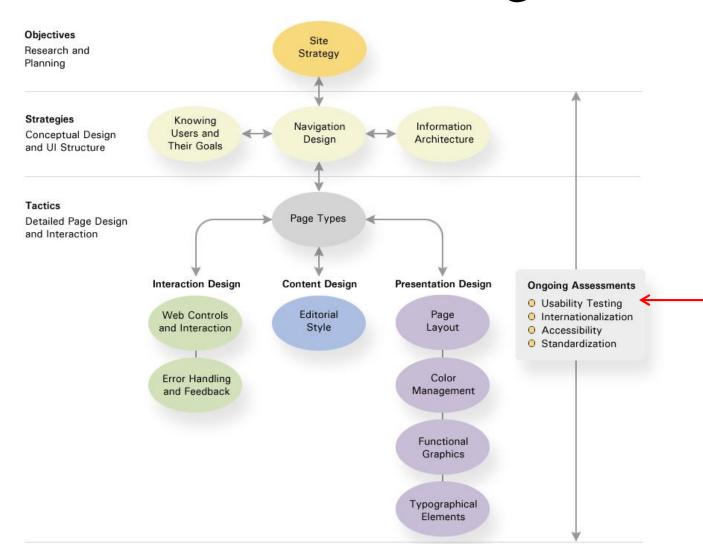
www.humanfactors.com

## Overview

- Method
- Results
- Recommendations

## Method

# User-Centered Design



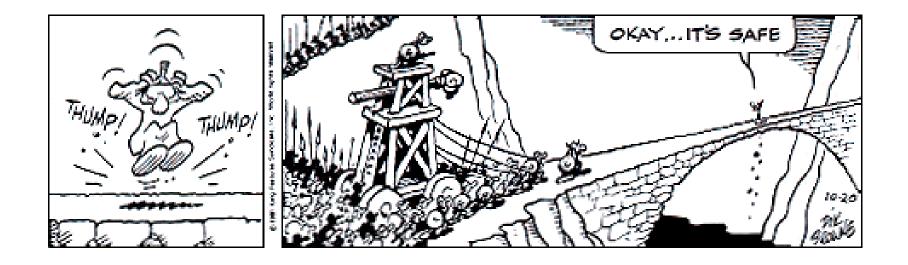
# Types of Usability Testing

Development Stage	Design Issues	Technique
Feasibility	Value of functions	Questionnaire
Task design	Practicality Completeness	Storyboard walkthrough
UI structure	Self-evidence Efficiency	Protocol simulation
Detailed design	Layout General presentation	Expert review Affordance test
	Performance	Protocol simulation Task modeling
	User satisfaction	Usability questionnaires
Production	Performance	Benchmark testing Comparison tests Usage logs
	User satisfaction	Online surveys Feedback

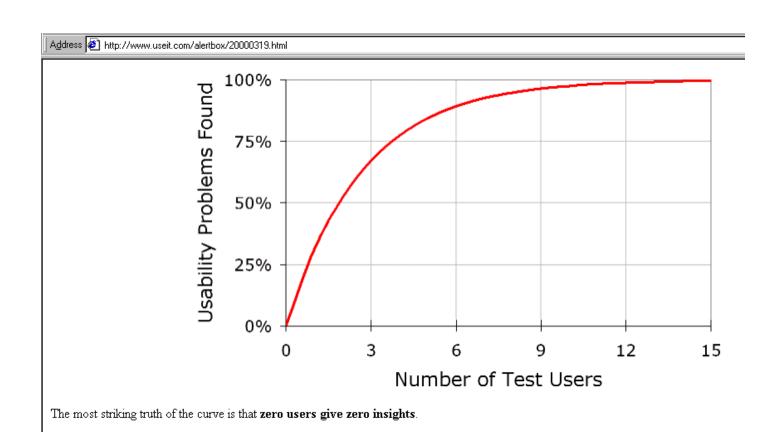
# Purpose of Usability Testing

Gather data to answer the question:

Can real users accomplish real tasks on the site?



# How Many Participants are Needed?



# **Participants**

- 11 professionals including researchers and practitioners
- 11 members of the general public including teachers, students, writers, advocates

## Representative Tasks Related to:

- General Information about NIH
- Ongoing Research
- News and Events
- Health Information
- Educational Resources

- Research Funding
- Training Information
- Research Resources

See also detailed test moderator's guide

# Usability Testing Lab

Participant and test moderator in testing room (cannot see into control room)

Observers and recording equipment behind one-way view glass in control room

### Procedure

- Participants sign Informed Consent and Permission to Videotape form (they are told in advance too)
- Participants are paid a "thank-you" fee for their time
- Sessions take about an hour

## Results

See also detailed test moderator's guide and results spreadsheets

# Results: Introductory Tasks

	Professionals	Publics
1 Purpose	100	100
2 In charge	68	91
3 Stem cell	91	86
4 Institutes	100	100

# Results: Ongoing Research at NIH

	Professionals	Publics
5 Studies	50	55
6 Labs	40	50
7 Non-scientists	80	67
8 Participate	67	50
9 Candidate	71	86

## Results: News and Events

	Professionals	Publics
10 Talks	73	68
11 Results	64	95
12 Press release	73	75

## Results: Health Information

	Professionals	Publics
13 Condition	88	73
14 Heart attack	93	85
15 Specifics	100	93

## Results: Educational Resources

	Professionals	Publics
16 Talk	50	40
17 Teach	57	29

# Results: Funding

	Professionals	Publics
18 Your area	75	N/A
19 Qualified	33	N/A
20 Institutes	30	N/A
21 Training	80	N/A
22 Contracts	100	N/A

## Results: Research Resources

	Professionals	Publics
23 Models	92	N/A
24 Animal care	42	N/A

## Results: Warm Down/General

	Professionals	Publics
25 Phone	70	72
26 Couldn't find	89	100
27 Health org	56	43
28 Business	67	75
29 Job	100	100

## Recommendations

# Home Page: Site Identity

Users knew where they were; no slogans or taglines required.



Search

▶ Check my spelling first
▶ Advanced Search Page

#### WHAT'S NEW

- Panel of Nobel Laureates to Discuss 50
   Years of Brain Research at the NIH
   <u>Christopher Reeve to Address Patients'</u>
   Perspective
- ArcticHealth: A New Website for the Polar Regions
- NIGMS Awards "Glue Grant" to Study Cell Talk
- Anthony S. Fauci Awarded 2001 Frank Annunzio Award
- NIH Funds Biomedical Research Infrastructure Networks
- ▶ Stem Cell Information
- ▶ <u>More</u>...

#### ■ Health Information

Publications & fact sheets, ClinicalTrials.gov, health hotlines, A-Z topic index, MEDLINEplus, other resources

#### ■ Grants & Funding Opportunities

Applications, grants policy, NIH Guide, award data, research training, research contracts, CRISP database

#### ■ News & Events

In the News, press releases, calendars, radio & video, media contacts, special reports

#### ■ Scientific Resources

Intramural research, special interest groups, library catalogs, journals, training, labs, scientific computing

#### ■ Institutes, Centers & Offices

The individual organizations that make up the NIH

#### ■ About NIH

Visitor info, jobs, science education, find employees, public involvement, policy issues, organization & mission, history, doing business with NIH, FOIA, Director's Page







- Information for Employees
- Información en español
- ☑ Search the NIH Web Site



[ Health | Grants | News | Science | Institutes | About NIH ]

[ Q8A About NIH | Employment Opportunities | Visitor Information ]

Recent Changes to This Site | Information for Employees | Información en español | Search ]

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# Home Page: What's New

Users read WHAT'S NEW, but did not pursue most links.



#### WHAT'S NEW

- Panel of Nobel Laureates to Discuss 50
   Years of Brain Research at the NIH
   Christopher Reeve to Address Patients'
   Perspective
- ArcticHealth: A New Website for the Polar Regions
- NIGMS Awards "Glue Grant" to Study Cell Talk
- Anthony S. Fauci Awarded 2001 Frank Annunzio Award
- NIH Funds Biomedical Research Infrastructure Networks
- Stem Cell Information
- ▶ <u>More</u>...

#### ☑ Health Inform

Publications & fact she MEDLINEplus, other re

#### ☐ Grants & Fur

Applications, grants po contracts, CRISP data

#### ■ News & Even

In the News, press rel

#### ■ Scientific Res

Intramural research, s scientific computing

#### ■ Institutes, Ce

The individual organiza

#### ☑ About NIH

Visitor info, jobs, scier issues, organization & Page

#### Recommendations to:

- 1. Shorten headlines
- 2. Ensure content has broad appeal
- 3. Either move What's New to the right-most column or design the links to look more important (rather than blue underlined)

[ Health | Grants | News | Science | Institutes | About NIH ]

[ <u>Q&A About NIH</u> | <u>Employment Opportunities</u> | <u>Visitor Information</u> ] [ <u>Recent Changes to This Site</u> | <u>Information for Employees</u> | <u>Informaci</u>

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# Home Page: Navigation

Users recognized primary navigation immediately.



Search

▶ Check my spelling first
▶ Advanced Search Page

#### WHAT'S NEW

- Panel of Nobel Laureates to Discuss 50 Years of Brain Research at the NIH Christopher Reeve to Address Patients' Perspective
- ArcticHealth: A New Website for the Polar Regions
- NIGMS Awards "Glue Grant" to Study Cell Talk
- Anthony S. Fauci Awarded 2001 Frank Annunzio Award
- NIH Funds Biomedical Research Infrastructure Networks
- Stem Cell Information
- More...

