

An Open Discussion on Web Navigation

[Puget Sound SIGCHI](#) Presentation

September 16, 2002

Keith Instone

keith@instone.org

<http://keith.instone.org/>

© 2002 Keith Instone

Hi, I am Keith

- Information Architect, User Experience, ibm.com
- Consultant, Argus Associates
- CHI-WEB, CHI, etc.
- Usable Web
- Toledo, Ohio
- BGSU CS grad (88)

An Open Discussion, not a Presentation

- Tonight's topic – Web Navigation
- I'll get the ball rolling with my stress test and a framework
- Everyone in this room is qualified to contribute their own views and their findings
- If you learn more from the other folks in the room than from me, I still call that a success

Web Navigation

- Oh, what is navigation?
- Central metaphor for the web
- If they cannot find it, they cannot buy it
- Conventions forming, but...
- ...It depends
- Future: Will navigation be less or more important?

Navigation Stress Test

- “Randomly” selected (deeper) pages
- Printed out for lower fidelity, no peeking
- Where am I?
- What is here?
- Where can I go?

The Art & Science of Web Design, Jeffrey Veen
Steve Krug's trunk test in *Don't Make Me Think*
Information Architecture for the WWW – 2nd Edition

Standard Inspection Method Disclaimers

- It depends: users, tasks, site goals, content, competition, technology, resources, ...
- Best: Testing with representative users trying realistic tasks
- At least: Inspection guides user research
- Still, useful to “get anal” about it when designing, even if not important in your situation (IMHO)

| Navigation Question | Mark Up on the Paper |
|---|---|
| What is this page about? | Draw a rectangle around the <i>title of the page</i> or write it on the paper yourself |
| What site is this? | Circle the <i>site name</i> , or write it on the paper yourself |
| What are the major sections of this site? | Label with X |
| What major section is this page in? | Draw a triangle around the X |
| What is "up" 1 level from here? | Label with U |
| How do I get to the home page of this site? | Label with H |
| How do I get to the top of this section of the site? | Label with T |
| What does each group of links represent? | Circle the major groups of links and label: <ul style="list-style-type: none"> • D: More details, sub-pages of this one • N: Nearby pages, within same section as this page • S: Pages on same site, but not as near • O: Off-site pages |
| How might you get to this page from the site home page? | Write the set of selections as: Choice 1 > Choice 2 > ... |

OK, Let's do the Test

- Review the questions & why each might matter
- Do hockey page as a group
- Pick one of the other samples, mark it up on your own
- Go over some as a group quickly

NAVIGATION STRESS TEST

| Navigation Question | Mark Up on the Paper |
|---|--|
| What is this page about? | Draw a rectangle around the <i>title of the page</i> or write it on the paper yourself |
| What site is this? | Circle the <i>site name</i> , or write it on the paper yourself |
| What are the major sections of this site? | Label with X |
| What major section is this page in? | Draw a triangle around the X |
| What is "up" 1 level from here? | Label with U |
| How do I get to the home page of this site? | Label with H |
| How do I get to the top of this section of the site? | Label with T |
| What does each group of links represent? | Circle the major groups of links and label: <ul style="list-style-type: none"> • D: More details, sub-pages of this one • N: Nearby pages, within same section as this page • S: Pages on same site, but not as near • O: Off-site pages |
| How might you get to this page from the site home page? | Write the set of selections as: Choice 1 > Choice 2 > ... Connect the visual elements on the page that tell you this. |

- Online Partner
- Tickets
- Travel
- Schedules
- Site Map
- On Campus
- Traditions
- Links
- Online Store
- Audio/Video
- Falcon Club

PLAY Trivia

FansOnly Network Member FOR FANS ONLY

[Vote for the preseason top 25 football teams!](#)

News Interactive Directory

This Week @ Bowling Green
 free email newsletter

Hockey

Choose Sport

Hockey Advances To "The Joe"

Williams scores in OT for 2-1 win at NMU; BGSU is lowest seed ever to advance to semifinal round.

March 13, 2001

[Box Score](#)

MARQUETTE, Mich. - The Bowling Green State University hockey team became the lowest seed ever to advance to the semifinal round of the Central Collegiate Hockey Association Championships, after posting a 2-1 overtime victory against Northern Michigan University Tuesday night (March 13). The Falcons and Wildcats met in the CCHA Play-In game at NMU's Berry Events Center.



Dennis Williams scored the game-winner at 14:54 of overtime against NMU.

The win sends the ninth-seeded Falcons to the CCHA's semifinal round Friday (March 16) at Joe Louis Arena in Detroit. BGSU will meet top-seeded Michigan State University in a 5:00 p.m. start at "The Joe." The second semifinal will match the third seed, Michigan, against fourth-seeded Nebraska Omaha.

Tuesday's win marked the second time in as many games that the Falcons advanced by scoring in the extra frame. The Brown and Orange received scoring from some unlikely heroes.

[Ryan Wetterberg](#) continued his recent hot streak, as he opened the scoring 14:23 into the game. Wetterberg received a pass from [Austin de Luis](#) and cut inside, sliding a backhand shot past NMU netminder Dan Ragusett for his second goal of the year.

NMU would rally to tie things up in the middle frame. Wildcat captain Mike Sandbeck scored his third goal of the campaign, a power-play tally on a shot from the point at 12:27.

NMU and BG would play to a draw in the third period to send the game into overtime. It was Northern Michigan's third extra-period match of the playoffs and Bowling Green's second.

BGSU has now won five consecutive games, each by a single goal. The Falcons have captured six of the last seven contests.

The Falcons are now 16-18-5 on the year, while NMU drops to 18-13-7.

Ice Hockey Home

FALCON FAN STORE



BUY IT NOW

HEADLINES

- [Two Falcons Selected In NHL Draft](#)
- [Private Funds Have Made Ice Arena Renovation Possible](#)
- [BGSU Ice Arena Project Is On Schedule to Be Completed Soon](#)

RELATED LINKS

- [FANsOnly NewsWire](#)
- [Email this to a friend](#)

[Bowling Green Ice Hockey](#)



 Search

Select a country

Industries > Retail > Solutions

- Global Retail
- News
- Events
- Solutions
- Case Studies
- Resource Center
- Search Retail
- Contacts

- Related links:
- Consumer Packaged Goods
 - Point-of-Sale and Kiosk solutions
 - Industry Associations

IBM and Retek solutions for retail

[The goal](#) | [The advantage](#) | [The benefits](#) | [The approach](#) | [The financial advantage](#)

IBM understands retail

Are you coping with massive daily transaction volumes? Are you leveraging your customer data to improve customer satisfaction?

IBM and Retek solutions for retail include supply chain management, merchandising and logistics. Our solutions can provide you with comprehensive tools for successful e-business.

Strength of e-business knowledge and experience

IBM and Retek solutions for retail are designed and implemented by the e-business professionals.

IBM--a technical leader with:

- Intellectual capital and solutions consulting
- Decades of experience in the retail industry
- World-class hardware and software
- Proven experience in hands-on implementation of multiphase e-business solutions

Forecast, plan, manage, assess

Retail processes have traditionally been complicated and time consuming. Now, with IBM and Retek solutions for retail, you can streamline your processes using an Internet-architected system to help you:

- Forecast customer demand to drive planning, allocation and replenishment
- Plan and manage details effectively for higher sales and faster turnover
- Manage your supply chain from end-to-end, for a more efficient flow of inventory
- Follow critical-path processes and track merchandise in near realtime
- Seek competitive bids and negotiate with suppliers publicly or privately
- Purchase directly from suppliers in near realtime
- Manage the price change process and make better, faster, proactive price management decisions
- Assess meaningful data through alert and exception management

A solution for evolving consumer demands

Easy access to goods and services has transformed the retail industry. Customers now satisfy their retail needs through multiple channels, including:

- Storefront
- Telephone
- Catalog
- Web
- Mobile phone
- Television
- Kiosk

With IBM and Retek solutions for retail, you can use technology to transform your business--and help you reap the benefits:

- Increase efficiency
- Handle evolving consumer demand
- Utilize emerging sales channels
- Streamline processes

Profitable relationships

IBM and Retek solutions for retail are designed to promote profitable relationships with both customers and suppliers.

