Promoting Website

CS 4640
Programming Languages for Web Applications

[Jakob Nielsen and Hoa Loranger, “Prioritizing Web Usability,” Chapter 5]
Search Engine Optimization (SEO)

- Huge incentives to improve web sites search ranking
- Black hat SEO tricks: **Do not do these!**
  - Cloaking
    - Send regular pages to users but “doorway pages” to spiders
    - In 2006, Google banned BMW’s main site for cloaking
  - Search spam
    - Creating huge numbers of content free pages with lots of keywords
  - Link farms
    - Establish bogus web sites that link to your site
  - Comment spam (blogs, discussion forums, etc.)
    - Post text with links back to your site
  - Domain repurposing
    - Buy website with respectable ranking and replace content
Search Engine Optimization (2)

• Three white-hat SEO techniques (You should do these!)
  1. Linguistic SEO
  2. Architectural SEO
  3. Reputation SEO

• Choosing names
  • Picking a new company name or brand name?
  • Test search name and avoid collisions

• Tip: Use text-only ads
  • Most search engine ads are small boxes of text
  • Most users and spiders ignore pictures
Linguistic SEO

• Speak users’ language, not corporate jargon

• Search query logs for user vocabulary

• Perform user testing and listen to users

• Read blogs and other reviews

• Users search problems, not solutions
  • Emphasize words that describe the problems

• Search ads can help bring in visitors
  • But visitors who arrive through search are more valuable

Basic Usability: Talk to users, not yourself
Architectural SEO

• Make sure your pages can be indexed
  • Images are invisible, text is what counts

• Linking structure (that is, link navigation) guides spiders
  • Dynamic pages are really hard to index
  • Spiders ignore anything after “?” in the URL

• Use descriptive text in the link
  • Hire usability experts and English majors, not CS majors!

• Link to main page as often as you can

• Uses phrases, not keywords

Build your pages for search engine spiders
Reputation SEO

• Search engines **count links** to your site
  • This is a **weak measure**, but widely used

• Links from other “**high reputation**” sites are better

• URLs need to be very **simple**!

• Link **rot**: Pages are moved, but links not updated

• **Publicize** your URLs and encourage others to use it

Reputation is everything

It takes time to build and can be destroyed in an instant
Summary

• Search currently dominates the Web

• SEO: be patient, success takes months and years, not days and weeks
Extra slides
(in case you are planning to implement internal search)

Search is a good idea if you have more than 100 pages.
Search is essential if you have more than 1000 pages
The State of Search

• External vs. internal search success: 56% vs. 33%

• Internal search should be much better
  • Much smaller set of pages
  • Extensive knowledge of user intent
  • Deep understanding of important parts of your site
  • Deep understanding of old & obsolete parts of your site
  • Potentially more access to metadata
  • Controlled vocabulary: synonyms, misspellings, variants
  • You can trust your own customized summary information
  • No problem with spammers or other manipulation
The State of Search (2)

• Some users go **immediately** to search; some **prefer** links
  • Need to **support both** types of behavior

• Users can easily scan a single page

• Three simple steps to better **internal searches**
  1. **Buy** better search software
     • And adjust the **settings**
  2. **Design SERP** according to usability guidelines
  3. **Improve pages** so they work better with search software
     • Write good **titles** and **summaries**
How Search Should Work

• Users want internal search to look like external search

• The three things users expect from search
  1. Search text box
  2. Search button
  3. Linear prioritized results on a new page

• When is a search not a search?
  • Search means keyword search
  • Don’t use the search button for other actions
    • Enter
    • Submit
  • Parametric search (users enter parameters): http://www.moviefone.com/
  • Advanced search: http://www.google.com/advanced_search

A good search is what users expect!
Search Interface

• Standard placement
  • Text box top right or top left on every page
  • Users can get lost anywhere, so put search everywhere

• Tip: Don’t try to be a search engine
  • Don’t search the whole web; others do that better

• Location and presentation
  • Input boxes are very visible
  • Buttons are actions, text has links … use buttons to search
  • Default to “all,” let users narrow their search
  • 90% of queries are 27 characters or less, so make search boxes 30 chars

A tool that is used frequently must be simple
Advanced Search and Filters

• Advanced search should rarely be used
  • Boolean algebra too hard for most users
  • “I am interested in graphics and web software”
    Search text: CS 4810 and CS 4501
    No … must use “or”!

• The “filter” approach appears to be very effective
  • Offer all choices
  • And convenient mechanisms to filter out unwanted information
  • Example: https://rabi.phys.virginia.edu/mySIS/CS2/search.php
Search Engine Results Pages

• Number one guideline: Mimic major search engines
  • No need for numbering or relevancy rankings
    • Users will scan from top anyway
  • Each search should start with a clickable headline
  • Follow with a 2 to 3 line summary
  • URLs are not needed

• Example: https://www.basf.com/en.html
  • Spell “polyethylene” as “polyethylene” (results: 684 vs 668)
    • Usable search engines will help users with spelling (Yahoo, Google)
Search Engine Results Pages (2)

• **Target** practice
  • Proportion the *size* of target and the *distance to target*
  • Badly designed SERPs require users to click *tiny numbers*
    • Arrows or “next” and “prev” links are better

• **International** formatting
  • Dates: 7/9/8 is *ambiguous*, 7/9/2011 is not much better
  • Most common order worldwide is “*day, month, year*”
  • On the web, always spell out the month: *9 July 2011*
  • Time: *24 hour clock* is most widely used, but AM and PM are always unambiguous: 12 PM does *not* exist, use *12 noon* or *12 midnight*

**Try to help users, do not punish them**
Search Engine Results Pages (3)

• Users seldom change their queries

• “Best bets” for top search engines
  • You can manually link queries to specific pages
  • External search engines do not trust site suggestions
    • One of the many prices of spam
  • But internal search engines can and should
  • Best bets and search engine results should look the same
    • Or users will think they are ads …
  • Analyze search logs for most frequent queries
    • Test against search engine
    • Add best bet if reasonable
Search Engine Results Pages (4)

• Four ways to build best bets
  1. Product names and brand names should be near the top
  2. Product numbers and other codes should be near the top
  3. Main page for the category name should be the top hit
     • Use common names, even if yours differ
  4. Names of top executives and key staff should be near the top

• Maintaining best bets
  • Maintenance is hard!
  • Best bet maintenance requires process and staffing

• Interesting example: HP
  • Note the “Support & Drivers” on the left
Sorting the SERP

• Usually sort by relevance
  • Don’t confuse the user with too many options

• Sometimes we have exceptions
  • Sort by price
    • Example: Amazon running shoes
    • Note the “Sort by” box on the right
  • Offer the choice of ascending and descending

Defaults are critical – what do most users want?
No Results or One Result Found

• Users will **blame the search engine**, not their poorly worded query!

• Never show a **blank screen**, give the user feedback

• Help the user **modify** the search
  • Keep the **old query** (always!)
  • Offer suggestions for **improvement**
  • Offer an **advanced** search

• If only **one result** found
  • Option: Go **straight** to page
    • Okay for a search on a **known item**
    • But otherwise violates user **expectations**
  • Showing SERP lets user **modify query**

**Help users …**
**Don’t make them follow your rules**