#### ■ Health Information

Publications & fact sheets, ClinicalTrials.gov, health hotlines, A-Z topic index, MEDLINEplus, other resources

#### ☐ Grants & Funding Opportunities

Applications, grants policy, NIH Guide, award data, research training, research contracts, CRISP database

#### News & Events

In the News, press releases, calendars, radio & video, media contacts, special reports

#### ■ Scientific Resources

Intramural research, special interest groups, library catalogs, journals, training, labs, scientific computing

#### ■ Institutes, Centers & Offices

The individual organizations that make up the NIH

#### ■ About NIH

Visitor info, jobs, science education, find employees, public involvement, policy issues, organization & mission, history, doing business with NIH, FOIA, Director's Page







- Information for Employees
- Información en español
- ☑ Search the NIH Web Site

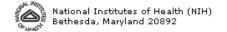


[ Health | Grants | News | Science | Institutes | About NIH ]

[ Q8A About NIH | Employment Opportunities | Visitor Information ]

Recent Changes to This Site | Information for Employees | Información en español | Search ]

[ Contact Us | Privacy Notice | Disclaimer | Accessibility ]







## Health Information



Some users expected these links to load new web pages, given location on page.

Some users missed the links within the paragraph at the top of this page.

Suggest add category such as Comprehensive Resources to match Publications, etc.

Also recommend different designs for clickable versus non-clickable items (these resemble clickables on Home Page).

## Health Information: Index



Back to: Health Information



Users had success with the Index.

Go to: [ A - E ] [ F - J ] [ K - O ] [ P - T ] [ U - Z ] [ Abbreviations ]

Where can you find information on diseases currently under investigation by NIH or topics? Right here in the NIH Health Information Index. Use this referral guide as a the abbreviated name(s) of the NIH institute(s), center(s), division(s), or other compared to the number of the nu

#### How to use the On-Line Health Information Index

- 1. If you seek information on "kidney stones" select [K-O] to reach the "K's."
- 2. Scroll down until you find "kidney stones" you will see: Kidney Stones NIDI
- The letters "NIDDK" stand for the name of the institute that is responsible fo Diabetes and Digestive and Kidney Diseases.
- Once there, use the search feature or other navigation aids to locate "kidney
- 5. In this case, the first item returned is http://www.niddk.nih.gov/health/kidney.
- Each entry includes a telephone number for more information in this cas
- 7. Another option, use the e-mail link found on the Institute's home page and a

The NIH Health Information Index is published by the NIH Office of Communication NIH.

This page was last reviewed on August 22, 2000.

[ NIH Home Page | Health | Grants | News | Science | Institutes | About NIH ]

Done

Recommend allow users option to select any letter

of alphabet from subsequent pages.



#### Subject Words K-O

Go to: [ K ] [ L ] [ M ] [ N ] [ O ] [ help ]

K

Kallman's Syndrome - NIDCD 301-496-7243 Kanner's Syndrome (Infantile Autism) - NIND8 301-496-5751 Kaposi's Sarcoma - NCI 800-422-6237 or 301-496-5583 Kawasaki Disease - NHLBI 301-592-8573

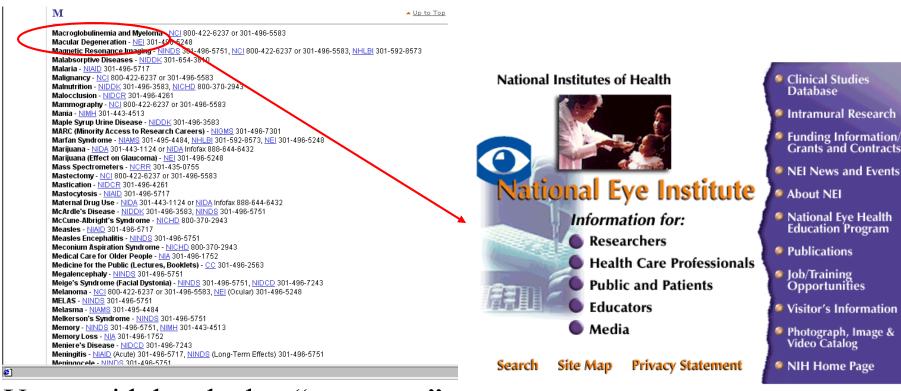
Kearns-Sayre Syndrome - NINDS 301-496-5751 Keloid - NIAMS 301-496-4484 Keratitis - NEI 301-496-5248 Keratoconus - NEI 301-496-5248 Keratomileusis - NEI 301-496-5248

Keratomileusis - <u>NE</u>I 301-496-5248 Keratoplasty - <u>NE</u>I 301-496-5248 Keratosis - <u>NIAMS</u> 301-495-4484

Kidney Diseases (Noncancerous) - NIDDK 301-654-4415 Kidney Failure - NIDDK 301-654-4415

Kidney Stones - NIDDK 301-654-4415 (easy-to-read version)

# Health Information: Index (Cont.)



Healthy People 2010

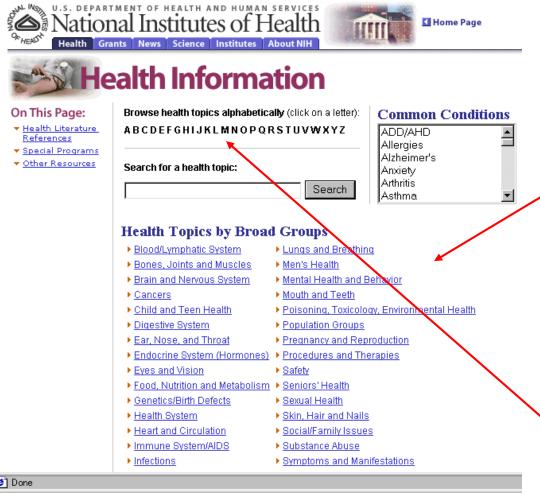
Low Vision

**Education Program** 

NEIBank–Database of Eve Genes & Proteins

Users said they had to "start over" for some of the Index subjects when they landed on the Institutes' home pages.

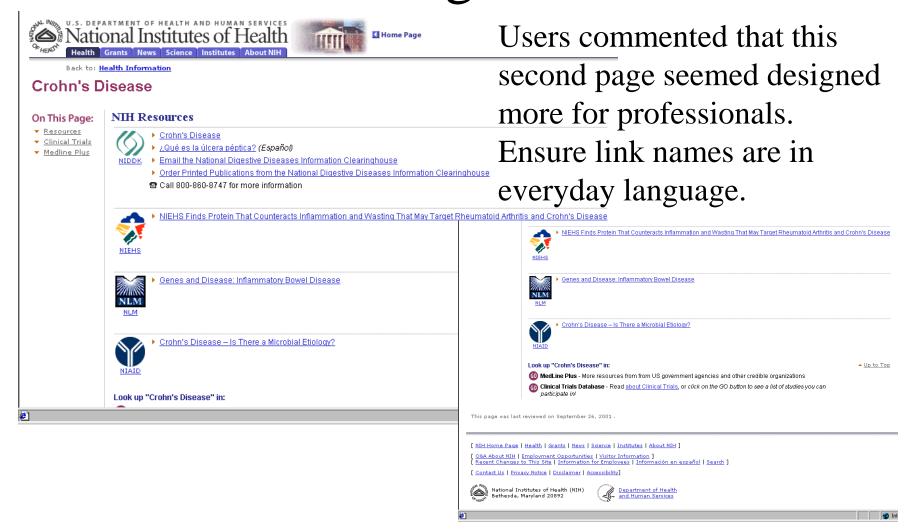
# Health Information: Prototype



Users said having the option to use the Index or this list of browsable health topics from MedlinePlus would be even better.

Recommend more clickable-looking Index letters for real page.

# Health Information: Prototype Page 2



# Health Information: Clinical Trials

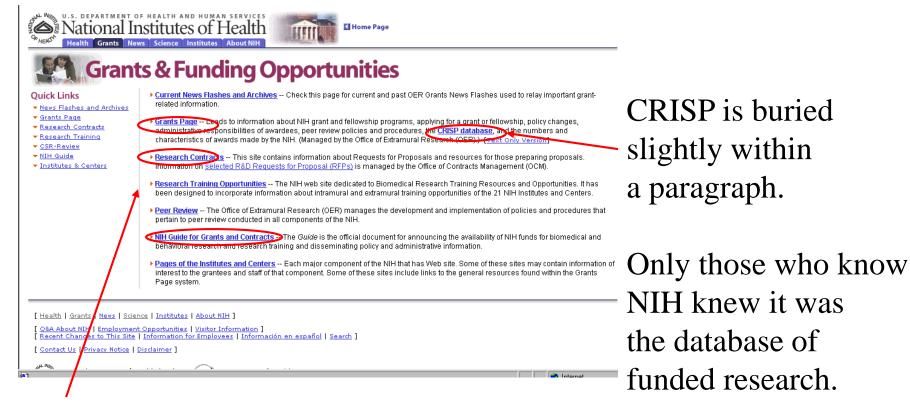


Users were asked to find studies with patients without the test moderators using the phrase "clinical trial."

A number of users missed Clinical Trials. (Some looked in other sections too.)

Perhaps an everyday language link name would help such as Studies with Patients/Volunteers.

