

Optimize Your Content

- Need to create content that is both what search engines need, and what searchers want to see.
- This chapter covers:
 - What search engines look for
 - The philosophy of writing for search
 - Step-by-step optimization of your search landing pages

What search engines look for

- Search engines make two kinds of decisions when generating results
 - Filtering – which pages are on the list
 - Keyword matching plus other user preferences/requirements
 - Ranking – what order to present those pages
 - Relevance, authority, quality, etc.

Search filters

- Language filters
 - Language metatag
 - Character encodings
 - Content analysis



Search filters

- Language filters
- Country and region filters
 - URL
 - Hosting location



Search filters

- Language filters
- Country and region filters
- Other filters
 - Document type
 - Adult content



The screenshot shows the Google Preferences page. At the top, the Google logo is followed by the word "Preferences" in a grey box. Below this is a blue bar with the text "Save your preferences when finished and return to search." The main content area is titled "Global Preferences (changes apply to all Google services)".

Interface Language Display Google tips and messages in: ▼
If you do not find your native language in the pulldown above, you help Google create it through our [Google in Your Language program](#)

Search Language Search for pages written in any language ([Recommended](#)).
 Search only for pages written in these language(s):

<input type="checkbox"/> Arabic	<input type="checkbox"/> English	<input type="checkbox"/> Indonesian
<input type="checkbox"/> Bulgarian	<input type="checkbox"/> Estonian	<input type="checkbox"/> Italian
<input type="checkbox"/> Catalan	<input type="checkbox"/> Finnish	<input type="checkbox"/> Japanese
<input type="checkbox"/> Chinese (Simplified)	<input type="checkbox"/> French	<input type="checkbox"/> Korean
<input type="checkbox"/> Chinese (Traditional)	<input type="checkbox"/> German	<input type="checkbox"/> Latvian
<input type="checkbox"/> Croatian	<input type="checkbox"/> Greek	<input type="checkbox"/> Lithuanian
<input type="checkbox"/> Czech	<input type="checkbox"/> Hebrew	<input type="checkbox"/> Norwegian
<input type="checkbox"/> Danish	<input type="checkbox"/> Hungarian	<input type="checkbox"/> Persian
<input type="checkbox"/> Dutch	<input type="checkbox"/> Icelandic	<input type="checkbox"/> Polish

SafeSearch Filtering [Google's SafeSearch](#) blocks web pages containing explicit sexual
 Use strict filtering (Filter both explicit text and explicit images)
 Use moderate filtering (Filter explicit images only - default behavior)
 Do not filter my search results.

Search results ranking

- The actual ranking algorithm used by a search engine is proprietary
- Such algorithms use many factors (perhaps more than 100!)
- Two principle directions:
 - Page ranking (query-independent) factors
 - Query-specific ranking factors

Page ranking factors

- Query independent factors
 - Link popularity
 - Popularity data
 - URL length and depth
 - Freshness
 - Writing quality
 - Site organization
 - Spam-free

