

Promoting Website

CS 4640 Programming Languages for Web Applications

[Jakob Nielsen and Hoa Loranger, "Prioritizing Web Usability," Chapter 5]
[Sean McManus, "Web Design," Chapter 15]

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://louslist.org/search.php?Semester=1212>

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 “**polyethyane**” as “**polyethylene**” (results: 684 vs 668)
 - Usable search engines will help users with **spelling** (Yahoo, Google)

All major search engines look very similar.

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: www.hp.com
 - Note the “Support”

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