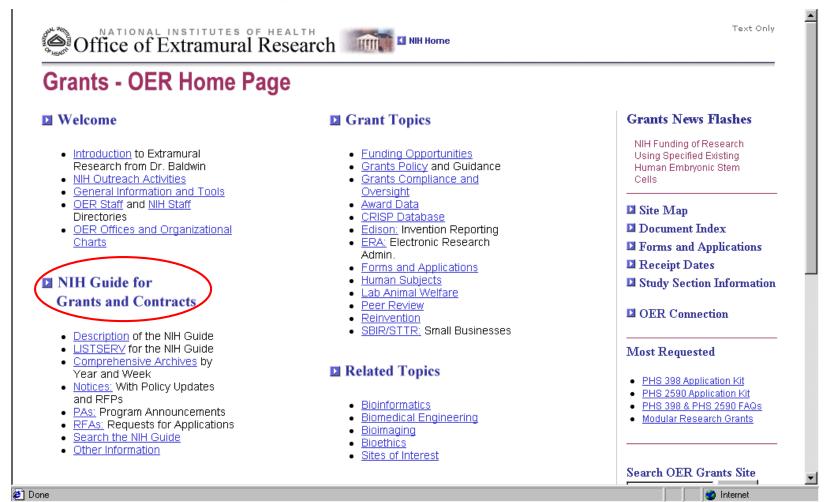
# Grants & Funding



Researchers who did not know NIH very well got confused among these options (see next slides).

# Grants Page

For example, Grants page has Contracts information.



### **CRISP**



CRISP needs a plainer language link name.

As mentioned earlier, only those in the know found it.

# Training





#### **NIH Research Training Opportunities**

**Home Page** 

#### On OER Site

OER Home Welcome News NIH Guide Grant Topics Research Training Related Topics Welcome to the Research Training Page of the National that will lead to better health for everyone. A critical part biomedical and behavioral scientists. This site has been training opportunities of the 24 Institutes and Centers.

The <u>NEWS</u> page will be periodically updated to provide r training support and stipends, and pertinent policy and n

The **EXTRAMURAL** page provides information for predo the Institutes and Centers, information about forms and r

The <u>INTRAMURAL</u> web site gives information about the programs for high school students through employment f

The JOB LINKS page is designed to help the new biome

The **CAREER RESOURCES** page provides helpful caree

Finally, the Q R A page gives general information about and human subjects in research.

We hope that this NIH Training Page will continue to evol us your comments and suggestions so that we can rema

#### Intramural

Brenda Hanning

For users unfamiliar with extramural and intramural, at least in this context, this page was confusing.

Several users hit the Back button when looking for training funding believing they had come to the wrong place.

## Guide



Users were not sure where to start on this page.

It assumes existing knowledge of the Guide.

### News & Events





■ Home Page



#### On This Page:

- ▼ <u>News</u>
- ▼ Press Releases
- ▼ Events
- ▼ VideoCasting
- ▼ Of Interest to the Media
- ▼ Special Reports
- ▼ Other Items of Interest

#### News

- NIH Disease Funding table: Special Areas of Interest
- Opening Statement for the FY 2002 Budget Request
- FY 2002 President's Budget
- Stem Cell Information

#### Press Releases

To receive NIH press releases via e-mail, subscribe to the HHS Press List.

- ► NIH Grantee Leland Hartwell Wins Nobel Prize for Breakthroughs in Unders.
- 'Master' Stress Hormone Prevents Mother From Rejecting Embryo, October
- Panel of Nobel Laureates to Discuss 50 Years of Brain Research at the NII-Cristopher Reeve to Address Patients' Perspective, October 5, 2001
- ▶ ArcticHealth: A New Website for the Polar Regions, October 5, 2001
- ▶ NIGMS Awards "Glue Grant" to Study Cell Talk, October 5, 2001
- Anthony S. Fauci Awarded 2001 Frank Annunzio Award, October 4, 2001
- NIH Funds Biomedical Research Infrastructure Networks, October 3, 2001
- Drop of 30 Percent in Use of Animals in Some Chemical Tests Could be Q
- ▶ NIGMS Awards "Glue Grant" to Probe Body's Response to Burn and Traum:
- ► NIH Funds \$3.9 Million in New Grants for Autism Research, October 1, 200
- ▶ Richard Klausner Leaves National Cancer Institute; Secretary Thompson N
- ▶ National Institute of Biomedical Imaging and Bioengineering Web Site Laur
- National institute of biomedical imaging and bioengineering (veb bite Laur
- ▶ NIDCR Funds Centers for Research to Reduce Oral Health Disparities, Oct
- Scientists Find New Approach to Developing Medications to Prevent Relaps
- ▶ Brain Scan Patterns Identify Objects Being Viewed, Sentember 27, 2001

Users had to read the long list of press releases scanning for keywords.

Consider linking important keywords at beginning of link.

Consider ways to break up long lists (even if just intentional line spaces every x line).



### News & Events: Archives



Users wanted to search by keyword too.

# Home Page: Scientific Resources



#### ■ Health Information

Publications & fact sheets, ClinicalTrials.gov, health hotlines, A-Z topic indemediately MEDLINEplus, other resources

#### **☑** Grants & Funding Opportunities

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Intramural research, special interest groups, library catalogs, journals, training, labs, scientific computing

#### ■ Institutes, Centers & Offices

The individual organizations that make up the NIH

#### ■ About NIH

Visitor info, jobs, science education, find employees, public involvement, policy issues, organization & mission, history, doing business with NIH, FOIA, Director's Page

Many users went to Scientific Resources looking for research results, and had trouble.

The shortened "tab" version of Science reinforced this.

Recommend consider link name Resources for Scientists.

### Scientific Resources





☐ Home Page

### Scientific Resources

- NIH Campus Info
- NIH Intramural Research News
- Intramural Research Sourcebook
- Research and Training Opportunities at the NIH
- NIH Graduate Program Partnership
- ▶ Topics relating to Molecular Biology and Molecular Modeling
- NIH Special Interest Groups
- NIH Research Labs on the Web
- Library and Literature Resources
  - Online Journals
- Model Organisms for Biomedical Research
  - Mouse
  - ▶ Rat
  - S. cerevisiae (budding yeast)
  - D. discoideum (social amoebae)
  - C. elegans (round worm)
  - D. melanogaster (fruit fly)
  - D. rerio (Zebrafish)
  - Xenopus (frog)
  - Arabidopsis
- The NIH Office of Animal Care and Use
- ▶ The NIH Office of Technology Transfer
- The NIH AIDS Reagent Program
- The NCI AIDS Malignancy Bank Database

Links on this page need to be organized and grouped so that long scrolling list of detailed links is not overwhelming.

### Institutes



Great page for experienced users but others played, "Guess the Institute" – an Institute locater by topic (such as Health Info. Prototype Page 2) might help.

### **About**



Mixing within-page jump links with links that navigate to other pages/sections can confuse users.

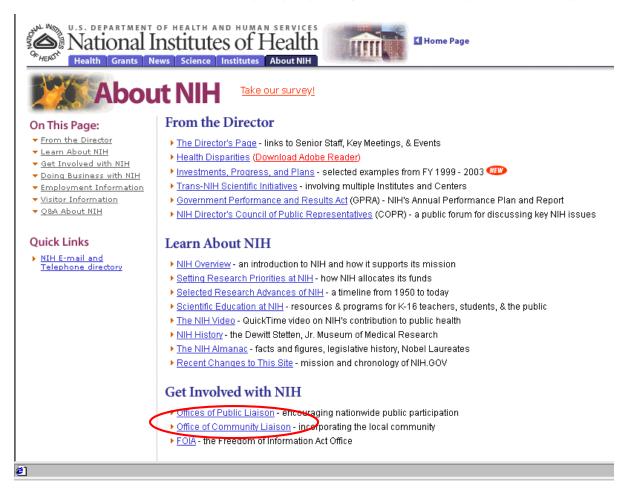
Plus Home Page says "find employees" under About...

### About: Science Education



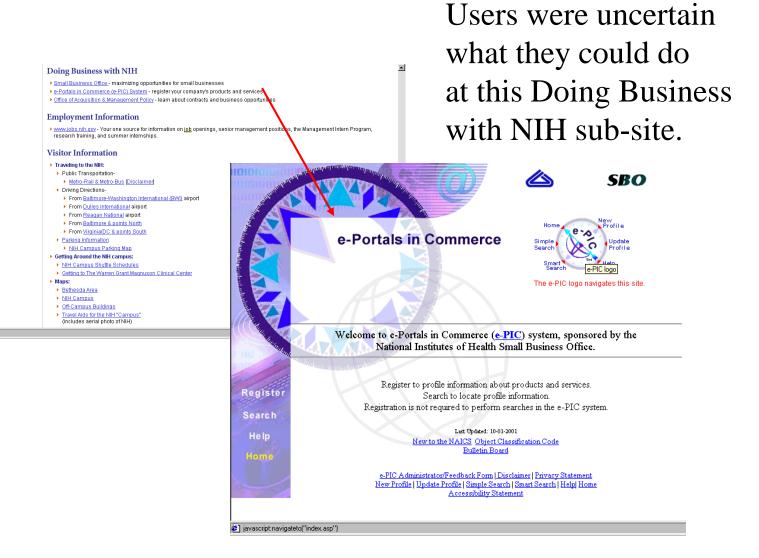
Users who made it past the Home Page looking for science education in About, sometimes got tripped up on this page.

### About: The Public



Public versus community sounded like synonyms to outsiders.