Page Ranking 1: Link popularity



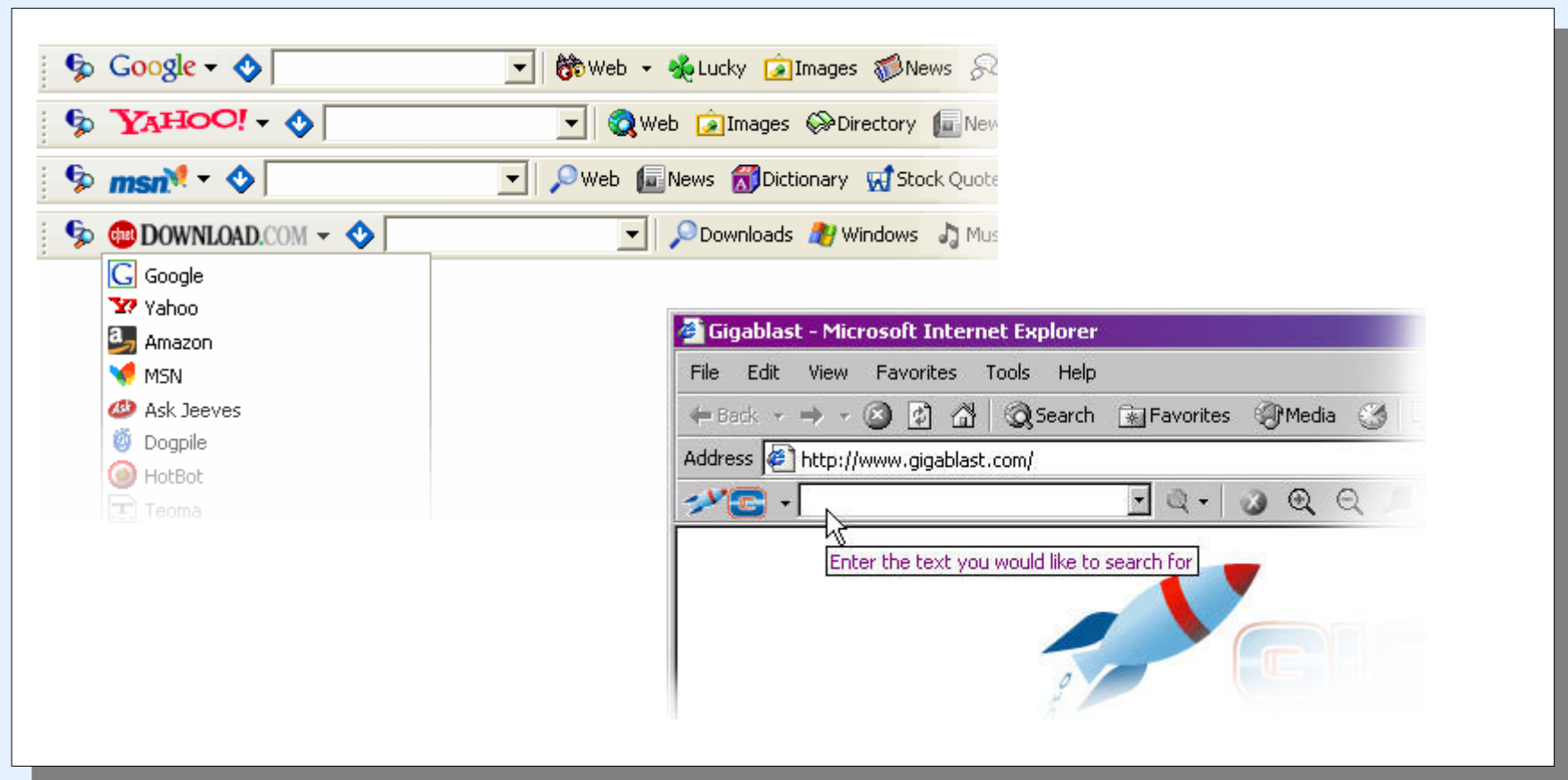
link...or shrink!



