CS-21

Web Searching Technology And Optimization

Prepared By: Creative Design & Multimedia Institute

CS-27 Search Engine Techniques And Digital Technology Trends				
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Unit-1

The Search Engines: Reflecting, Consciousness and Connecting Commerce Search Engine Basics
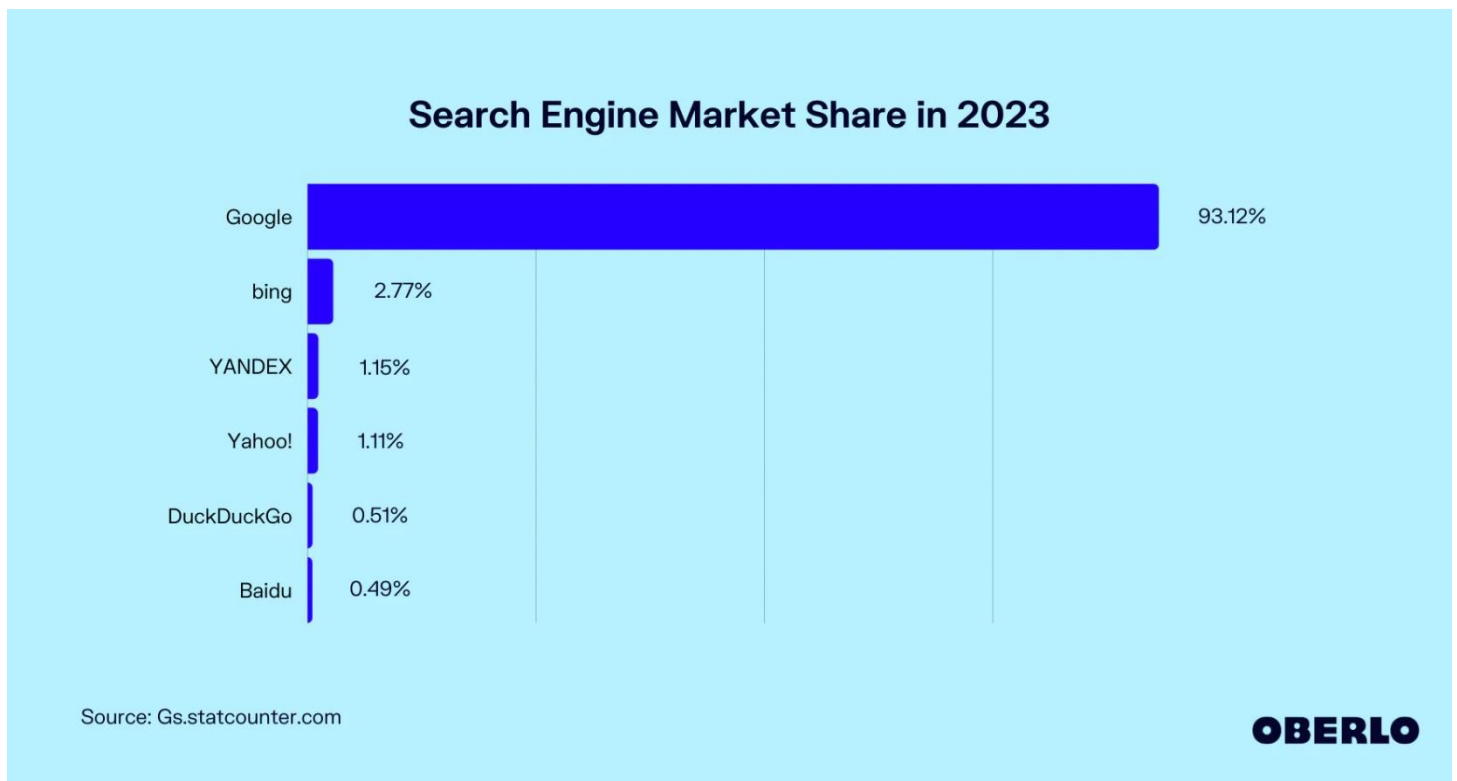
The Mission of Search Engines:

➢ Since web searchers are free to use any of the many available search engines on the Web to find what they are seeking, the burden is on the search engines to develop a relevant, fast, and fresh search experience.