A technological, customer-focused, platform can help you:

- Forecast customer demand
- Enhance inventory management
- Gain supply chain efficiency
- Lower operating costs
- Promote productivity
- Expedite supplier transactions
- Accelerate time to market

RETAIL

BUSINESS VIEW

Contact Us

Questions? Contact an IBM Retail Specialist

News and Events

[IBM and Retek solutions: improving SCM efficiency](#)

[Kroger and Retek improve inventory performance](#)

[Web seminar - Cultivate industrial-strength supplier networks](#)

Resource center

[IBM and Retek logistics brochure](#)

[IBM and Retek merchandising solution brochure](#)

[IBM and Retek supply chain management brochure](#)

Services

[Global financing](#)

[Consulting services](#)



Seattle Community Network

[Community](#)

Spirituality

↓ [Spirituality Sites Hosted on SCN](#)

☰ [Spirituality](#) Mailing Lists

☰ [Announcements](#) updated September 14, 2001

↓ [Buddhism](#)

☰ [Christianity](#)

↓ [Hinduism](#)

☰ [Islam](#)

☰ [Judaism](#)

↓ [Paganism](#)

Spirituality Sites Hosted on SCN

scn [ANON Faction](#)

scn [Exist Foundation](#)

scn [North Pacific Young Adult Friends](#)

scn [Pacific Northwest Quarterly Meeting](#)

scn [Quaker Experiential Service and Training](#)

scn [Rooted in Spirit](#)

scn [University Friends Meeting](#)

scn [University Christian Church](#)

Buddhism

[Buddhist Studies Library](#)

☑ [Dai Bai Zan Temple](#)

☑ [Dharma Friendship Foundation](#)

☑ [Dharma Sound Zen Center](#)

[Insight Meditation Society](#)

Hinduism

☑ [Hare Krishna Temple](#)

☑ [Ramakrishna Order of India](#)

Paganism

scn [ANON Faction](#)

☑ [Widdershins](#)

☑ [Aquarian Tabernacle Church](#)

Updated October 8, 2001 webeditors@scn.org

[Calendars](#)

[Community](#)

[Activism](#)

[Arts](#)

[Civic](#)

[Education](#)

[Environment](#)

[Health](#)

[Housing](#)

[Jobs](#)

[Media](#)

[Neighborhoods](#)

[People](#)

[Politics](#)

[Recreation](#)

[Science/Tech](#)

[Social Services](#)

[Spirituality](#)

[Transportation](#)

[Volunteers](#)

[Featured Sites](#)

[Free Speech/Privacy](#)

[Help](#)

[Mailing Lists](#)

[Net Guide](#)

[Personal Sites](#)

[Translate](#)

[What's New](#)

[SCN's Free Services](#)

[SCN Association](#)

[Contribute](#)

[Free Classes](#)

[Publish on SCN](#)

[Volunteering for SCN](#)

[Go to Top of Page](#)

[Go to Top of Page](#)



[home](#)

[meetings](#)

[membership](#)

[discussions](#)

[job posting](#)

[links](#)

2000-2001 Meeting Schedule

[1999-2000](#) | [2000-2001](#) | [2001-2002](#) | [2002-2003](#)

| | |
|-----------------------|---|
| September 2000 | The Social Illogic of Ubiquitous Computing Paul Andrews, Seattle Times Wednesday, September 20th |
| October 2000 | Usability Data Analysis Bob Graf, Microsoft Usability Wednesday, October 18th |
| November 2000 | 7 Ways Community Enhances the Online Experience Ted O'Neill, Infopop Corporation Wednesday, November 15th |
| December 2000 | No Meeting Scheduled |
| January 2001 | Different Scopes for Different Folks Erin Schulz, Microsoft Wednesday, January 17th |
| February 2001 | Sketchy Interfaces Mark D. Gross, University of Washington Wednesday, February 21st |
| March 2001 | Speech Recognition Software: Barriers and Solutions Mark Griffith, Ph.D., Zephyr-TEC Wednesday, March 21st |
| April 2001 | Magic Book Mark Billingham, University of Washington HIT Lab Wednesday, April 18th |
| May 2001 | Usability and the Holy Grail Jared Spool Founding Principal, User Interface Engineering Wednesday, May 23rd |
| June 2001 | Designing Office XP Brad Weed and Christopher Konrad, Microsoft Wednesday, June 20th |

A Special Thanks

[Attachmate Corporation](#) has been a long-time supporter of Puget Sound SIGCHI. The officers and membership of PS-SIGCHI would like to express their appreciation to Attachmate for hosting our monthly meetings and providing a pleasant environment for everyone who attends.

Search This Site

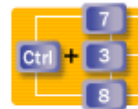
[Advanced Search](#)

- [Office Home](#)
- [Visio Home](#)
- [Product Information](#) ▶
- [How to Buy](#)
- [Technical Resources](#)
- [Using Visio](#)
- [Downloads](#)
- [Support](#)
- [Previous Version](#)
- [Office Programs](#) ▶

[Office Programs](#) > [Visio Home](#)

Using Visio

Learn how to get the most from Microsoft Visio® 2002. If you're using a previous version of Visio, visit the [Previous Versions page](#).



[Master Visio 2002 Shortcuts, Toolbars](#)

Keep the color, printable Visio 2002 Shortcut Reference as a guide for links, keyboard shortcuts, and toolbar descriptions to help you work more effectively with Visio version 2002.



[Make Your Diagrams More Fun with Smart Clip Art](#)

Configurable smart clip art shapes provide a fun, easy way to convey ideas using Visio 2002. Learn how to turn on a light bulb for emphasis, use a clock to show a specific time, and more.

▶ [Tips and Tricks](#)

Try something new. These shortcuts can help turn you into a proficient Visio user.

▶ [How-to Articles](#)

Learn how to create effective diagrams with these tutorials from the Assistance Center.

▶ [Training](#)

Find online, self-paced, and instructor-led courses, and become a Visio expert.

▶ [Books](#)

Find books and other Visio learning resources at the Office Bookstore, brought to you by eShop.

▶ [Newsgroups](#)

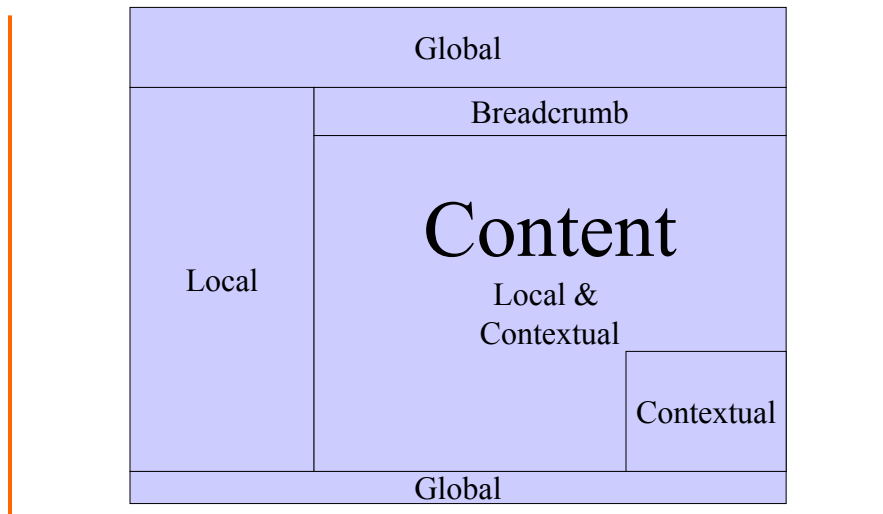
Join a newsgroup, and share information and questions with other Visio users.

[^ Top](#)

BGSU Athletics > Men's Ice Hockey > News > Hockey Advances ...

The screenshot shows the Bowling Green State University Athletics website. At the top, a breadcrumb trail reads "Bowling Green State University > Men's Ice Hockey > News > Hockey Advances ...". Below this is a navigation menu with links like "Tickets", "Travel", "Schedules", "Site Map", "On Campus", "Traditions", "Links", "Online Store", "Audio/Video", and "Falcon Club". The main content area features a news article titled "Hockey Advances To 'The Joe'" with a sub-headline "Williams scores in OT for 2-1 win at NMU; BGSU is lowest seed ever to advance to semifinal round." A photo of a player is shown, and a merchandise advertisement for "FALCON FANS" is visible. Hand-drawn annotations in green and pink highlight the breadcrumb trail, the article title, the player's name "Dennis Williams", and the merchandise ad.

**Navigation Framework
(see also Chapter 7 of PB2)**

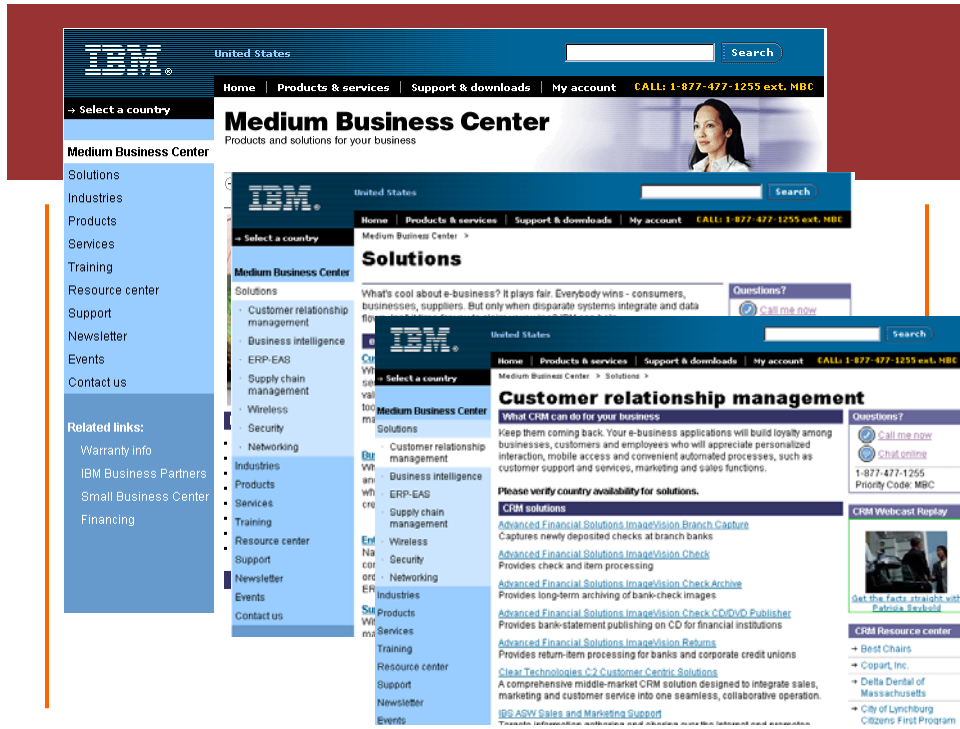


Global Navigation

- Site identification, branding
- Major sections
- Utilities
- Almost every page
- Can (should?) change for sub-sites
- Where-am-I indicators