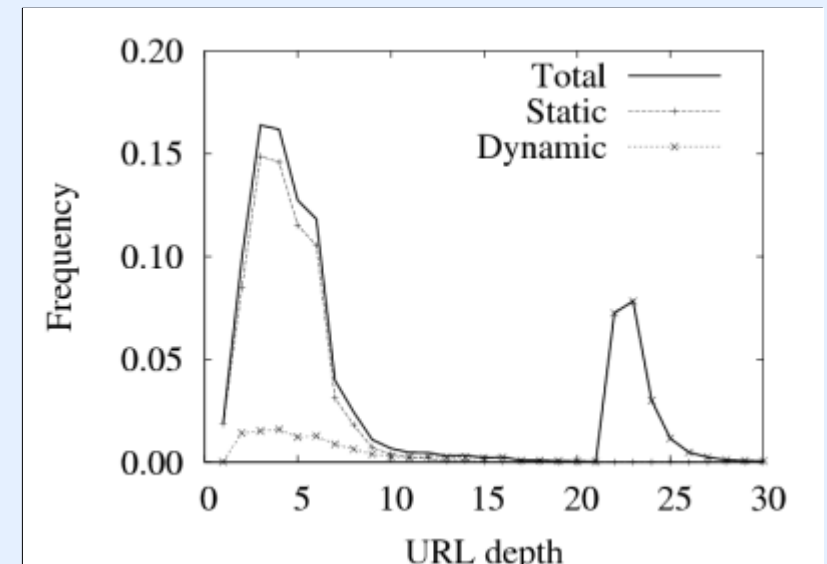
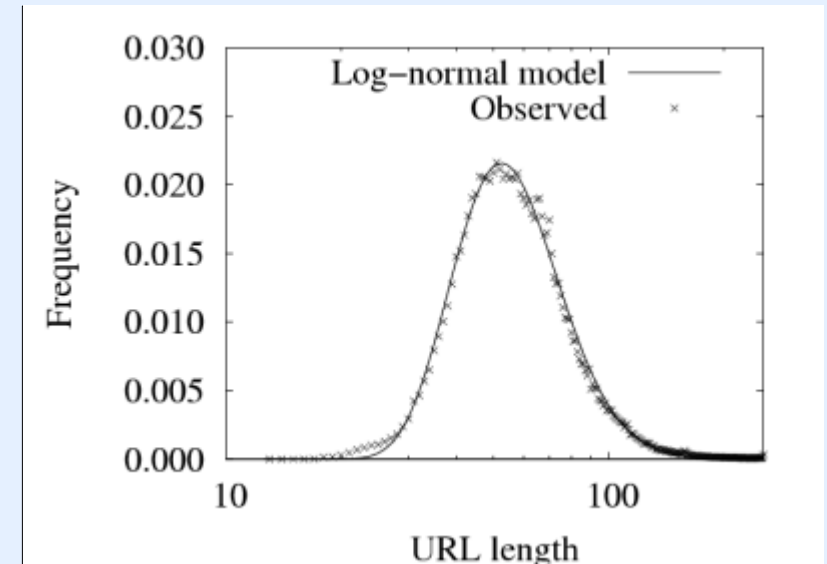
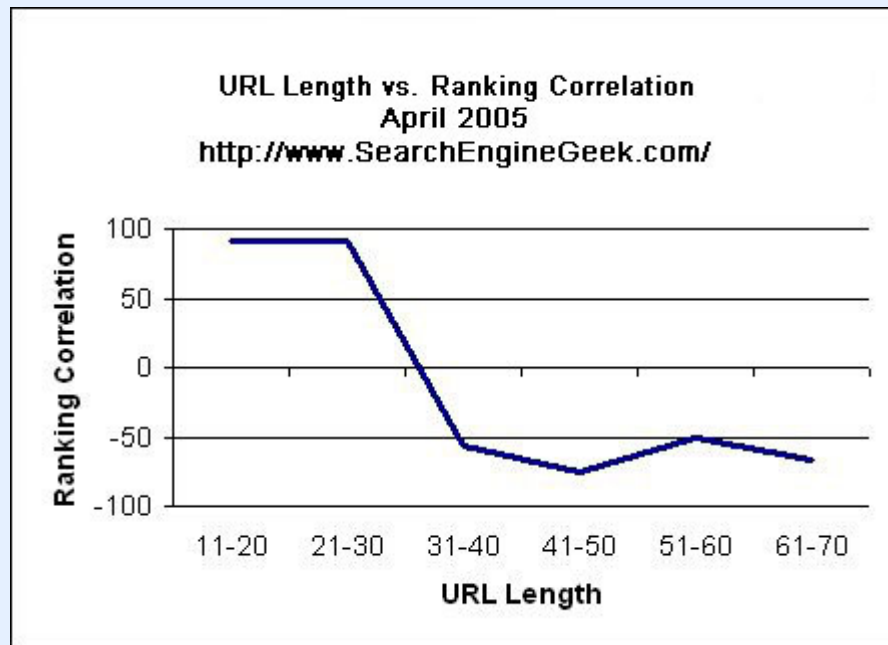
- Addressed further in chapter 13