- For the most part, search engines accomplish this by being perceived as having the most relevant results and delivering them the fastest, as users will go to the search engine they think will get them the answers they want in the least amount of time.
- As a result, search engines invest a tremendous amount of time, energy, and capital in improving their relevance. This includes performing extensive studies of user responses to their search results, comparing their results against those of other search engines, conducting eye-tracking studies (discussed later in this chapter), and constructing PR and marketing campaigns.
- Search engines generate revenue primarily through paid advertising. The great majority of this revenue comes from a pay-per-click (or cost-per-click) model, in which the advertisers pay only for users who click on their ads. Because the search engines' success depends so greatly on the relevance of their search results, manipulations of search engine rankings that result in nonrelevant results (generally referred to as spam) are dealt with very seriously.
- Each major search engine employs a team of people who focus solely on finding and eliminating spam from their search results. This matters to SEO practitioners because they need to be careful that the tactics they employ will not be seen as spamming efforts by the search engines, as this would carry the risk of resulting in penalties for the websites they work on.

The Market Share of Search Engines:

- Handling over 90% of all search queries worldwide, Google is undoubtedly dominating the global search engine market share.
- As of May 2023, a whopping 93.12% of all search queries conducted across all search engine providers are done through the internet giant. In other words, more than nine out of ten internet users who search for information online do so through Google.
- By comparison, its closest rival, Microsoft's Bing, is only managing a fraction of Google's volume. Bing currently has a market share of 2.77%.

➢ Russia's Yandex is the third most popular search engine and has a market share of 1.15%. This is followed by Yahoo, with 1.11%. DuckDuckGo is in fifth place, with 0.51% of the total market share. China's leading search engine, Baidu, wraps up the top six. It has a market share of 0.49%.

➢ Even though Bing, Yahoo, Yandex, DuckDuckGo, and Baidu rank among the world's top search engines, their market shares total 6.03%, just a fraction of Google's.

➢ With such figures, there is no question that the current search engine market share worldwide is dominated by Google. And Google is also, in fact, seeing quite a similar lead in the United States.

Search Engine Market Share in 2023

Search Engine	Market Share
Google	93.12%
bing	2.77%
YANDEX	1.15%
Yahoo!	1.11%
DuckDuckGo	0.51%
Baidu	0.49%

Source: Gs.statcounter.com

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✦ The Human Goals of Searching:

➢ The basic goal of a human searcher is to obtain information relevant to an inquiry. However, searcher inquiries can take many different forms. One of the most important elements to building an online marketing strategy for a

website around SEO and search rankings is developing a thorough understanding of the psychology of your target audience. Once you understand how the average searcher—and, more specifically, your target market—uses search engines, you can more effectively reach and keep those users.

➢ Search engine usage has evolved over the years, but the primary principles of conducting a search remain largely unchanged. Most search processes comprise the following steps:

    o Experience the need for an answer, solution, or piece of information. For example, the user may be looking for a website (navigational query) to buy something (transactional query) or to learn something (informational query). We will discuss this in more detail in the following section.

    o Formulate that need in a string of words and phrases (the query). Most people formulate their queries in one to three words. Below Table gives a more detailed look at the percentages of searches per query length.

Words	Percent of searches
1	25.8%
2	22.8%
3	18.7%
4	13.2%
5+	19.5%

    o Execute the query, check the results, see whether you got what you wanted, and if not, try a refined query.

Determining Searcher Intent: A Challenge for Both Marketers and Search Engines

1) Good marketers are empathetic. Smart SEO practitioners and the search engines have a common goal of providing searchers with results that are

relevant to their queries. Therefore, a crucial element to building an online marketing strategy around SEO and search rankings is to understand your audience. Once you grasp how your target market searches for your service, product, or resource, you can more effectively reach and keep those users.

2) Search engine marketers need to be aware that search engines are tools—resources driven by intent. Using the search box is fundamentally different from entering a URL into the address bar, clicking on a bookmark, or picking a link on your start page to go to a website; it is unique from a click on the "stumble" button in your StumbleUpon toolbar or a visit to your favorite blog. Searches are performed with intent; the user wants to find something in particular, rather than just land on it by happenstance.

3) What follows is an examination of the different types of queries, their categories, characteristics, and processes.

1) **Navigational Queries:**
   - Navigational searches are performed with the intent of surfing directly to a specific website.
   - In some cases, the user may not know the exact URL, and the search engine serves as the "White Pages." Below Figure shows an example of a navigational query.