Local Navigation

- Specific to this section of the site
- Varies from section to section, but consistent (hopefully)
- Parental, sibling, child relationships
- Where-am-I indicators



Global on the Left

FORRESTER

Home Page

Personal View

Full Research List

Contact Us

Help

Glossary

Reset Login

Search

FULL RESEARCH LIST

[Full List](#) | [View By Date](#) | [View By Analyst](#)

With eResearch 2.0 Forrester organizes its research into Market Focuses Benchmarks. Clicking on any research item in the list below will display a that area.

| | | |
|---|--|--------------------------------------|
| <p>Strategy Research</p> <p>INDUSTRY MARKET FOCUSES</p> <p>Automotive</p> <p>B2B</p> <p>Consumer Packaged Goods</p> <p>Financial Services</p> | <p>European Strategy Research</p> <p>EUROPEAN MARKET FOCUSES</p> <p>B2B Europe</p> | <p>Cons</p> <p>NORT</p> <p>Afflu</p> |
|---|--|--------------------------------------|

FORRESTER

Home Page

Search Our Research

More Search Options

Register/Login

Reverse Research

By Date

By Analyst

Most Popular

Research

Top Research

Inquiries

Emails & Alerts

Events & Webcasts

Products & Services

About Forrester

Contact Us

How To Buy

Shopping Cart

BROWSE RESEARCH

SITE TECHNOLOGY & DESIGN

Site Technology & Design research includes areas like Site Design, Commerce Platforms, and Measurement. [Learn more](#) about Site Technology & Design research.

TechRankings™ Product Evaluations
[Commerce Platform](#)

October 2001-September 2002

[All methodologies] [All geographic regions] [Last year]

| Title | Date | |
|---|-------------|-------|
| Bobby Bay Bolsters Watchfire's Accessibility Ditch TechStrategy Brief | August 2002 | [BUY] |
| The Forrester Wave™ Explained TechStrategy Brief PDF | July 2002 | [BUY] |
| Yahoo!'s Beta Launch Highlights Best Practice TechStrategy Brief | June 2002 | [BUY] |
| When Can Web Analytics Drive Design? TechStrategy Brief | June 2002 | [BUY] |
| CEOs Should Not Design Web Sites TechStrategy Brief | May 2002 | [BUY] |
| Lessons Learned From Design Leaders TechStrategy Brief | May 2002 | [BUY] |
| Macromedia's MCI: A Smart, Strategic Move TechStrategy Brief | May 2002 | [BUY] |

Global on the Left

The screenshot shows the Forrester Strategic Services website. On the left is a vertical navigation menu with links such as 'Home Page', 'Search Our Research', 'Register/Login', 'Browse Research', 'Emails & Alerts', 'Events & Webcasts', 'Products & Services', 'WholeView Research', 'Strategic Services', 'Unlimited Analyst Access', 'About Forrester', 'Contact Us', 'How To Buy', and 'Shopping Cart'. The main content area is titled 'STRATEGIC SERVICES' and features a search bar with 'Site Evaluation & Design Services' entered. Below this, there are sections for 'SITE EVALUATION & DESIGN SERVICES', 'Web Site Review', and 'Web Site Review Boot Camp'. A 'FORRESTER' logo is also present. To the right of the main content is a section titled 'UPCOMING EVENTS' with filters for 'View By Date', 'View By Industry', and 'View By Location'. Below the filters, there are event listings with 'REGISTER' buttons. At the bottom right, there is a section titled 'WHAT IS A FORRESTER...' with links to 'Forum', 'Summit', and 'Workshop'.

Microsoft.com

The screenshot shows the Microsoft TechNet website. At the top, there are links for 'All Products', 'Support', 'Search', and 'microsoft.com Guide'. The main navigation bar includes 'TechNet Home', 'Downloads', 'Site Map', and 'TechNet Worldwide'. Below this is a search bar with 'I want to:' and a dropdown menu. The left sidebar contains a 'Knowledge Base' section with a tree view showing 'The Cable Guy' and its monthly archives from September 2002 to October 2002. The main content area is titled 'The Cable Guy - January 2002' and features an article 'How the Windows XP Network Bridge Works' by 'The Cable Guy'. Below the article title is an illustration of a person holding a cable. At the bottom of the article, there are 'Topics on this Page' including 'Layer 2 Bridging', 'Layer 3 bridging', and 'For More Information'.

Microsoft.com

Microsoft Product Support Services United States

All Products | Support | Search | Microsoft.com Guide

Home | Search | FAQs | Downloads | Newsgroups | Customer Service

Send | Print | Help

Search the Knowledge Base

Advanced Search and Help

Support Menu

- Self Service Support Options
- Find & Download Software
- Microsoft Services
- Contact Microsoft

International Support

Guide to Software Downloads - Overview

- Microsoft Windows Updates**
Use the Windows Update home page to update your system with the latest critical security updates, service packs, device drivers, and the latest version of Windows Media Player.
- Microsoft Office Updates**
Use the Office tools on the Office home page to view the latest information and downloads that are available to enhance your Microsoft Office suite, including templates, the graphic gallery, and Office eServices.
- Service Packs**
Find the latest service packs by product. Service packs may contain updates for system reliability, application compatibility, security, and more. All are conveniently bundled for easy downloading.
- Internet Explorer**
Can't find Outlook Express to download? It's now part of Internet Explorer. Go to download site for the latest version of Internet Explorer and benefit from the secure and enhanced Internet browsing experience that Microsoft Internet Explorer provides.
- Other Microsoft Products**
Use the Microsoft Download Center to find technical files for all Microsoft products. These downloads include device drivers, service packs, patches, as well as full products.
- Microsoft Product Catalog**
Search for Microsoft Products in the Product and Technology Catalog.

Send | Print | Help

Last reviewed Tuesday, January 29, 2002

© 2002 Microsoft Corporation. All rights reserved. Terms of Use Privacy statement Accessibility

Usability research

All Products | Support | Search | Microsoft.com Guide

Microsoft

Home | Sign-up | Usability Information | Participant Information | Related Information

Home
[Sign-up](#)

Usability Information:
[At Microsoft](#)
[Lab Studies](#)
[Usability Labs](#)
[Site Visits](#)
[Publications](#)
[Jobs](#)

Participant Information:
[Strategies](#)
[Directions](#)

Related Information:
[Accessibility](#)
[Play Test](#)

Get involved in the product development process and help us understand your needs by signing up to participate in one of our Usability Research studies.

In the **Puget Sound area**, we conduct [Usability Lab Studies](#) or [Focus Groups](#) on our main campus in Redmond, WA.

[Click here](#) if you live in the **San Francisco bay area**, product evaluations and usability research is conducted in our Mountain View campus facilities.

We also conduct [Usability Field Studies](#) in the Puget Sound region and across the United States whereby our product design and development teams go out into the field to meet with users, like you, in their own business or home environments.

Standard Form
Our most basic form if you would like to be eligible

Have You Seen These Pages?
[Jonathan Grudin](#)
[Data Mining Project](#)
[BABC - Telepresence - Home](#)

Microsoft Research Current Research

home
current research
people
search
news
publications
community
conferences
downloads
opportunities
labs

Collaborative & Multimedia Systems

Overview

The Collaborative and Multimedia Group conducted research from the spring of 1998 to the fall of 2001, at which time its members moved to other groups. Subsequent work can be found on the pages of individual group members. This is a summary of the group's projects and papers. Papers written in 2001 are updated to reflect final status.

Online communication, collaboration, and communities are the basis for exciting new application areas for

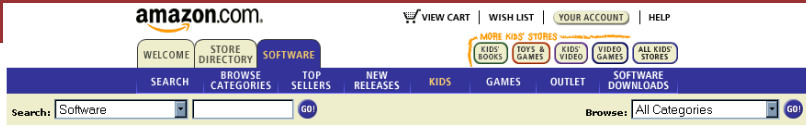
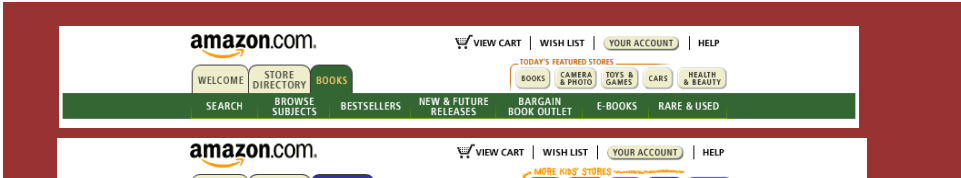
- Overview
- People
- Group Member Photos
- Projects
- Selected Publications

Microsoft.com

The screenshot shows the Microsoft Windows Platform Development website. At the top, there are navigation links for "All Products", "Support", "Search", and "Microsoft.com Guide". The main header includes "Microsoft Windows Platform Development" and "Microsoft". Below the header, there are links for "Platform Development", "Site Map", and "Platform Development Japan". A search bar is present with a "GO" button. A left-hand navigation menu lists: Home, Future Directions, Platform Design, Buses, Technologies, Drivers, Information For..., and Resources. The main content area features an article titled "Mobile PC Design" with the sub-heading "Native Processor Performance Control". The article text states: "This information should be considered in designing mobile PC systems and docking stations that will run Microsoft® Windows® operating systems." Below the text is a "Click on selection below:" section with links for "White Papers" and "Long Testing / Driver Signing". A "Take the Hardware Developer Survey" banner is visible at the bottom left.