Page Ranking 2: Popularity data

- Search traffic clicks
- Toolbar traffic



Page Ranking 3: URL length, depth



For the web of Spain

Source: [Baeza-Yates, Castillo, and Lopez, 2005](#)

Page Ranking 4: Freshness

- Recently updated content is considered more valuable
- Old content is sometimes assumed to be stale and out-of-date

Page Ranking 5: Writing quality

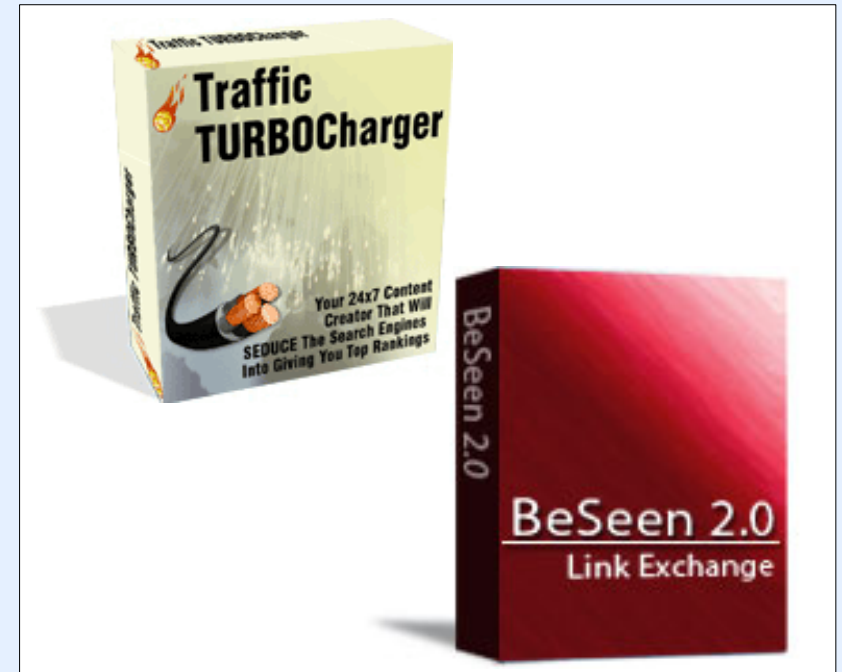
- It is possible for engines to examine the text of your site for grammatical correctness, reading level, and general writing quality
- Sites with easily detectable errors may be de-emphasized

Page Ranking 6: Site organization

- Always helpful to have a good web design
 - Simple layout
 - Sensible URLs
 - Easy to navigate

Page Ranking 7: Spam-free site

- Avoid spamming methods
 - Keyword stuffing
 - Hidden text
 - Doorway pages
 - Duplicate sites
 - Self-promotion via link exchanges



Query-specific ranking factors (1/3)

- Keyword prominence
 - Pages with keywords in prominent places (title, headings, start of body) tend to be good matches.
- Keyword density
 - The fraction of text represented by keyword. Too high makes text unnatural, while too low suggests page is on a different topic.
- Keyword frequency
 - Number of occurrences, as a tiny page that mentions keyword very few times is not as valuable.

Query-specific ranking factors (2/3)

- Keywords in anchor text of in-links
 - Such terms are considered to be part of **your** page
- Query intent
 - Engine may try to identify intent behind query.
 - Informational queries need pages with text.
 - Navigational often need home pages.
 - Transactional need forms or links to documents.
- Contextual relevancy
 - Searcher-specific information, such as location, past queries, gender, etc.