- **Opportunities:** Pull searcher away from destination; get ancillary or investigatory traffic.
- **Average value:** Generally low, with the exception of navigational searches on the publisher's own brand, where the value is very high as these types of searches tend to lead to very high conversion rates.

2) Informational Queries:

- Informational searches involve a huge range of queries—for example, local weather, maps and directions, details on the latest Hollywood awards ceremony, or just checking how long that trip to Mars really takes.
- Informational searches are primarily non-transaction-oriented (although they can include researching information about a product or service); the information itself is the goal and no interaction beyond clicking and reading is required. Below Figure shows an example of an informational query.

Opportunities: Brand searchers with positive impressions of your site, information, company, and so on; attract inbound links; receive attention from journalists/researchers; potentially convert to sign up or purchase.

Average value: Middling. Note, though, that informational queries that are focused on researching commercial products or services can have high value.

3) Transactional Queries:

- Transactional searches don't necessarily involve a credit card or wire transfer.
- Signing up for a free trial account at CookIllustrated.com,
- creating a Gmail account,
- paying a parking ticket, or finding the best local Mexican cuisine for dinner tonight are all transactional queries.
  Below Figure shows an example of a transactional query.

Opportunities: Achieve transaction (financial or other).

Average value: Very high.

Research by Pennsylvania State University and the Queensland University of Technology (http://ist.psu.edu/faculty_pages/jjansen/academic/pubs/jansen_user_intent.pdf)

shows that more than 80% of searches are informational in nature and only about 10% of searches are navigational or transactional.

The researchers went further and developed an algorithm to automatically classify searches by query type. When they tested the algorithm, they found that it was able to correctly classify queries 74% of the time. The difficulty in classifying the remaining queries was vague user intent, that is, the query could have multiple meanings. Here are some URLs that point to additional academic research on this topic:

➢ **Searcher Intent:**

When you are building keyword research charts for clients or on your own sites, it can be incredibly valuable to determine the intent of each of your primary keywords. Below is shows some example:

Term	Queries	Intent	$$ value
Beijing Airport	980	Nav	Low
Hotels in Xi'an	2,644	Info	Mid
7-Day China tour package	127	Trans	High
Sichuan jellyfish recipe	53	Info	Low

- This type of analysis can help to determine where to place ads and where to concentrate content and links.
- Hopefully, this data can help you to think carefully about how to serve different kinds of searchers, based on their individual intents, and then concentrate your efforts in the best possible areas.

Although informational queries are less likely to immediately convert into sales, this does not necessarily mean you should forego rankings on such queries. If you are able to build a relationship with users who find your site after an informational query, they may be more likely to come to you to make the related purchase at a later date.

One problem is that when most searchers frame their search query they provide very limited data to the search engine, usually in just one to three words. Since most people don't have a keen understanding of how search engines work, they can often provide a query that is too general or in a way

that does not provide the search engine (or the marketer) with what it needs to determine their intent.

For this reason, general queries are important to most businesses because they often get the brand and site on the searcher's radar, and this initiates the process of building trust with the user. Over time, the user will move on to more specific searches that are more transactional or navigational in nature.

If, for instance, companies buying pay-per-click (PPC) search ads bought only the high-converting navigational and transactional terms and left the informational ones to competitors, they would lose market share to those competitors. During several days, a searcher may start with digital cameras and then hone in on canon g10, and buy from the store that showed up for digital cameras and pointed her in the direction of the Canon G10 model.

Given the general nature of how query sessions start, though, determining intent is quite difficult, and can result in searches being performed where the user does not find what she wants, even after multiple tries. An August 2007 Foresee/ACSI Report for eMarketer found that 75% of search engine and portal users were satisfied with their experiences. In a breakdown by property, 79% of Yahoo! users, 78% of Google users, and 75% of both Live Search (Microsoft's web search property, which has since been renamed to Bing) and Ask.com users reported being satisfied.

Based on this later study, more than 20% of users did not find what they were looking for. This suggests that there is plenty of room to improve the overall search experience. As an SEO practitioner, you should be aware that many of the visitors that you succeed in attracting to your site may have arrived for the wrong reasons (i.e., they were really looking for something else), and these visitors are not likely to help your business goals.