# About: Doing Business









I Home

Back to: About NIH

#### **Questions and Answers About NIH**

- ▼ What is the National Institutes of Health (NIH)?
- ▼ Where is the NIH located?
- ▼ Where can I find information about a specific disease?
- ▼ Where can I locate information about stem cell research?
- ▼ Where can I find information about alternative medicine?
- ▼ Where can I go for information about clinical trials?
- ▼ Does the NIH provide advice for specific medical conditions?
- ▼ Can I receive medical treatment at the NIH?
- ▼ Can the NIH recommend medical specialists or hospitals in my area?
- ▼ Does NIH have a toll-free number?
- ▼ Where can I find information about NIH sponsored conferences and events?
- ▼ How can I locate an NIH employee address, phone number, and email address?
- ▼ Where can I find information about employment opportunities at NIH?
- Where can I find information about summer internships?
- ▼ How can I contact the Director of the NIH?
- ▼ Who is responsible for the assurance of proper conduct of research?
- ▼ How often is the NIH web site updated?
- ▼ Where can I find grant information?
- ▼ How do I submit a Freedom of Information Act (FOIA) request?
- ▼ Where can I find information about the NIH Budget?
- ▼ Where can I find information about NIH Image (the software package)?
- ▼ Will the NIH link to my web site?
- ▼ May I link to the NIH site?
- ▼ Where can I find information about conducting business with NIH?

Done

Users had to read the long list of Q&As scanning for keywords.

Consider linking important keywords at beginning of link.

Consider ways to break up long lists (even if just intentional line spaces every x line).

Also darker link color would help readability.

# Employment



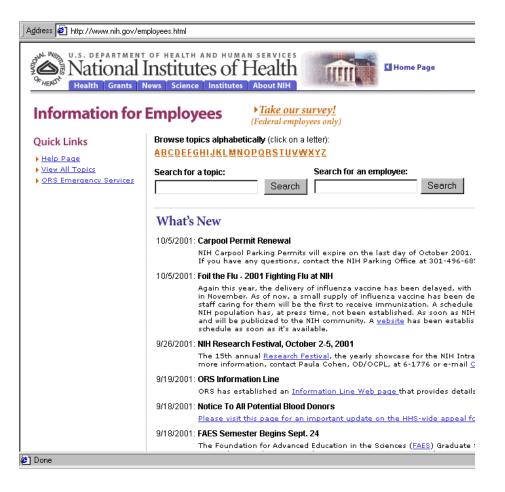
Watch text and background contrast; this is harder to read.

### Visitor

Address <equation-block> http://www.nih.gov/about/#visitor Visitor Information Traveling to the NIH: ▶ Public Transportation-▶ Metro-Rail & Metro-Bus [Disclaimer] Driving Directions-► From Baltimore-Washington International (BWI) airport ▶ From <u>Dulles International</u> airport From Reagan National airport From Baltimore & points North From Virginia/DC & points South Parking Information NIH Campus Parking Map ► Getting Around the NIH campus: NIH Campus Shuttle Schedules ▶ Getting to The Warren Grant Magnuson Clinical Center Maps: ▶ Bethesda Area ▶ NIH Campus ▶ Off-Campus Buildings ► Travel Aids for the NIH "Campus" (includes aerial photo of NIH) ▶ Facilities and Libraries: Food Service Facilities National Library of Medicine ▶ NIH Library ► Other Resources: Bethesda Area Information [Disclaimer] ▶ Washington, DC Information [Disclaimer] **Q&A About NIH** ▶ Questions and Answers About NIH Done

Users were pleased at the comprehensiveness of directions.

# For Employees



Users tended not to use this link, understandably given its name.

# Spanish



Users tended not to use this link, understandably given they were English-speaking.

Several commented they were pleased to see it.

### Search Link

Nation Nation	nal Institutes of News   Science   Institute	f Health Home Page	
Search the N	IH Web Site		
Quick Links  Advanced Search  Help  What is Searched  Feedback on the Spell Checker	Enter words or phrases, se		
	Show summaries?		
	Search Tips		
	-	e operators (Near or Phrase), use the <u>Advanced Search</u> .	
	Word(s) entered this way:	Will be searched in a way that:	
	meet	Finds the word meet, meeting and other variations	
	"meet"	Finds the word <b>meet</b> No variations	
	research, biology, opportunity	Finds the words <b>research</b> , <b>biology</b> , or <b>opportunity</b> , ran	
	brain AND tumor	Finds the words brain and tumor	
	brain OR tumor	Finds either the word <b>brain</b> or <b>tumor</b>	
	brain NOT tumor	Finds the word <b>brain</b> , excluding documents that contain	
	hyper*	Finds words beginning with hyper	
	attention deficit disorder	Finds the entire phrase attention deficit disorder or va	
Done			

Most users availed themselves of the Search text box in the upper right-hand corner of the Home Page, instead of using the link within the body of the page.

### Search Text Box





🚺 Home Page

#### **Search Results**

#### Quick Links

- ▶ Basic Search
- Advanced Search
- ▶ Help
- ▶ What is Searched
- Feedback on the Spell Checker

1 2 3 4 5 6 7 8 9 10 Next

Your search for **stem cell** matched 2321 documents out of 142904. 20 documents are displayed.

#### Rank Score Document Title & Information

- 1 0.78 Clinical Study: 00-C-0201, Active Immunization of Sibling Stem Cell Transplant
  Cell Recipient with Multiple Myeloma in the Setting of Non-Myeloablative, HLA-I
  Size: 12 KB, URL: http://clinicalstudies.info.nih.gov/detail/A\_2000-C-0201.htm/
  Description: Clinical Study Summary Sheet for 00-C-0201
- 2 0.75 MEDLINEplus Stem Cells/Stem Cell Transplantation Size: 30 KB, URL: http://medlineplus.nlm.nih.gov/medlineplus/stemcellsstemcells Summary: National Institutes of Health and WiCell Research Institute, Inc., National Institutes of Health) Renewing Muscles and Nerves: Could Stem Ce Library of Medici
- 3 0.75 MEDLINEplus: Stem Cells/Stem Cell Transplantation Size: 30 KB, URL: http://www.nlm.nih.gov/medlineplus/stemcellsstemcelltranspla Summary: National Institutes of Health and WiCell Research Institute, Inc., National Institutes of Health) Renewing Muscles and Nerves: Could Stem Ce

Library of Medici

0.75 Clinical Study: 00-DK-0060, Leukapheresis of Volunteers with Sickle Cell Trait
Colony-Stimulating Factor and Stem Cell Collection and Storage for Allogeneis
Size: 9 KB, URL: http://clinicalstudies.info.nih.gov/detail/A\_2000-DK-0060.html

- Description: Clinical Study Summary Sheet for 00-DK-0060

  NIH: News: Stem Cell: Stem Cells; Scientific Progress and Future Research C
  Size: 21 KB, URL: http://www.nih.gov/news/stemcell/scireport.htm
  Description: National Institutes of Health's report to Congress on Stem Cells
- 0.72 NCRR Reporter, Winter 2001, Germline stem cells
   Size: 10 KB, URL: http://www.ncrr.nih.gov/newspub/jan01rpt/Egging.htm

with MEDLINEplus.
When probed later,

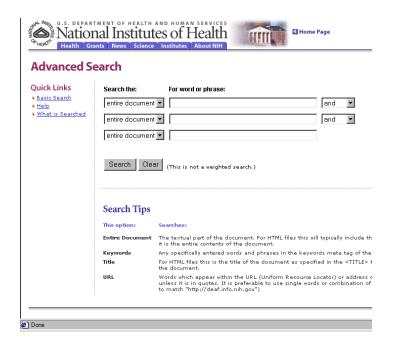
Users scanned past

hit results that began

when probed later, some assumed it was a health telephone hotline.

In general, users relied on the first few words...

### **Advanced Search**



Users did not avail themselves of the Advanced Search link on the Home Page.

In fairness though, we steered users away from using the Search too much, so we could test the link names on the Home Page (and given inherent limitations of most Web searches).

### Featured Site



National Heart, Lung, and Blood Institute



About this site
Resources for Health Professionals
Resources for Patients and the Public

Heart Attacks
Heart Attack Warning Signs
Surviving a Heart Attack
Testing for a Heart Attack
Reducing Heart Attack Risk
Heart Disease and Medications
Frequently Asked Questions





 Main
 Heart Attacks
 Heart Attack Warning Signs
 Surviving a Heart Attack
 Testing for a Heart Attack

 Reducing Heart Attack Risk
 Heart Disease and Medications
 Frequently Asked Questions

 NHLBI Privacy Statement
 NHLBI Home
 Contact NHLBI

Please send us your feedback, comments, and questions by using the appropriate link on the page, Contact the NHLBI Some users missed the Featured Site on the Home Page.

This could have been due to its resemblance to an ad.



# Home Page: Footer



Users had no trouble finding the HHS link here or on the About page.

However, introducing new links at the bottom of the page interspersed with repeated navigation links often leads to users missing options.



### Contact Us



Back to: NIH Home page

#### Comments, Questions, Feedback

Comments, questions, and feedback can be sent to NIHInfo@OD.NIH.GOV.

Before writing, you may want to employ the NIH Search Sugine or try some of our other popular resources:

- Employment Information
- ▶ Grants
- ▶ The NIH Employee Directory
- Clinical Trials Database

#### How we process your mail messages

Messages are answered by information specialists who process mail Monday-Friday (9 a.m.-4 p.m. Eastern Time), over the weekend will not be reviewed until the following Monday. We try to respond to you within 48 hours. Two

#### Medical questions

If you have a medical question, please visit the <u>Health Information</u> section of the NIH home page. In addition to listin listing of <u>Information Clearinghouses</u> operated by the <u>Institutes and Offices</u>. We've found that a large percentage of t answered by browsing the listings in this area or by using the <u>NIH Search Engine</u>.