U-C-Lotsa-Alternate Navigation

The screenshot displays the UCLA website's navigation structure. At the top, there are links for "UCLA", "DIRECTORY & MAP", "CONTACT", "SITE MAP", and "FULL SEARCH". A search bar is located below these links. The main navigation menu includes: WELCOME, FRESHING, RESEARCH, SERVICE, ABOUT UCLA, ADOPTIONS, HEALTH SCIENCES, RESOURCES, LIBRARY & THE ARTS, ATHLETICS, UCLA STORE, CONTINUING ED, LOCAL PLACES, EMPLOYMENT, MY UCLA, LEARN FROM UCLA, and HOME. A central banner features a photo of children and text about UCLA's commitment to the community. To the right, there is a "UCLA Campus Calendar" section with a search bar and links for "UCLA Campus Calendar", "Events", "Event Locations", "UCLA Commencement", "Schedules", "Central Ticket Office", "Related Links", "UCLA Photo Gallery", "Administrations", and "Events Office Home". Below this is a "UCLA Events Office" section with a search bar and links for "Keyword Search", "Detailed Event Search", "Today's Events", "Submit Events", and "Academic Calendar". At the bottom, there is a "Registrar's Office" section with links for "Schedules", "Catalog", "Calendars", "Fees", "Forms", "Archives", "URSA", "MyUCLA", and "Home". A "UCLA Academic and Administrative Calendars" section provides information on past year calendars and a link to "2001-02 Annual Schedule of Classes Calendar". A "Student Health Service" banner is also visible at the bottom left.



TOP SELLERS

Amazon.com Hot 100 Software Products

Business & Office

Education & Reference

Games

Macintosh

New & Future Releases

Programming & Development

Top Sellers > Amazon.com Hot 100 Software Products

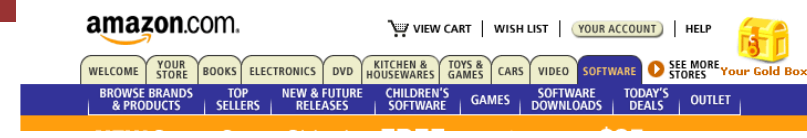
Our most popular items. Updated daily.

- 1. Quicken TurboTax (Tax Year 2000)**
 Windows 95, Windows 98, Windows NT, Windows 2000, Windows Me
Our Price: \$19.99
 Rebate: Your price is \$14.99 after the manufacturer's mail-in rebate of \$5.00.
[Click here for more information](#)
- 2. Easy CD Creator 5.0 Platinum**
 Windows 95, Windows 98, Windows NT, Windows 2000, Windows Me
 List Price: ~~\$99.00~~
Our Price: \$84.99
You Save: \$15.00 (15%)

Customer Rating: ★★★★★
Usually ships in 24 hours

[Add to cart](#)
[Add to Wish List](#)

Today's Amazon.com – Kids' Tabs



L.L.Bean® Shop

HOME SHOP CUSTOMER SERVICE OUTDOORS ONLINE
MY ACCOUNT PRIVACY SHOPPING CART SITE MAP

Welcome! [Log In/Register](#)

SEARCH

SHOP

- Men's
- Women's
- Kids'
- Sporting Gear & Apparel
 - Camping & Hiking Gear
 - Hunting Gear & Apparel
 - Fishing Gear & Apparel
 - Men's Outdoor Apparel
 - Outerwear
 - Shirts
 - Shorts & Pants
 - Fitness & Swim
 - Underwear & Accessories
 - Women's Outdoor Apparel
 - Outdoor Footwear
 - Kayaks, Canoes & Paddling Gear
 - Cycling Gear & Apparel

Shorts & Pants

- Active Shorts
- Hiking Pants
- Fishing Pants
- Hunting Pants

| | |
|---|----------------------------------|
| | |
| Woodsmen's Bib Overalls | Upl Cotton Field |
| | |
| Upland Hunting Jeans, Natural Fit | Filson Cloth |
| | |
| Filson's Shelter Cloth Bibs | Shelle Upland |
| | |
| Holland Bibs | Holland |

L.L.Bean Shopping Bag

Shop Explore the Outdoors Customer Service My Account

[Log In/Register](#) [Your Privacy](#)

Pants & Shorts [Hide Images](#)

Click below for more

- Pants & Shorts
- Fishing Pants
- Hunting Pants

| | | | |
|---|---|--|--|
| | | | |
| Convertible Pants, Cotton | Bike And Hike Shorts | Convertible Pants, Ripstop Cordura | Trail Cargo Shorts, Cotton |
| \$49.00 | \$39.50 | \$79.00 | \$29.50 |
| | | | |
| Trail Cargo Shorts, Cordura Nylon | Stretch Schoeller Dryskin Guide Pants | Tropic Wear Zip-Pants | Trail Model Fleece Pants |
| \$39.50 | from \$125.00 | from \$65.00 | from \$39.00 |

DEPARTMENTS

- Men's
- Women's
- Kids'
- Outdoor Gear & Apparel
 - Camping & Hiking Gear
 - Fishing Gear & Apparel
 - Hunting Gear & Apparel
 - Women's Outdoor Apparel
 - Men's Outdoor Apparel
 - Outerwear
 - Shirts
 - Pants & Shorts
 - Men's Fitness Apparel
 - Underwear & Accessories
 - Outdoor Footwear
 - Kayaks, Canoes & Paddling Gear
 - Cycling Gear & Apparel
 - Car Racks, Carriers & Trailers
 - Winter Sporting Gear & Apparel
 - Shopping Guides
 - Travel Gear & Apparel
 - Home & Outdoor Living
 - Gift Certificates

Questions: Global and Local Navigation

- Global: TLBR?
- When to use tabs for global navigation?
- When is it best to abandon the global nav?
- How does global change for sub-sites?
- Local: TLBR?
- How to make sure users do not confuse them?
- Right level of integration between them?
- Where-am-I indicators: useful?

Question from Kathy Roach

Is web navigation positioning (side-left menu) so entrenched now that user expectation of its location has, in and of itself, BECOME the usability standard?

And, is defying that standard for the sake of ergonomics (read: right-side nav being more sensibly positioned for mouse-driven tasking) or for the sake of simplifying or clarifying overall site organization (read: top menu model [sans overcopied Amazon.com file tabs metaphor] used to avoid content clutter or confusion) now considered to be a liability to site usability because it might not be what the user expects?

Contextual Navigation

- Specific to this page
- Cuts across hierarchy (local navigation covers the stuff in the same bucket)
- Hand-crafted and/or automated
- Embedded in the content and/or given its own space on the screen

Contextual Link Examples

[Jakob Nielsen's Alertbox](#), March 4, 2001:

Retaining Key Staff: What High-Tech Employees Say versus What They Do

Summary:

Never listen to what people say in response to a survey: asking high-tech employees what will keep them in their jobs provides very different answers than the factors that actually drive retention.

Getting and keeping good people is one of the greatest problems facing Internet companies. Even with the latest slump in the industry, we still face negative unemployment among people who understand the Internet.

We have all seen the clueless ads looking for Java programmers with ten years' experience. Indeed, those ads started appearing back when not even James Gosling would have qualified. The real issue is not so much number of years as it is amount of insight and skills which translate into real experience. In the human interface field experience is largely driven by the number and diversity of user tests somebody has observed. Some usability professionals run a test per week; others may only get exposure to real people a few times per year.

Assume that you have succeeded in hiring an excellent staff. How to keep it?

At the [World Economic Forum](#) in Davos, Switzerland in January 2001, Dr. [David Finegold](#) from the University of Southern California presented an interesting study of employee retention in high-tech companies.

Contextual Link Examples

Customers who bought this book also bought:

- [Web Navigation: Designing the User Experience](#) by Jennifer Fleming, Richard Koman(Editor)
- [Designing Web Usability : The Practice of Simplicity](#) by Jakob Nielsen
- [Collaborative Web Development: Strategies and Best Practices for Web Teams](#) by Jessica R. Burdman
- [Secrets of Successful Web Sites : Project Management on the World Wide Web](#) by David Siegel

Customers who bought titles by Louis Rosenfeld also bought titles by these authors:

- [Jakob Nielsen](#)
- [Jennifer Fleming](#)
- [Jessica R. Burdman](#)
- [David Siegel](#)
- [Steve Krug](#)

REI Gore-Tex Full-Zip Pants -
Men's
\$ 175.00
Item 048259



Browse more gear

[Waterproof/Breathable
Rainwear -- W/B;
Alternative Pants](#)

[Waterproof/Breathable
Rainwear -- W/B;
Gore-Tex
Jackets/Pullovers](#)

Comparison vs. Coordinating Shopping

Boys' Full Elastic-waist Chino Pants



Elastic Waist Chinos go on easy, feel good all day.