How People Search:

Search engines invest significant resources into understanding how people use search, enabling them to produce better (i.e., faster, fresher, and more relevant) search engine results. For website publishers, the information regarding how people use search can be used to help improve the usability of the site as well as search engine compatibility.

User interactions with search engines can also be multistep processes, as indicated in the user search session documented by Microsoft and shown in Figure below.

Inside a real query "session"

Example decision: Which shoes to buy?
Total task time: 55 minutes and 44 seconds

☐ Dwell time

☐ 21 sec	Merrell shoes	Search
☐ 2 min	www.onlinestores.com
☐ 1 min	www.merrell.com
☐ 6 sec	Discount Merrell Shoes	Search
☐ 4 min	www.nextag.com
☐ 12 sec	Merrell women's sandals	Search
☐ 8 min	www.coachlikeapro.com
☐ 3 min	Clarks shoes	Search
☐ 9 min	www.clarks.com
☐ 5 sec	Easy spirit	Search
☐ 1 min	www.zappos.com
www.easyspirit.com 27 min ☐ $

In this sequence, the user performs five searches over a 55+ minute period before making a final selection. The user is clearly trying to solve a problem and works at it in a persistent fashion until the task is done.

Marin Software provided us with data on one consumer durable retailer (whose products represent high-cost, considered purchases) for whom 50% of the orders involved more than 10 clicks leading up to the conversion event.

For this particular retailer, when you look at the number of different ad groups that were clicked on in those 10 clicks, the clicks were mostly on the same keyword. In fact, for more than 75% of all conversions that came from multiple paid clicks, all the clicks were from the same ad group. Only 7% of conversions came from three different ad groups (and none from more than that).

Delay between first click and purchases	Percentage of users
Same day	50%
2–7 days	9%
8–30 days	12%
31–90 days	26%
More than 90 days	3%

This behavior pattern indicates that people are thinking about their tasks in stages. As in our Merrell shoes example in Figure Above, people frequently begin with a general term and gradually get more specific as they get closer to their goal. They may also try different flavors of general terms. In Figure Above, it looks like the user did not find what she wanted when she searched on Merrell shoes, so she then tried discount Merrell shoes. You can then see her refine her search, until she finally settles on Easy Spirit as the type of shoe she wants.

➕ How Search Engines Drive Commerce on the Web:

People make use of search engines for a wide variety of purposes, with some of the most popular being to research, locate, and buy products. Ecommerce sales reported by the U.S. Census Bureau were a healthy $80.3 billion in the first quarter of 2015.4 Forrester Research forecasts that U.S. ecommerce retail sales

will reach $370 billion by 2017, outpacing sales growth at brick-and-mortar stores, as shown in Figure Below.

Figure 1 Forecast: US Online Retail Sales, 2012 To 2017

	2012	2013	2014	2015	2016	2017
US$ billions	$231	$262	$291	$319	$345	$370
Year-on-year growth	14%	13%	11%	10%	8%	7%
Share of total retail sales	8%	8%	9%	10%	10%	10%

CAGR from 2012 to 2017: 9%

Source: Forrester Research Online Retail Forecast, 2012 To 2017 (US)

93281   Source: Forrester Research, Inc.

It is important to note that search and offline behavior have a heavy degree of interac- tion, with search playing a growing role in driving offline sales. In April 2014, Google, in an effort to solve the online search/offline conversion attribution dilemma, announced the launch of a pilot program within its AdWords system called "In-Store Attribution Transaction Reporting," teaming up with large data providers Axciom Corp. and DataLogix Holdings Inc. to combine cookie data with offline personal information databases. It will be interesting to see how this program performs, and to what extent it helps search marketers close the attribution gap between search and brick- and- mortar conversions.

Eye Tracking: How Users Scan Results Pages?