The information and e-mail services on this Web site cannot provide personalized medical advice to individuals abousers with information to better understand their health and their diagnosed disorders. The resources on this site sl medical care and we urge you to work with your medical care providers for answers to your personal health question physicians or health care facilities. Such activities are usually handled by State or local Governments.

If you have guestions that relate specifically to foods, medications, or over-the-counter drugs, you should visit the For

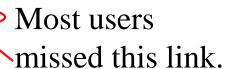
Consider link to toll-free numbers list from here too.

Also, link says
Contact Us but
page name is different.

# Getting Back Home

■ Home Page





### Health Information

#### On This Page:

- ▼ Publications
- ▼ Clinical Trials
- ▼ Health Hotlines
- ▼ <u>Health Literature</u> <u>References</u>
- ▼ Special Programs
- Other Resources

Finding credible health information on the World Wide Web can be difficult. Here are so

- NIH Health Information Index 2001, an A-Z subject guide that provides a direct link to health concern
- MEDLINEplus, a service brought to you by NIH's National Library of Medicine, was de quality health sites, not only at NIH, but at other reliable institutions across the count
- <u>ClinicalTrials.gov</u>, a consumer-friendly database, has information on federal and pr of locations nationwide

#### **Publications**

▶ Full-text Consumer Health Publications

Recommend develop a Home tab or include near logo in upper left.

# Next Generation Designs

Given the number of important links and/or categories of links on secondary pages (defined as primary links off the Home Page), NIH may want to consider a future redesign with more navigational links on the Home Page to strive for a broader, shallower design.

### Thank you.

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# NIH.gov Information for Employees Web Site Usability Testing

February 8, 2002 version

#### *Prepared for:*

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Human Factors International 1-800-242-4480

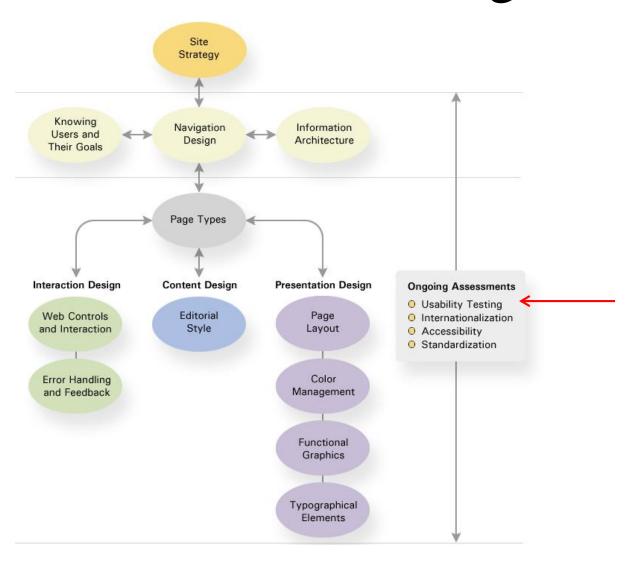
www.humanfactors.com

### Overview

- Method
- Results
- Recommendations
  - Site strategy
  - Navigation and information architecture
  - Specific tasks and pages

# Method

# User-Centered Design



# Purpose of Usability Testing

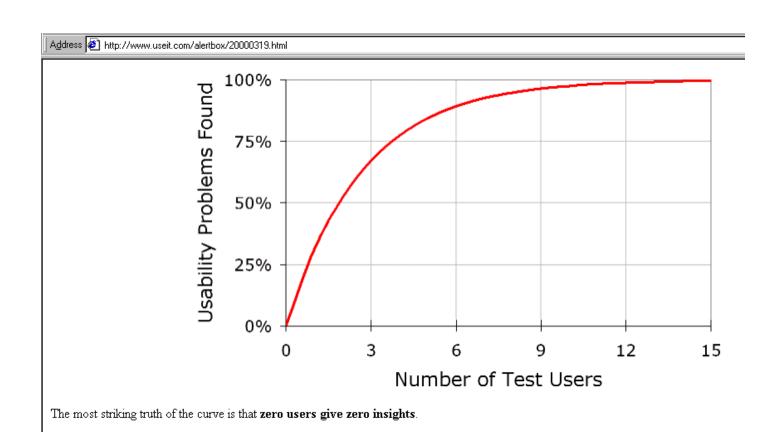
Gather data to answer the question:

Can real users accomplish real tasks on the site?

# Why Bother with Usability?

- **Time**: Increase speed, efficiency, and decrease workload
- Quality: Increase accuracy, reduce errors, improve quality
- Satisfaction: Increase users' satisfaction, reduce frustrations
- **Training**: Decrease time to learn or training required

# How Many Participants are Needed?



# **Participants**

- 24 NIH employees scheduled from among staff who responded to a call for participants representing:
  - Diverse institutes/centers
  - Diverse levels within the organization
  - Diverse disciplines and job positions, including directors' offices, extramural, intramural
  - Range of experience at NIH
- 20 showed up over a three-day period

# Representative Questions Related to:

- Use of intranets
- Sources of employee information
- Use of Employees section of public site
- Sample usability testing tasks asked of everyone

- Participant-specified tasks too
- Knowledge of portals and personalization
- Suggestions for information or service needs not currently being met

See also detailed interview/test moderator's guide

### Procedure

- Sessions took about a half hour per person
- Participants who were on their own time were paid a "thank-you" fee for their time

# Usability Testing/Interview Setup

Participants worked in a private NIH office



An observer watched from behind the participant

The test moderator sat nearby

## Results

See also summary results report

## Results: Use of Intranets

Use them at Institute/Center level:	80%
Of those who use it:	
Daily	12.5%
Weekly	31.0%
Monthly	37.5%
Less frequently than monthly	19.0%

# Results: Use of Employees Section

Use it:	90%
Of those who use it:	
Daily	39%
Weekly	28%
Monthly	22%
Less frequently than monthly	11%

### Results: Sample Tasks

Percent at least partially successful

Email address	95%
Long term care insurance	68%
Temporary parking permit	74%
Emergency numbers	95%
Job in Office of Director	89%
New campus buildings	89%

### Recommendations: Site Strategy

### Employee Link on Public Site

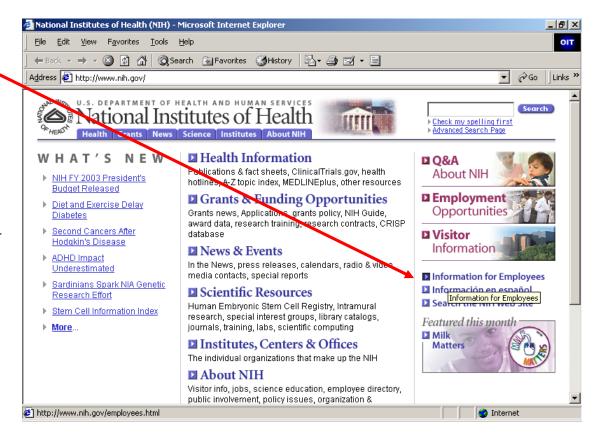
Public site has so much to offer and is growing



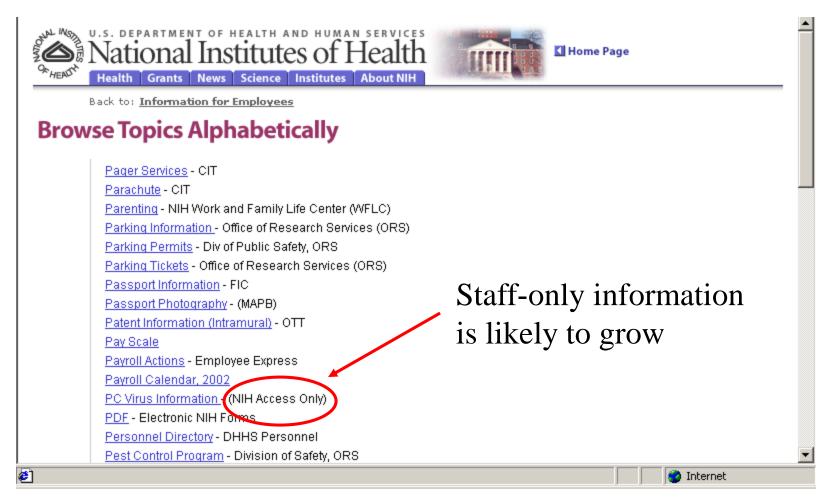


Eventually employeeonly information should be located elsewhere

Public should not be bothered with insider information intermingled with search results that are meant for them



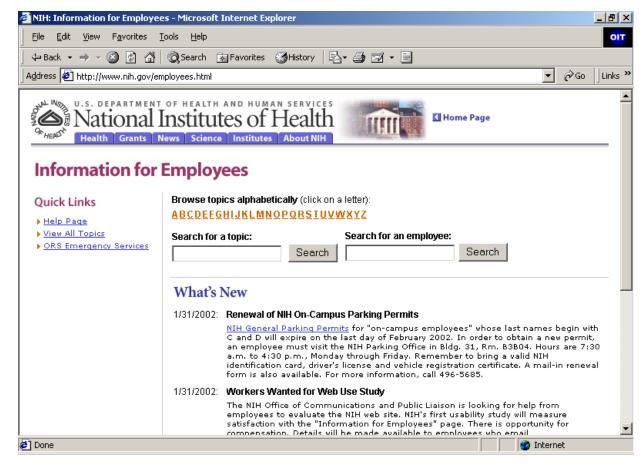
### Staff-only Access



### Employees' Opening Page

This part
of the public
site is growing
into being
the trans-NIH
Intranet

It is the one place employees come to search across the entire organization



## Intranet versus Internet Differences

- Users differ
- Tasks differ
- Type of information differs
- Amount of information differs
- Bandwidth and cross-platform needs differ