- 100% cotton twill, prewashed for softness
- Full-elastic waistband is all-day comfortable
- Zip fly with snap closure — simpler for little hands to manage

▼ [Read More...](#)

[size charts](#)

Alternatives



[Boys' Cotton
Pleat-Front
Chino Pants](#)



[Boys' Flat-Front
Chino Pants](#)

Comparison vs. Coordinating Shopping

The screenshot shows the Eddie Bauer Kids website. The main product is 'Relaxed Khakis' priced at \$14.99 (regularly \$28). The product description lists features like 'Cut full through the hips', 'Soft enzyme wash', and 'Unique cargo pocket'. A 'Coordinating Products' pop-up window is overlaid on the right, displaying four items: a 'Hooded Nylon Ripston Vest', a 'Long-Sleeve Image Tee', 'Skechers@Photos Joggers', and a 'Leather Jean Belt'. The pop-up has a 'CLOSE WINDOW' button.

ibm.com Right Column & Related links

The screenshots illustrate the layout of the IBM website's right-hand column and related links. The first screenshot shows the 'Cluster servers' page with a right-hand column containing 'More cluster...', 'Support', 'Education', 'Library', and 'Contact IBM'. The second screenshot shows the 'Press releases' page with a right-hand column containing 'More information' and 'Future stories'. The third screenshot shows the 'Cluster Starter Kit for Linux' page with a right-hand column containing 'Cluster Starter Kit for Linux' and 'Learn more'. The 'Related links' section on the bottom screenshot lists 'IBM ClusterProven', 'IBM eServer solutions', 'IBM ClusterProven', and 'IBM eServer solutions'.

Questions: Local and Contextual Navigation

- Do users care about differences in local and contextual navigation? Can they tell the difference? Does it matter?
- Should all contextual navigation be embedded within the main content, or should it have its own space?
- How much contextual navigation is worth doing by hand? How useful are the automated recommendations?
- Which is better: comparison shopping (local) or coordination shopping (contextual)? When?

Warning! More than you ever wanted to hear about breadcrumbs

- Those faint of heart may want to leave now....

About Breadcrumbs in General

- Use these definitions and examples to talk more intelligently about breadcrumbs
- Element (links) and Separators (characters)
- First Element > Second Element > Third Element > Last Element
- Last element (optional): Unlinked, title of the page

About the 3 Types of Breadcrumbs

The term “breadcrumb” is used for several different concepts – causing confusion during design discussions

- Location Breadcrumb – “You are here”, static
- Path Breadcrumb – how you got here, dynamic
- Attribute Breadcrumb – meta-information

(When you go home, start using these terms!)

I still am not sure breadcrumbs are a good idea

- There still are a lot of questions we need answers to re: breadcrumbs (like, are they even useful?)
- These definitions do not provide any answers, only more questions
- Ask these questions before using breadcrumbs on your site
- Just because we now have these definitions, it does not mean you have to include breadcrumbs in your designs

Other Terms

- ibm.com – Navigation trail (location)
- Depth maps (location) and breadcrumbs (path)
- Others?

Definition of Location Breadcrumbs

- The single location of this page within the site's hierarchy
- Hard coded – best choice for static sites
- Tells users "you are here" - not how they got here
- Gives them a way to go "up" to higher sections of the site

Yahoo Directory: Everyone's first exposure to breadcrumbs?

The screenshot shows the Yahoo Directory homepage. On the left, there are several category links: Arts & Humanities, Business & Economy, Computers & Internet, Education, Entertainment, Government, Health, News & Media, Recreation & Sports, Reference, Regional, Science, Social Science, and Society & Culture. A red arrow points from the 'Computers & Internet' link to the 'Internet' link in the breadcrumb trail. The breadcrumb trail is: Home > Computers and Internet > Internet. Below the breadcrumb trail is a list of sub-categories under 'Internet': Software@, Statistics and Demographics (32), User Groups (22), WAIS (7), World Wide Web (1966) NEW!, and Usenet Groups (5).

Arts & Humanities
Literature, Photography...

Business & Economy
B2B, Finance, Shopping, Jobs...

Computers & Internet
Internet, WWW, Games...

Education
College and University, K-12...

Entertainment
CoolLinks, Movies, Humor, Music...

Government
Elections, Military, Law, Taxes...

Health
Medicine, Diseases, Drugs, Fitness...

News & Media
Full Coverage, Newspapers, TV...

Recreation & Sports
Sports, Travel, Autos, Outdoors...

Reference
Libraries, Dictionaries, Quotations...

Regional
Countries, Regions, US States...

Science
Animals, Astronomy, Engineering...

Social Science
Archaeology, Economics, Languages...

Society & Culture
People, Environment, Religion...

Home > Computers and Internet > **Internet**

- **Software@**
- **Statistics and Demographics** (32)
- **User Groups** (22)
- **WAIS** (7)
- **World Wide Web** (1966) **NEW!**
- **Usenet Groups** (5)

Yahoo Directory: @ means Transport

[Home](#) > [Computers and Internet](#) > [Internet](#) >

World Wide Web

- [ActiveX@](#)
- [Beginner's Guides](#) (37)
- [Books@](#) → [Home](#) > [Business and Economy](#) > [Shopping and Services](#) > [Books](#) > [Booksellers](#) > [Computers](#) > [Internet](#) > [Titles](#) > [World Wide Web](#)
- [Browsers@](#)
- [Caching](#) (12)
- [Chat](#) (167)
- [Conferences](#) (24)
- [Cookies](#) (15)
- [Databases and Searching](#) (12)
- [Evaluation](#) (8)
- [Gateways](#) (23)
- [History](#) (9)
- [HTML@](#)
- [HTTP](#) (53)
- [Imagemaps](#) (16)
- [Java@](#)
- [JavaScript@](#)

Yahoo! uses the @ for a **transport** link – it does not go deeper in the site hierarchy (local) but instead leads to a completely new breadcrumb (contextual)

Common Location Examples

[useit.com](#) → [Papers and Essays](#) → [Heuristic Evaluation](#) → [List of Heuristics](#)

Ten Usability Heuristics

Visibility of system status

The system should always keep users informed about what is going on, through appropriate feedback.

Match between system and the real world

The system should speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, for example in the labeling of controls, menus and windows.

Waffle Recipes

[New! Submit a Site](#)

You are here: [Lifestyle](#) > [Hobbies](#) > [Cooking](#) > [Recipes](#) > [Breads & Grains](#) > [Breakfast Breads](#) > Waffles

Waffle Boy's Domain of the Waffle

Ultimate resource for waffle lovers features a collection of recipes and a historical overview.

Waffle Page

Waffle aficionado gives the history of his favorite breakfast food along with a selection of recipes. Check out the humorous trivia section.

Common Location Examples

The screenshot shows the e-greetings.com website. At the top, there is a contest banner: "Answer the following question for a chance to win \$1,000. What country is Arnold Schwarzenegger from?" with radio buttons for Germany (selected), Austria, and Switz. Below the banner is a navigation menu with tabs for Cards, Music Scene, Gift Shop, Contests, and Members. A yellow banner reads "Welcome to Have a Nice Day!". On the left, a "Keep in Touch" sidebar lists links like "Most Popular", "Blank", "Call Me", "Have a Nice Day", "Hello", "Miss You", "Share a Smile", "Thinking of You", "What's Up", and "Write Me". The main content area is titled "Have a Nice Day (7 cards)" and displays two cards: "Flash Penguin Skates" and "Interactive Dress Me Up!".

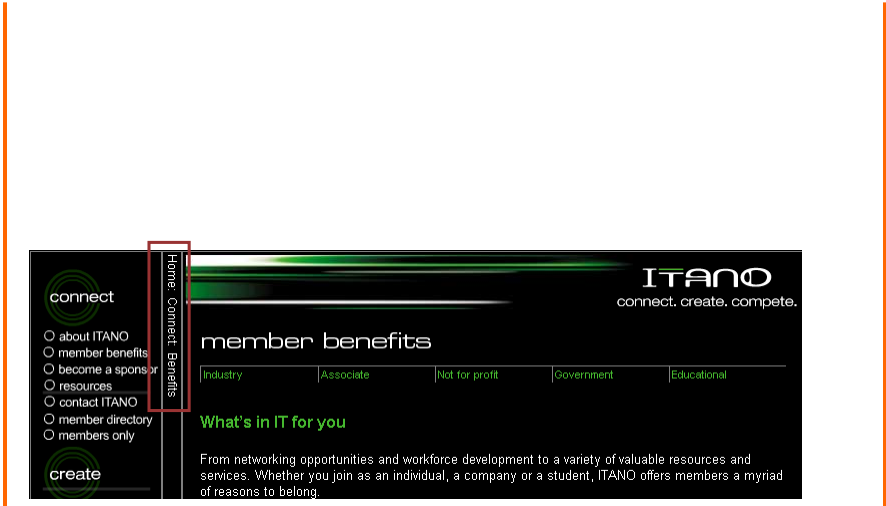
Common Location Examples

The screenshot shows the IBM website for the United States. The top navigation bar includes "Home", "Products & services", "Support & downloads", and "My account". A "Select a country" dropdown is visible. The main content area is titled "Financial services" and includes a sub-header "Medium Business Center > Industries >". The text describes the challenges of the financial-services industry, such as merger activity and global competition, and mentions that much of the change is driven by e-business and e-commerce. It lists differentiating factors for future survival and competitive readiness. Below the text, it states: "In this competitive marketplace, the networked world — which provides access to customers and competitors — is disrupting traditional models, which have been geographically focused, product-oriented and controlled growth strategies. How networked is your company?"