Query-specific ranking factors (3/3)

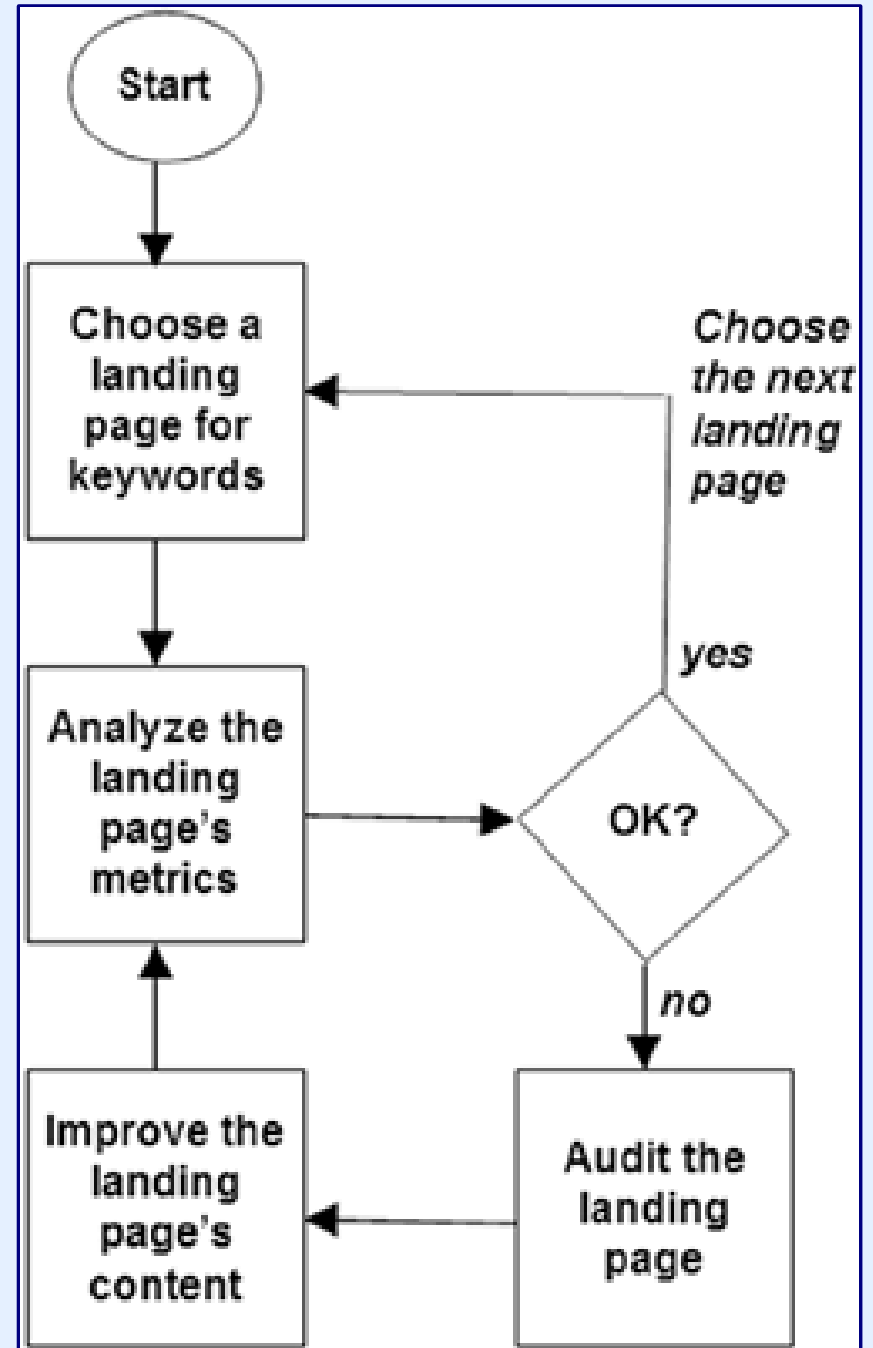
- Term rarity
 - If your page features a query term not used by many other pages, it is likely valuable to the searcher.
- Term proximity
 - The closer the query terms appear, the better (an exact match is best!)

