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 4640
    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](https://www.basf.com/en.html)
  • Spell “polyethylene” as “polyethylen” (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
• 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