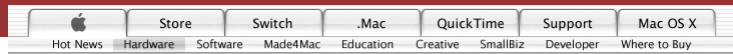
Uncommon Location Examples



Uncommon Location Examples



Uncommon Location Examples



iPod FAQ

[Choosing an MP3 Player That's Right for You](#) | [Using the iPod with Your Computer](#)
[Skip Protection](#) | [Storage](#)
[Audio](#) | [Using iPod in Your Home and in Your Car](#)
[Battery](#) | [Non-music Features](#)
[Services and Support](#) | [Accessories](#)

Choosing an MP3 Player That's Right for You

What's the difference between iPod and other portable MP3 players?

There are three types of portable MP3 players on the market — flash-based players, MP3 CD

players such as the Rio 800 or Samsung Yepp use solid-state flash memory. On average they store up to 128MB, or about two hours, of music, and

[Home](#) > [iPod](#) > [FAQ](#)

[Site Map](#) | [Search Tips](#)

Visit the Apple Store [online](#) or at [retail](#) locations.
1-800-MY-APPLE

[Contact Us](#) | [Privacy Policy](#)

Copyright © 2002 Apple Computer, Inc. [All rights reserved.](#)

Old BBC Breadcrumbs



MONDAY
13th August 2001

[A-Z Index](#) | [Search](#)

Main Sites

Go

[BBC Homepage](#)
[Homes](#)
[Antiques](#)

• Roadshow

[Expert Advice](#)
[Clubs](#)
[FAQs](#)
[Venues](#)
[Experts](#)
[On Air](#)
[Roadshow Finds](#)
[Valuations](#)
[Video Quiz](#)
[Next Generation](#)

- The old BBC vertical breadcrumbs were NOT useful to people
 - Inconsistently created and named because they were manually entered
 - Located in a blindspot on the page
- Biggest result from testing was that horizontal breadcrumbs were "something all websites have, but I do not really pay attention to".

What syntax / layouts are "standard"?

[useit.com](#) → [Alertbox](#) → June 2001 PDF

[Jakob Nielsen's](#) Alertbox, June 10, 2001:
Avoid PDF for On-Sc

NN/g NIelsen NOrman Group

Strategies to enhance the user experience

[Home](#) [People](#) [Services](#) [Publications](#) [Events](#) [About NN/g](#)

[NN/g Home](#) > [Publications](#) > Locator Usability Report

[NN/g Home](#) → [AskTog](#) → Basics → Maximizing Human Performance

[Don Norman Home Page](#) | [Publications](#) | The Perils of Home Theater

[Course Catalog](#): [E-Commerce](#): [Internet User Experience Suite](#)

Annotations on the right side:

- Top left, arrows
- Right side, >, under Global navigation
- Arrows
- Vertical bars
- Colons

When do users not "get" breadcrumbs?

eGreetingCards.com

Home | Sign In | Join | Index

Home | Birthday | Family Birthday | For Wife

Home > Birthday > Family Birthday > For Wife

Annotations:

- Arrows pointing to the breadcrumb trail with question marks and double question marks.
- A dropdown menu for "Birthday" with options: Find more cards, Holidays, Keep in Touch, Friendship, Love & Dating, Birthday, Share a Laugh, Inspire & Encourage, Comfort & Support, Events & Occasions, Invitations & RSVPs.

Definition of Path Breadcrumbs

- Like the Hansel-and-Gretel metaphor – how you got to the current page
- Same result via different paths = different breadcrumbs
- Possible with dynamic sites that retain some aspect of the user's state

Epicurious: Faceted browsing

Main Ingredient

[Beans](#), [Beef](#), [Berries](#), [Cheese](#), [Chocolate](#), [Citrus](#), [Dairy](#), [Eggs](#), [Fish](#), [Fruits](#), [Garlic](#), [Ginger](#), [Grains](#), [Greens](#), [Herbs](#), [Lamb](#), [Mushrooms](#), [Mustard](#), [Nuts](#), [Olives](#), [Onions](#), [Pasta](#), [Peppers](#), [Pork](#), [Potatoes](#), [Poultry](#), [Rice](#), [Shellfish](#), [Tomatoes](#), [Vegetables](#)

Cuisine

[African](#), [American](#), [Asian](#), [Caribbean](#), [Eastern European](#), [French](#), [Greek](#), [Indian](#), [Italian](#), [Jewish](#), [Mediterranean](#), [Mexican](#), [Middle Eastern](#), [Scandinavian](#), [Spanish](#)

Special Considerations: [Kid-Friendly](#), [Low Fat](#), [Meatless](#)

Preparation Method

[Advance](#), [Bake](#), [Broil](#), [Fry](#), [Grill](#), [Marinade](#), [Microwave](#), [No Cook](#), [Poach](#), [Quick](#), [Roast](#), [Saute](#), [Slow Cook](#), [Steam](#), [Stir Fry](#)

Season/Occasion

[Christmas](#), [Easter](#), [Fall](#), [Fourth of July](#), [Hanukkah](#), [New Years](#), [Picnics](#), [Spring](#), [Summer](#), [Superbowl](#), [Thanksgiving](#), [Valentine's Day](#), [Winter](#)

Course/Dish

[Appetizers](#), [Bread](#), [Breakfast](#), [Brunch](#), [Condiments](#), [Cookies](#), [Desserts](#), [Hors d'Oeuvres](#), [Main Dish](#), [Salads](#), [Sandwiches](#), [Sauces](#), [Side Dish](#), [Snack](#), [Soup](#), [Vegetables](#)

- Main ingredient = Mushrooms
- Cuisine = Asian
- Course/dish = Soup

Epicurious: 6 breadcrumbs for the same end result

The image displays six different breadcrumb navigation paths for the same recipe, 'CHINESE-STYLE SPINACH AND MUSHROOM SOUP', on the Epicurious website. Each path is shown in a separate panel, illustrating how the same end result can be reached through multiple, non-intuitive routes. The paths are:

- Path 1:** Browse > Mushrooms > Asian > Soup
- Path 2:** Browse > Soup > Asian > Mushrooms
- Path 3:** Browse > Asian > Mushrooms > Soup
- Path 4:** Browse > Asian > Soup > Mushrooms
- Path 5:** Browse > Mushrooms > Soup > Asian
- Path 6:** Browse > Asian > Soup > Mushrooms

Each path leads to the same recipe page, which includes the title 'CHINESE-STYLE SPINACH AND MUSHROOM SOUP', the source (e.g., Bon Appétit, Gourmet), and the date of publication. The paths are designed to be confusing, as they do not clearly indicate the relationship between the categories and the final recipe.

Rashmi Sinha comment

- Epicurious breadcrumbs were not confusing in a usability study we did as part of Flamenco
- See <http://bailando.sims.berkeley.edu/flamenco.html>

3 ways to Marvin Gaye

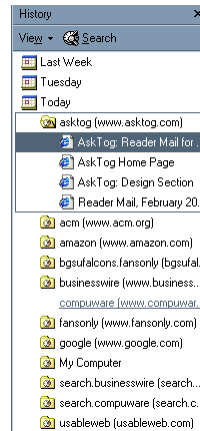


Search vs. Browse Paths

| Navigation | Guide Information | Navigation | Guide Information |
|--------------------------------------|--|-------------------|--|
| Search/Browse | http://www.iupui.edu/~webtrain/ | Search/Browse | http://members.xoom.com/rjtless/links.htm |
| Main Page | Keywords HTML (HyperText Markup Language), Web design | Main Page | Keywords astronomy (general) |
| Computers and Information Technology | Compiled by Cynthia D. Hollingsworth (cholling@iupui.edu) Client Services Consultant Indiana University-Purdue University Indianapolis | Search Results | Compiled by Robert J. Tless (rjtless@warwick.net) Creator & Webmaster Cosmic Context |
| Internet and networking | Rating Overall: | Guide Information | |
| HTML (HyperText Markup Language) | | | |
| Guide Information | | | |

Are we allowed to do this?

- Who is responsible for the user's path: the browser or the site?



Are we allowed to do this?