### What do Others Do on Intranets?

### On Home page:

- **Directory hierarchy** that structures all content on the intranet
- Search field connecting to a search engine that indexes all pages on the intranet
- News about the organization and employee interests, coupled with link to an archive

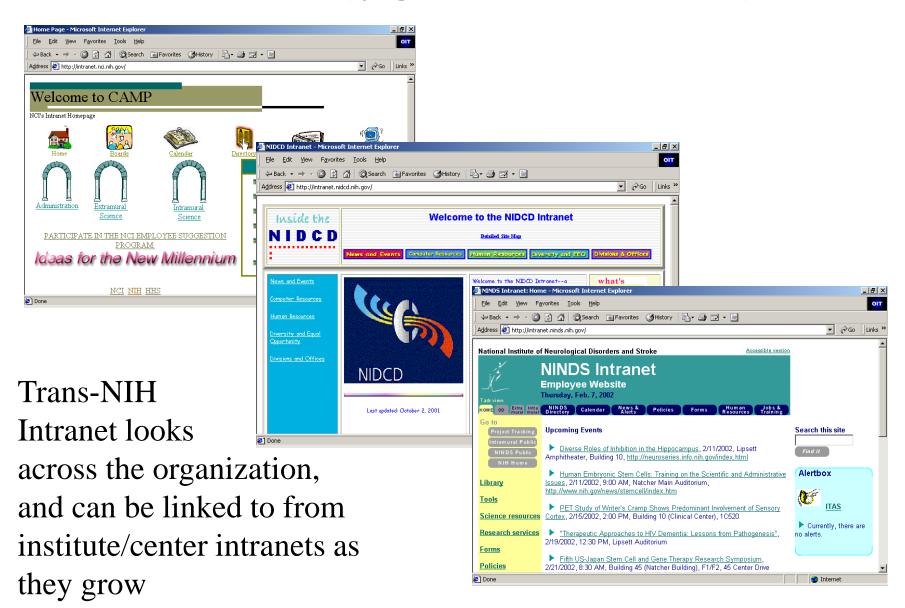
### What do Others Do? (Cont.)

**Best Intranets of 2001** (DOTNet was in Top 10 internationally):

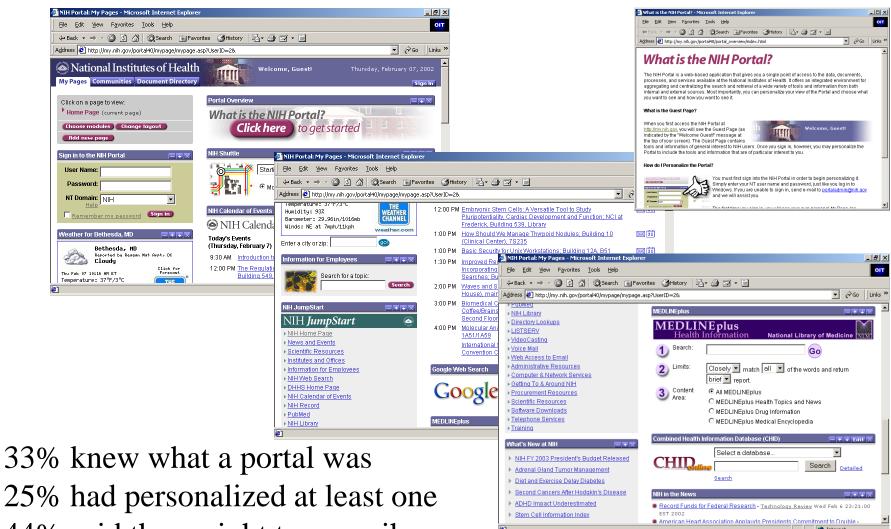
- Emphasize iterative design and standardized navigation
- Feature collaboration tools and content management systems

"On average, companies saw intranet use increase by 98% following their winning usability redesigns."

### Institute/Center Intranets



### Portal Approach

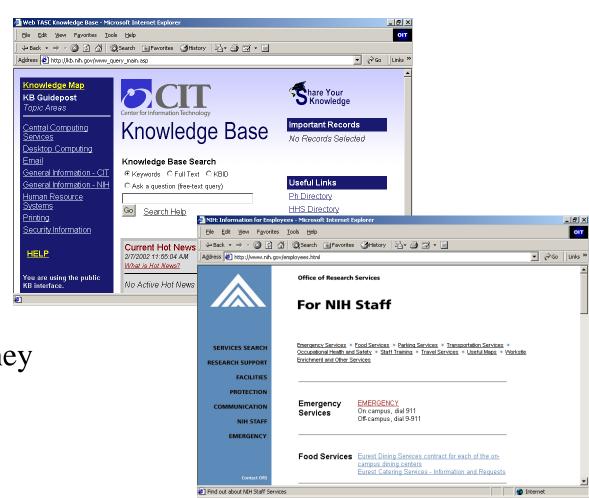


25% had personalized at least one 44% said they might try my.nih.gov remainder said they did not have the time

### Other Employee Information

Users started at the Information for Employees page when they did not know where in NIH to go

If they knew it was a computer issue and they had been at NIH a little while, they would go to CIT first

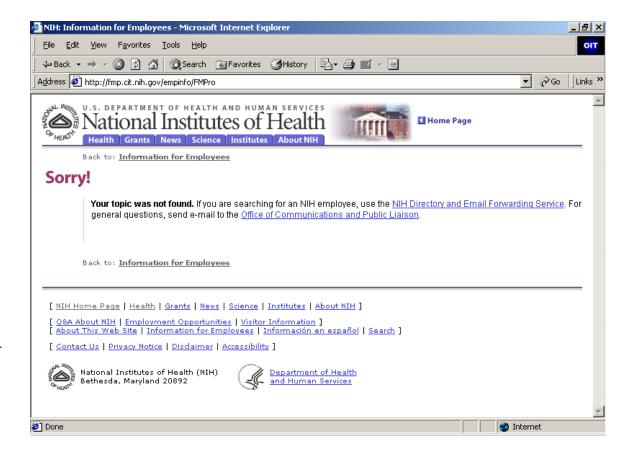


# Recommendations: Navigation and Information Architecture

### Search Engine

Given the importance of this resource, the limitations of its search engine should be addressed

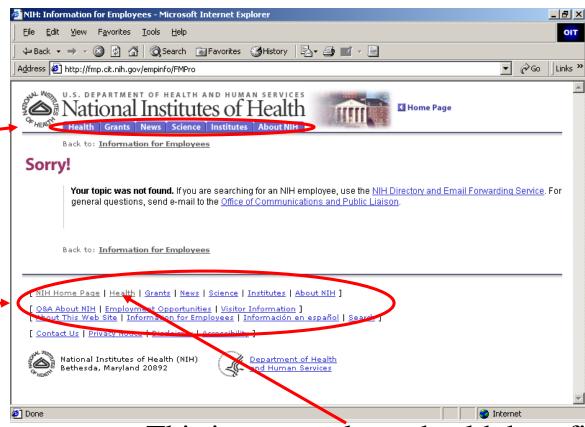
Also it is not clear whether staff understand this search is not the same as on nih.gov home page



### Site versus Section Navigation

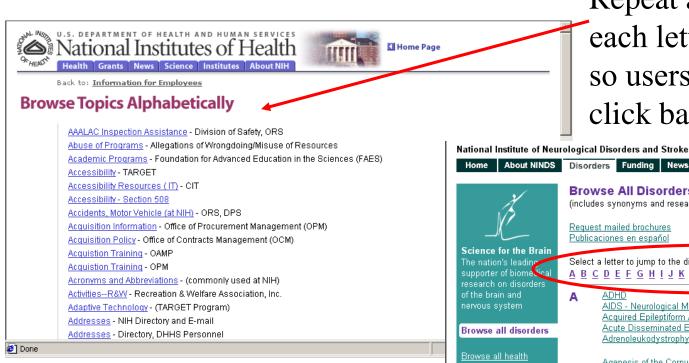
Technically in the tab metaphor, every page should be contained within a selected tab – but it is not here...