Philosophy of writing for search

- Getting a top ranking is usually not enough!
- Your real goal is some kind of conversion:
 - Online purchase
 - Sales lead generation
 - Getting another signature for a petition
- Your page has to reach the reader
- Well-written pages are more likely to convert readers, and attract links
- It is not worth trying to chase the ranking algorithm

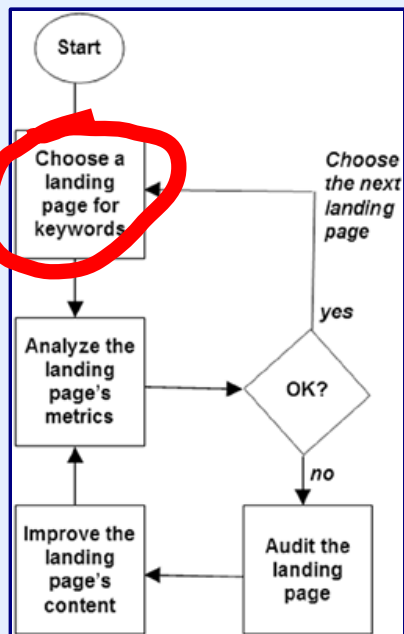
Optimization of landing pages

- Can be relatively straightforward
- Some steps can take months



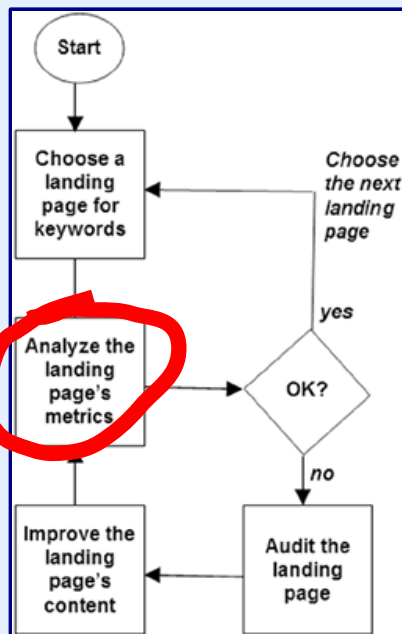
Choose a search landing page for a set of keywords

- Determine what page a **searcher** wants to see for each query
 - First need to satisfy search need
 - Then spin a message around the need
- Don't bother to optimize for a temporary marketing offer
 - Such offers can be linked from landings
- Same page can be used for multiple keywords if sufficiently related



Analyze the metrics for your search landing page

- Check organic search rankings
 - Across multiple engines, each keyword
- Measure organic search referrals
 - Web metrics log analysis software
- Calculate search conversions
 - Web metrics log analysis software
 - Match projections from ch7?



Audit your search landing page

(Tools are available, or performed manually)

- Scrutinize your title
 - Consider keyword density and prominence (especially versus competitors)
 - Title is vital for click-through, but not for conversion

- Analyze your snippet

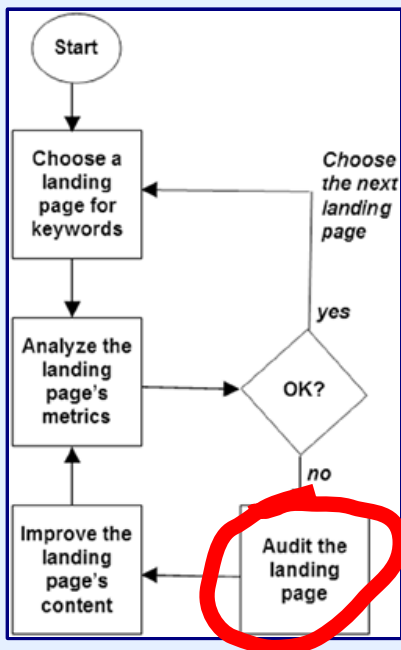
- Needs to provide reason for click-through