IBM @server Solution Connection

Integrated ■ Targeted ■ Connected

IBM @server Solution Connection Search Results mySAP Business Intelligence

mySAP Business Intelligence

Now looking at: iSeries

| Provider | 6 | 7474 | facts |
|---------------------------------------|---------|---------|---------|
| Advertising Advisor | xSeries | pSeries | |
| Balanced Scorecard | xSeries | | |
| DB2 Universal Database | | | |
| Extenders for iSeries | iSeries | | |
| V7.1 | | | |
| mySAP Business Intelligence | zSeries | xSeries | iSeries |
| ShowCase (R) STRATEGY (TM) - 5758-S99 | iSeries | | |

Business Problem
mySAP Business Intelligence offers knowledge management capabilities that help you connect "those who know" with "those who need to know." The cornerstone of these capabilities is an active information repository designed to house a range of information types, including documentation, video... [\[more\]](#)

Solution website
<http://www.sap.com/solutions/bi/>

Americas (NA - LA)
[\[See Countries\]](#)
SAP AG
Holger Rasig
49 6227-731045
holger.rasig@sap.com

Asia/Pacific (AP)
[\[See Countries\]](#)
SAP AG
Holger Rasig

Path vs. Location Breadcrumbs

- When are path vs. location breadcrumbs appropriate?
- Does it depend on the information architecture of the site (e.g., hierarchy vs. database), user's goals, type of user, type of site, ...?

What if a page lives in more than 1 place?

- What if a page could live in more than one place and you can't choose a "buddha place" – all are equally valid. Example, Service A lives in 3 places and you do not want to pick 1 as the default location:
- Consulting > Services > Implementation > Service A
- Consulting > Services > Optimization > Service A
- Consulting > Services > Upgrade > Service A
- Should you cut off the breadcrumb at a higher level, like "Consulting > Services"?

My answer

- In this case, do not use LOCATION breadcrumbs – use Path or Attribute instead
- This is exactly why we need more detailed definitions for breadcrumbs
- And, no, do not cut off your breadcrumbs at a higher level – it makes them useless

Should a step-by-step indicator look like a breadcrumb?

The screenshot displays the America West Airlines website interface. At the top, there is a navigation bar with the following links: [Travel Planning](#), [Travel Tools](#), [Specials](#), [Frequent Flyer](#), [Programs](#), and [Services](#). Below this, a secondary navigation bar includes: [Home](#), [Air Schedules & Reservations](#), [Vacations](#), [Cars](#), [Hotels](#), [Cruises](#), [Groups](#), [Meetings](#), and [User Profile](#). The main content area is divided into two sections: "Price Itinerary" and "Review Itinerary".

Price Itinerary

▶ [Enter Cities/Dates](#) ▶ [Price Itinerary](#) ▶ [Review Itinerary](#) ▶ [Confirmation](#)

- Select one flight per direction then click **Continue** below to price your itinerary.
- If traveling to Mexico, view our [Mexico service schedule](#).
- A red check mark will appear in the **Special Offers** column when an Internet only fare that the number of Internet only fares are limited on each flight. If the Internet only fare flights, choose other flights or dates of travel.
- If planning to redeem a travel voucher, view the [Alternate Payment Methods](#) section.

Review Itinerary

▶ [Enter Cities/Dates](#) ▶ [Price Itinerary](#) ▶ [Review Itinerary](#) ▶ [Confirmation](#)

To price another itinerary return to the previous page and make different selections. To complete page to renew your itinerary, **choose your seats** and enter your passenger/traveler & credit card information.

If applicable, online discounts are applied automatically and included in the base fare subject to change until purchased.

Confirmation

▶ [Enter Cities/Dates](#) ▶ [Price Itinerary](#) ▶ [Review Itinerary](#) ▶ [Confirmation](#)

Click on the **Print This Page Now** link below for a copy of your confirmation.

Definition of Attribute Breadcrumbs

- Breadcrumb does not represent the whole page, but attributes of it
- Meta-information presented in a breadcrumb-like manner (instead of as a "flat" keyword)
- Tend to be at the bottom or on the side of the page, or near the object they are describing
- Common in e-commerce sites where each product has a large set of attributes
- Could be either path or location breadcrumbs

Google results tell you where each link exists within the ODP

The screenshot shows a Google search interface with the query "monty python and the holy grail". The search results are categorized into three items, each with a pink oval annotation on the right side:

- Item 1:** "Welcome to PythOnline!" with the annotation "The video game company". The category path is "Games > Video Games > ... > Adventure > Graphical Adventures > Monty Python Games".
- Item 2:** "Monty Python & the Quest for the Holy Grail Game Hints" with the annotation "The video game". The category path is "Games > Video Games > ... > Monty Python and the Quest for the Holy Grail".
- Item 3:** "Monty Python's Flying Circus" with the annotation "The TV show". The category path is "Regional > Europe > ... > Programmes > Comedy > Monty Python's Flying Circus".

More Google Results

CINEMA

CINEMA. **"Monty Python's Holy Grail"**. This is english crazy movie. Do you understand these "BAKA" scenes? ...

Description: Lego-modeled version of stills from **"Monty Python and the Holy Grail"**.

Category: [Arts > Movies > Titles > M > Monty Python and the Holy Grail](#)

www.geocities.co.jp/Hollywood/9060/holye.html - 5k - [Cached](#) - [Similar pages](#)

The movie

[Monty Python and the Holy Grail CCG homepage](#)

... What if my local store does not stock **Monty Python and the Holy Grail**??? ... Check out what people are saying about **Monty Python & the Holy Grail** CCG Endorsements. ...

Description: King Arthur, Sir Lancelot the Brave, and Sir Robin, are featured along with the rest of the outrageous...

Category: [Games > Trading Cards > Monty Python and the Holy Grail](#)

members.aol.com/telkin/mpghmain.htm - 6k - [Cached](#) - [Similar pages](#)

Trading cards

[MontyPython.net The Ultimate Monty Python Site](#)

... sale by the time you read this. The long-awaited special edition of **Monty Python** and the **Holy Grail** is widely available both online and in many video and music ...

Description: Massive script and sound site for all things **Python**.

Category: [Regional > Europe > ... > Performing Arts > Comedy > Monty Python](#)

www.montypython.net/ - 18k - [Cached](#) - [Similar pages](#)

The (British) comedy troupe

[Regional > Europe > United Kingdom > Arts and Entertainment > Performing Arts > Comedy > Monty Python](#)

Amazon: 5 attribute breadcrumbs for a toy

amazon.com. [VIEW CART](#) | [WISH LIST](#) | [YOUR ACCOUNT](#) | [HELP](#)

WELCOME YOUR STORE **TOYS & GAMES** **TOYSRUS.COM** **TOY FINDER** **AGE RANGES** **BROWSE CATEGORIES** **TOYS OUTLET** **LEARNING TOYS** **VIDEO GAMES**

SEARCH
Toys & Games
Search by Keyword or Online Item Number

TOY INFORMATION

LEGO Town Polar Base (6575)
by LEGO Systems, Inc

List Price: ~~\$59.99~~
Our Price: **\$49.98**
You Save: **\$10.01** (17%)
Availability: Usually ships within 24 hours

READY TO BUY?

(Use if you're redeeming a promotional certificate or coupon.)

Returning customer?

Browse for Toys

- [Age Ranges > 5-7 Years > Blocks & Building](#)
- [Age Ranges > 8-11 Years > Building & Models](#)
- [Age Ranges > 12-14 Years > Construction](#)
- [Brands > LEGO > Arctic](#)
- [Outlet > Blocks, Building Sets & Models](#)

How useful are these sets of attribute breadcrumbs from Amazon?

Browse for **Toys**

- [Categories](#) > [Activities & Learning](#) > [Pretend Play & Dress-Up](#) > [Fashion & Beauty](#) > [Body Arts](#)
- [Favorite Characters](#) > [Rocky & Bullwinkle](#)

Browse for **Baby** items in:

- [Categories](#) > [Strollers](#) > [Full-Size Strollers](#)
- [Brands](#) > [Chicco](#)

Browse for **music** in:

- [Styles](#) > [Children's Music](#) > [General](#)
- [Styles](#) > [Rock](#) > [Progressive](#) > [Progressive Rock](#)
- [Music Outlet](#) > [Children's Music](#) > [CDs \\$7 - \\$10](#)
- [Music Outlet](#) > [Rock](#) > [Progressive Rock](#) > [CDs \\$7 - \\$10](#)
- [Music Outlet](#) > [Children's Music](#) > [All Bargain Titles](#)
- [Music Outlet](#) > [Rock](#) > [Progressive Rock](#) > [All Bargain Titles](#)

Attributes

- Style = General Children's Music, Progressive Rock
- Price = Bargain, \$7-10

Browse for **books** in:

- [Subjects](#) > [Religion & Spirituality](#) > [Christianity](#) > [Reference](#) > [Criticism & Interpretation](#) > [New Testament](#)
- [Christian Living](#) > [General](#)
- [Bibles](#) > [Study Guides, History & Reference](#) > [General](#)

When are simple keywords better than attribute breadcrumbs?