All this site-wide navigation confused a few users; may want to delete repeated links



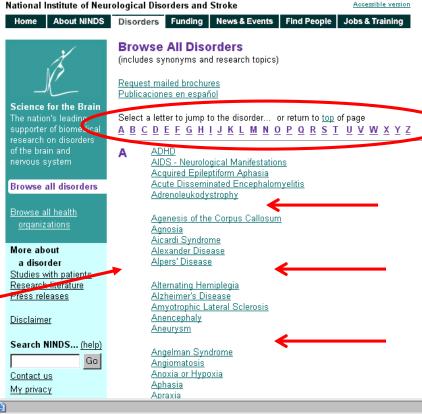
This is not employee health benefits

### **Browse Topics**



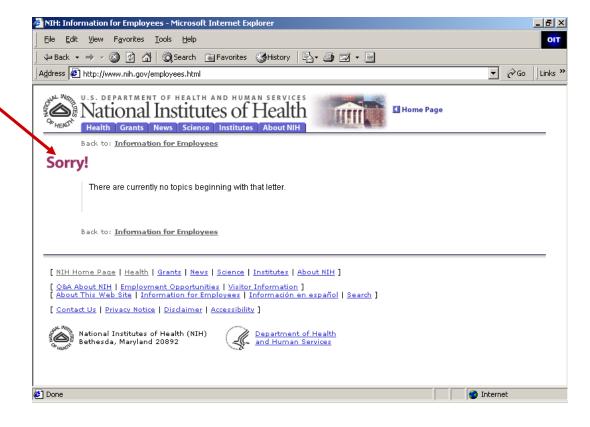
Intentional blank lines can speed scanning

Repeat alphabet on each letter's page, so users don't have to click back



## Alphabetical Links with No Content Should Look Unclickable

Results for letter X



### NIH's Prototype for New Design



### **Information for Employees**

► In Case of Emergency

### **Ouick Links**

- ▶ Help Page
- ▶ View All Topics

### Browse topics alphabetically (click on a letter):

**ABCDEFGHIJKLMNOPQRSTUVWXYZ** 

Search for a topic: Search for an employee:

86% said categories would help

### Browse Topics by Category:

### **Getting around NIH**

Maps, shuttle schedules, parking, permits, badges, METRO, carpools

### Worklife at NIH

Pay scales, holidays, leave policies, Human Resources, R&W, child care, Work & Family Life

### Your Career at NIH

Jobs, training, classes, internships

Search:

### News & Events at NIH

NIH "Yellow Sheet" Calendar

### What's New

### 12/31/2001

### Renewal of NIH On-Campus Parking Permits

NIH General Parking Permits for campus employees whose first names begin with A and B will expire on the last day of January 2002. Click here to learn how to obtain a newpermit

### 12/31/2001

### Weather Advisories

During weather emergencies this page provides current info on the operating status of federal executive agencies inside the Washington Capital Beltway.

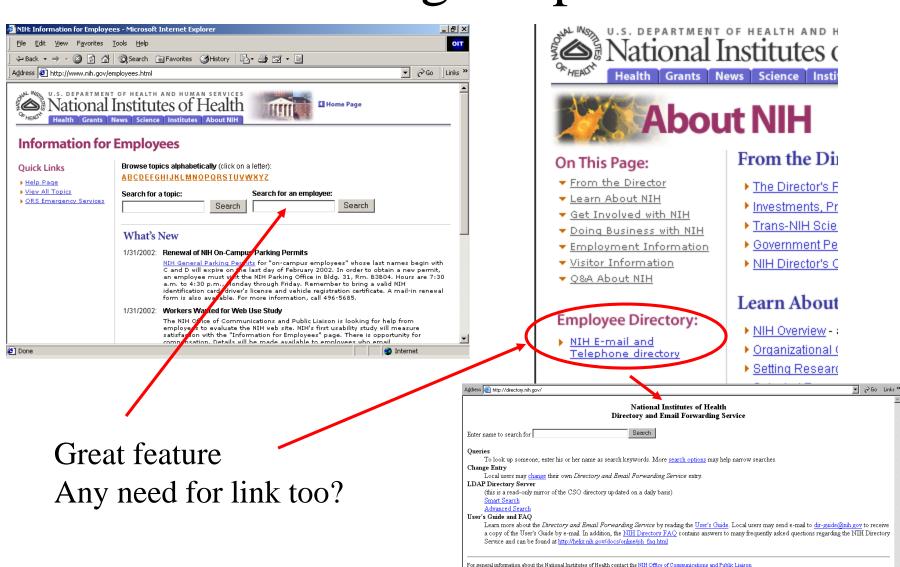
### 12/10/2001

### Workers Wanted for Web Use Study

Details will be made available to employees who email meadk@od.nih.gov with the words "Web Evaluation" in the subject of the message.

### Recommendations: Specific Tasks and Pages

### Finding People

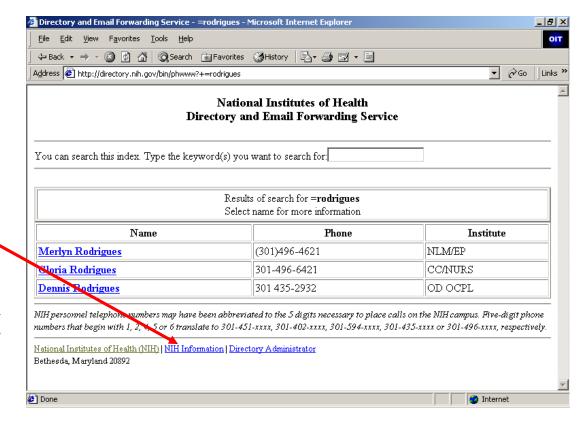


National Institutes of Health (NIH)

### Finding People (Cont.)

Make it easier to update directory entries; clicking on NIH Information is not intuitive

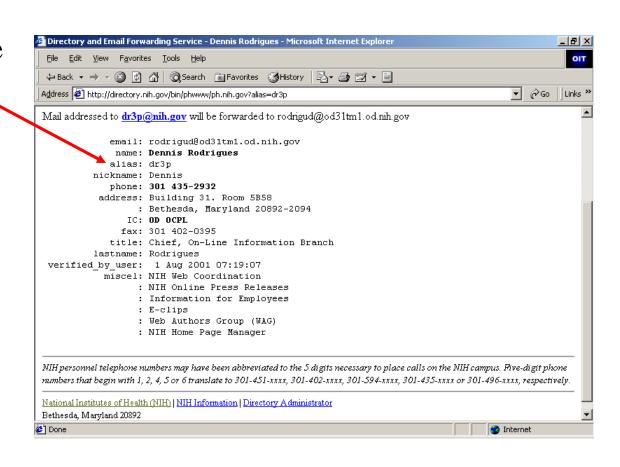
Coordinate with email Outlook directories, if practical



### Finding People (Cont.)

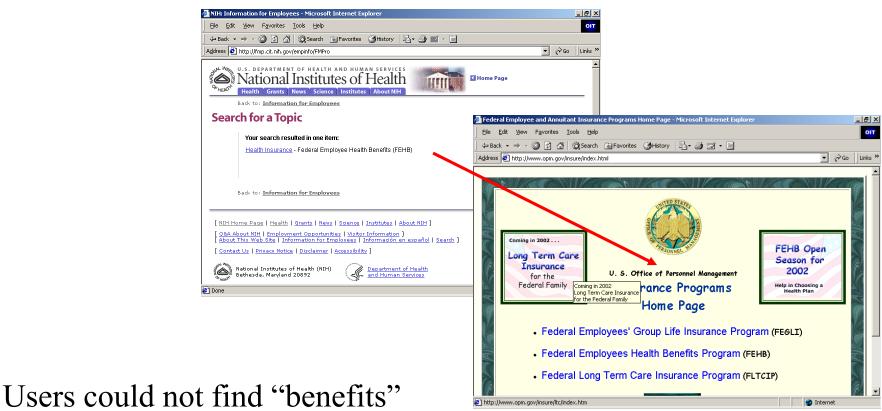
Can we minimize techno-speak?

Might encourage more users to update, if the field labels were more everyday English



### Finding Human Resources

Health insurance link goes off site to OPM Should there be an NIH HR page first?



such as daycare center, tuition reimbursement

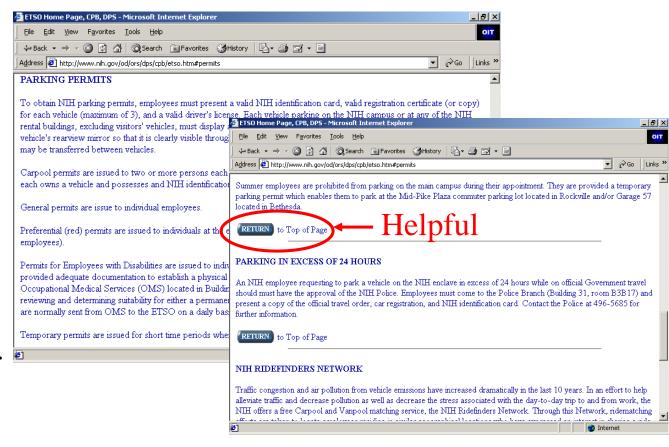
### Orienting New Employees

• Recent employees longed for an on-line orientation resource (centralized or otherwise) to follow up on NIH orientation and to provide institute/center specifics

## Writing for Web Usability: Parking Permit Example

This page is harder to scan because it is in paragraphs

Blue text is harder to read than black or dark blue (should reserve medium blue for "clickables" anyway)