- Evaluate your body text

- Density + prominence, bold, headings

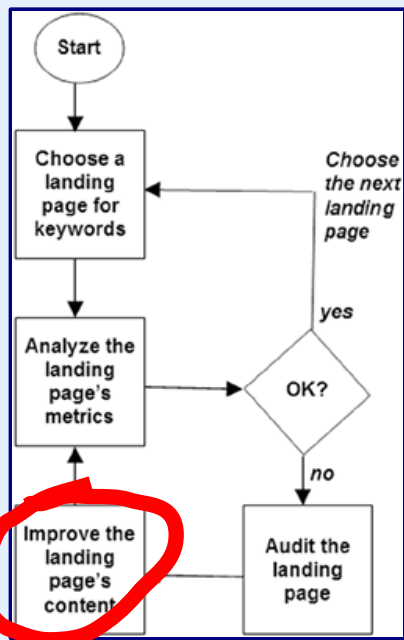
- Examine your link popularity

- Measure number and quality of in-links



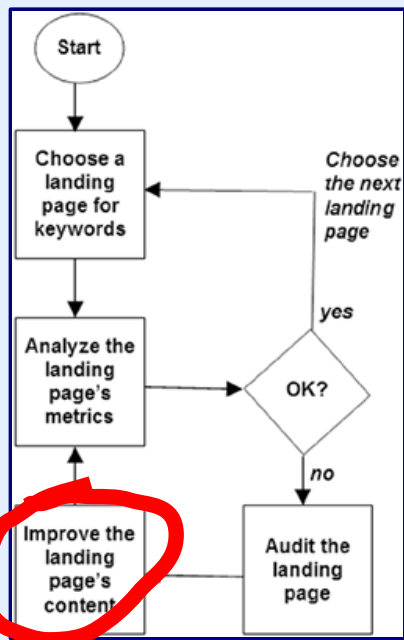
Improve your search landing page's content

- Perfect your title
 - Eliminate useless terms
 - Consider variations that improve prominence, density
- Influence your snippet
 - Often the first instance of keywords
 - Want action-oriented text to drive click-throughs (organic referrals)
- Tune your description
 - Might be used by some engines



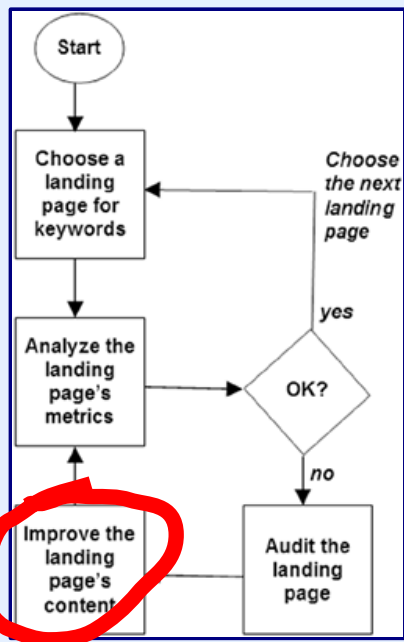
Improve your search landing page's content

- Fix your body text
 - Emphasize keywords in headings, opening text, emphasized text, and incoming link text.
 - Text should
 - Also contain keywords
 - Not be too long
 - Not be repetitive, but varied
 - Be organized like a news article
 - Contain localization information
 - Use CSS for formatting, but use traditional `<h1>`, `<h2>`, ... `<h6>`



Improve your search landing page's content

- Handle non-text elements properly
 - Proper alt text for images
 - Use headers rather than images
- Optimize dynamic content
 - Recognize that dynamic pages are a mixture of code and database content
 - Fix code once for all pages
 - Change database contents for each page individually




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NEWS ARTICLE

Living large in the nano world

Lehigh was the only school to receive National Science Foundation grants in all four categories.

Lehigh is the only university this year to receive the maximum number of grants possible from two [National Science Foundation](#) nanotechnology research programs.

Lehigh researchers received two grants each through NSF's Nanoscale Interdisciplinary Research Team (NIRT) and Nanoscale Exploratory Research (NER) programs.

Nationally, NSF awarded 37 NIRT grants and 48 NER grants this year. NIRT grants run four years and provide \$1 million or more in funding. NER grants run one year and provide \$100,000. Several schools received two NIRT or two NER grants, but only Lehigh received two of each.

Derived from the word nanometer (nm), which is one one-billionth of a meter, nanotechnology refers to the creation of materials and devices through the control of matter at the atomic and