Look for similar books by subject:

Browse for **books** in:

- [Subjects](#) > [Computers & Internet](#) > [Web Development](#) > [Internet Commerce](#) > [Web Site Design](#)
- [Subjects](#) > [Computers & Internet](#) > [Networking](#) > [Internet, Groupware, & Telecommunications](#) > [Internet Publishing](#)
- [Subjects](#) > [Computers & Internet](#) > [Web Development](#) > [HTML, Graphics, & Design](#) > [Interface Design](#)
- [Subjects](#) > [Computers & Internet](#) > [General](#)

Search for books by subject:

- [Web sites](#)
- [Design](#)
- [Web site development](#)
- [Desktop Publishing](#)
- [Computer Networks](#)
- [Computer Bks - Internet](#)
- [Computers](#)
- [Internet - Web Site Design](#)
- [Internet - General](#)

Link for each element?

- Should each element be a link in attribute breadcrumbs, or should it all be one link?
- Do users really need to be able to jump to *any* part of the path?

- [Subjects](#) > [Cooking, Food & Wine](#) > [Drinks & Beverages](#) > [Beer](#)
- [Subjects](#) > [Cooking, Food & Wine](#) > [General](#)
- [Kitchen & Housewares](#) > [Categories](#) > [Cookbooks](#) > [Drinks & Beverages](#) > [Beer](#)
- [Kitchen & Housewares](#) > [Categories](#) > [Cookbooks](#) > [General](#)

Category: [Recreation](#) > [Food](#) > [Drink](#) > [Beer](#)

Breadcrumb Summary

- I warned you it was too much!
- Use these definitions in design discussions – saves hours of headaches
- But do not automatically assume that you should now add them to your sites
- Share your in/formal findings with me
- Anybody else want to do a thesis on breadcrumbs?

More possible Web navigation discussions...

- Value of rollovers
- Bullet lists vs. pop-up menus
- Text vs. graphics
- Navigation vs. content
- Technology: HTML vs. Flash vs. DHTML
- Information vs. applications
- We could be here all night...

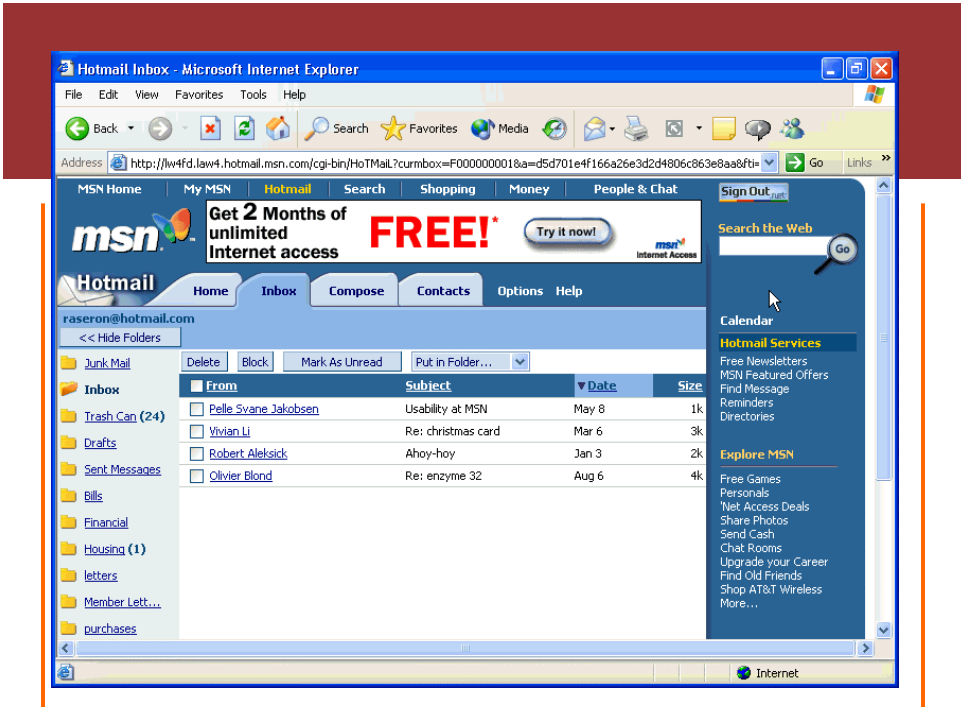
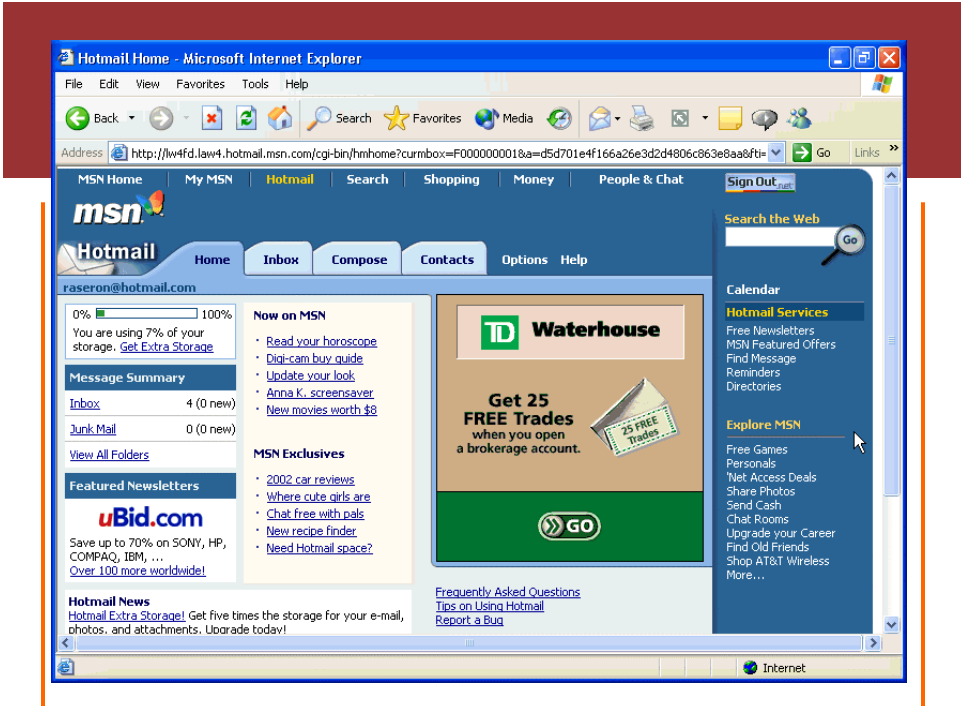
Late addition from Rob Aseron (Hotmail)

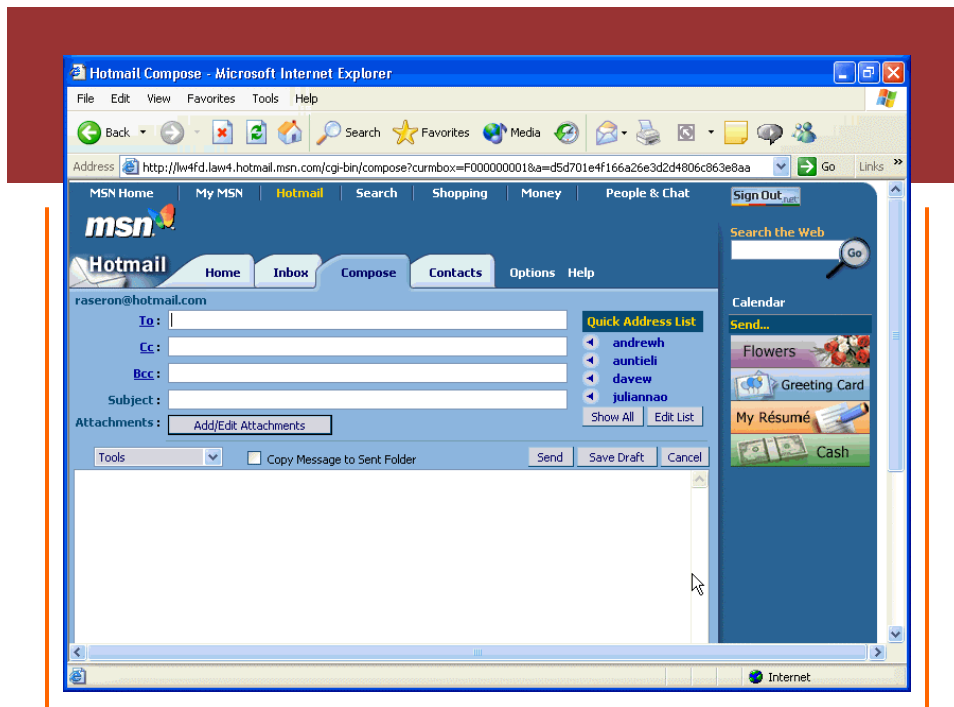
I'm lead program manager for Hotmail UI & Usability.

One of the questions that comes up whenever I tell a design person what I do is Hotmail's high level navigation (the tabs and other items on the same row). The argument usually goes that it's not conceptually clear because if 'Inbox' is a core conceptual space, then maybe Contacts is too, but Compose certainly isn't (or at least not at the same 'level'). Conceptually Compose belongs 'below' Inbox in the mail experience. ...

My explanation is that by and large frequency rules the day over conceptual clarity.

Does a lack of conceptual clarity matter if users quickly get to their important tasks and get them done? Over the past several years we've had all manner of 'conceptually clearer' designs. None of them sold us enough to go away from what we have.





Thanks for your participation!

- If you become aware of research addressing the many questions we discussed, drop me a line.
- keith@instone.org