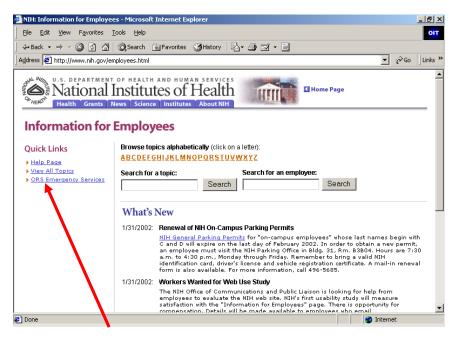


### Writing for Web Usability

Site Version	Sample Paragraph	Usability Improvement (relative to control condition)
Promotional writing (control condition) using the "marketese" found on many commercial websites	Nebraska is filled with internationally recognized attractions that draw large crowds of people every year, without fail. In 1996, some of the most popular places were Fort Robinson State Park (355,000 visitors), Scotts Bluff National Monument (132,166), Arbor Lodge State Historical Park & Museum (100,000), Carhenge (86,598), Stuhr Museum of the Prairie Pioneer (60,002), and Buffalo Bill Ranch State Historical Park (28,446).	<b>0%</b> (by definition)
Concise text with about half the word count as the control condition	In 1996, six of the best-attended attractions in Nebraska were Fort Robinson State Park, Scotts Bluff National Monument, Arbor Lodge State Historical Park & Museum, <u>Carhenge</u> , Stuhr Museum of the Prairie Pioneer, and Buffalo Bill Ranch State Historical Park.	58%
Scannable layout using the same text as the control condition in a layout that facilitated scanning	Nebraska is filled with internationally recognized attractions that draw large crowds of people every year, without fail. In 1996, some of the most popular places were:  • Fort Robinson State Park (355,000 visitors) • Scotts Bluff National Monument (132,166) • Arbor Lodge State Historical Park & Museum (100,000) • Carhenge (86,598) • Stuhr Museum of the Prairie Pioneer (60,002) • Buffalo Bill Ranch State Historical Park (28,446).	47%
Objective language using neutral rather than subjective, boastful, or exaggerated language (otherwise the same as the control condition)	Nebraska has several attractions. In 1996, some of the most-visited places were Fort Robinson State Park (355,000 visitors), Scotts Bluff National Monument (132,166), Arbor Lodge State Historical Park & Museum (100,000), Carhenge (86,598), Stuhr Museum of the Prairie Pioneer (60,002), and Buffalo Bill Ranch State Historical Park (28,446).	27%
Combined version using all three improvements in writing style together: concise, scannable, and objective	In 1996, six of the most-visited places in Nebraska were:  • Fort Robinson State Park • Scotts Bluff National Monument • Arbor Lodge State Historical Park & Museum • Carhenge • Stuhr Museum of the Prairie Pioneer • Buffalo Bill Ranch State Historical Park	124%

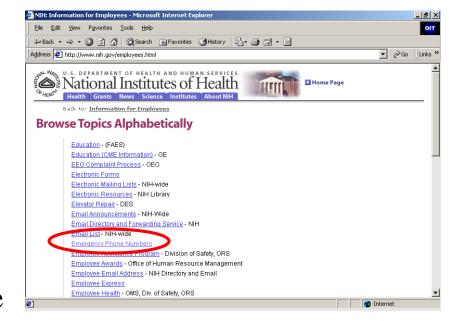
From: http://www.useit.com/alertbox/9710a.html

### Page Layout: Emergency Example



Users missed link because:

- a) Starts with ORS and not "E"
- b) Small text or more likely
- c) Focus is on main body of page (see next slide too)

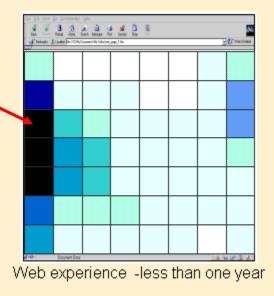


## Where is Major Section/Page Navigation Expected?

Users expect major nav. here

If space gets used for selected links or news, the expectation may wear off

Figure 2 shows that both groups generally expected internal links to be located on the left side of a web page.



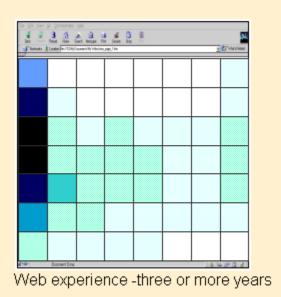
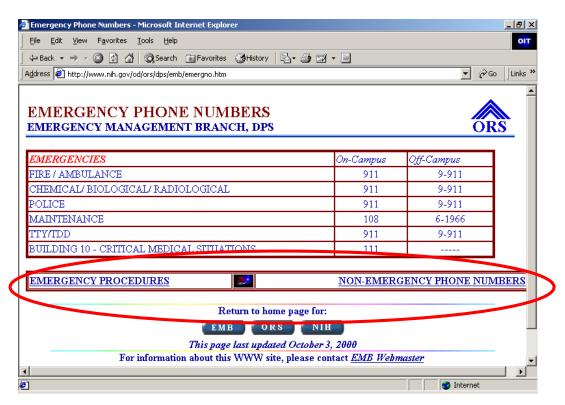


Figure 2. Expected location for links internal to site

Especially given tendency to focus on main body of page deeper in site

From: http://psychology.wichita.edu/surl/usabilitynews/3W/web\_object.htm

### Animation is Distracting: Emergency Example



### Finding Jobs



Many users went back to nih.gov

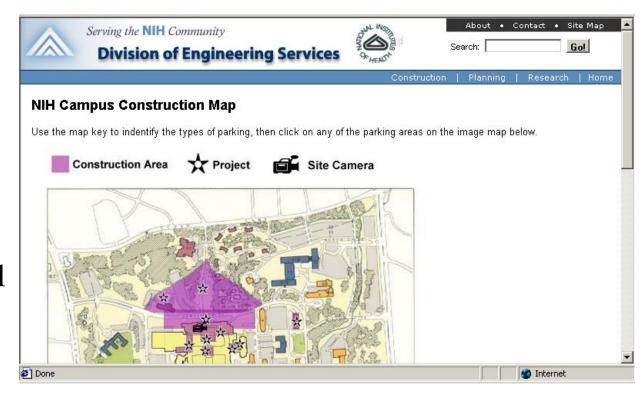
One user was pleasantly surprised to find jobs under "J" – she said it seemed too easy



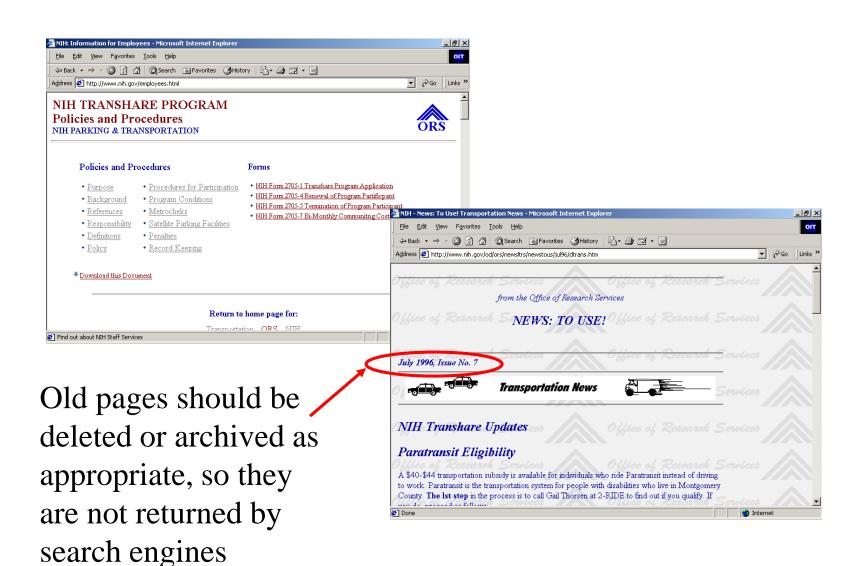
### Date of Content?: Construction Example

One of many examples on site for which date of content was not provided

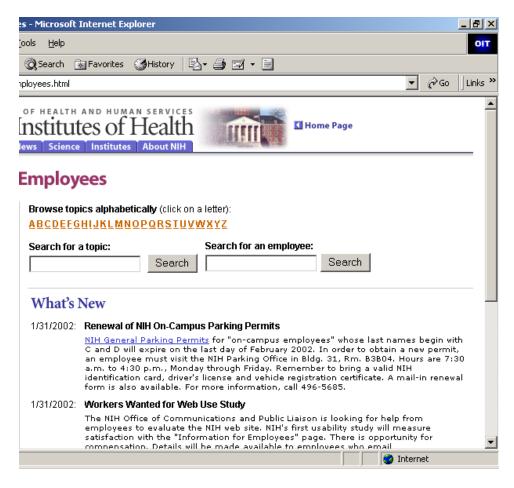
Also, page has cool features but many broken links



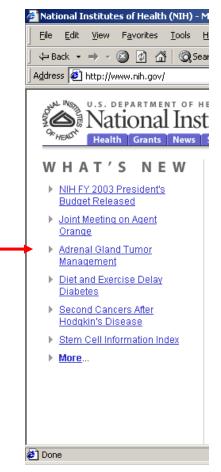
### Date of Content?: Transhare Example



### News and Events



A few participants suggested a less wordy approach to news such as that on the public home page



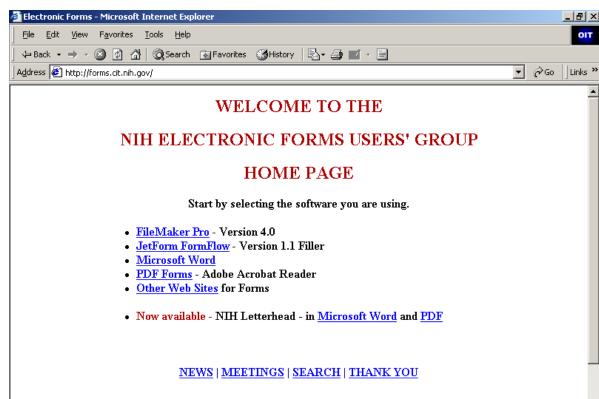
### **Forms**

Users appreciate being able to get forms on line

All forms are not available in all formats

Seems awkward to have to look within formats for a specific form

For example, one purchase req. form is not in Word or .pdf but is in FileMaker



### Next Generation Designs

- Separate information for employees from that for general public, at least in public search results
- Consider private trans-NIH intranet so public not frustrated, and staff can be private when appropriate

### Thank you

cathy@humanfactors.com