> ➢ Way back in 2006, research firm Enquiro (now called Mediative) conducted heat-map testing with search engine users that produced fascinating results related to what users see and focus on when engaged in search activity.Figure Below depicts a heat map showing a test performed on Google; the graphic indicates that users spent the most amount of time focusing their eyes in the upper-left area, where shading is the darkest. This has historically been referred to in search marketing as the "Golden Triangle."
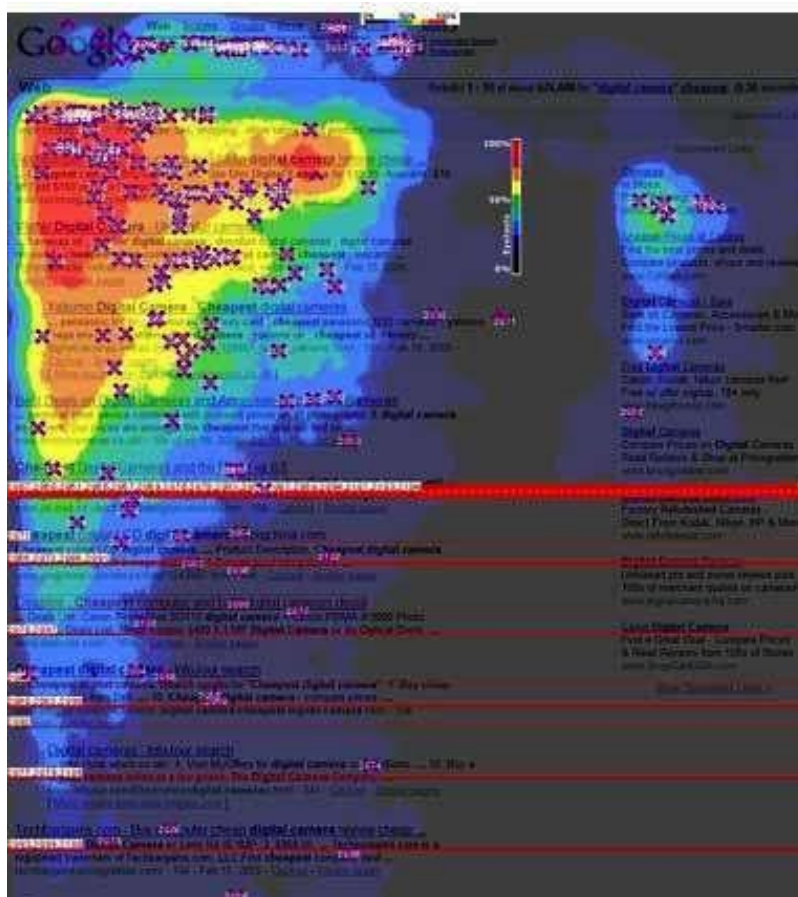
➢ This particular study perfectly illustrated how little attention has traditionally been paid to results lower on the page versus those higher up, and how users' eyes are drawn to bold keywords, titles, and descriptions in the organic results versus the paid search listings, which receive comparatively little attention. It also showed that different physical positioning of on-screen search results resulted in different user eye- tracking patterns. When viewing a standard Google results page, users tended to create this "F-shaped" pattern with their eye movements, focusing first and longest on the upper-left corner of the screen, then moving down vertically through the first two or three results, across the page to the first paid page result, down another few vertical results, and then across again to the second paid result. (This study was done only on left-to-right language search results—results for Chinese, Hebrew, and other non-left- to-right-reading languages would be different.)

➢ In May 2008, Google introduced the notion of Universal Search. This was a move from simply showing the 10 most relevant web pages (now referred to as "10 blue links") to showing other types of media, such as videos, images, news results, and so on, as part of the results in the base search engine. The other search engines followed suit within a few months, and the industry now refers to this general concept as ***Blended Search***.

➢ Blended Search, however, creates more of a chunking effect, where the chunks are around the various rich media objects, such as images or video. Understandably, users focus on the image

first. Then they look at the text beside it to see whether it corresponds to the image or video thumbnail (which is shown initially as an image). Based on an updated study published by Enquiro in September 2007.

Click Tracking: How Users Click on Results? Natural Versus Paid

➢ By now, you should be convinced that you want to be on the top of the SERPs. It never hurts to be #1 in the natural search results.

➢ In contrast, data shows that you may not want to be #1 in the paid search results, because the resulting cost to gain the #1 position in a PPC campaign can reduce the total net margin on your campaign. A study released by AdGooroo in June 2008

Bidding for top positions usually makes financial sense only for high-budget, brand-name advertisers. Most other advertisers will find the optimal position for the majority of their keywords to lie between positions 5–7.

➢ Of course, many advertisers may seek the #1 position in paid search results, for a number of reasons. For example, if they have a really solid backend on their website and are able to make money when they are in the #1 position, they may well choose to pursue it. Nonetheless, the data from the survey suggests that there are many organizations for which being #1 in paid search does not make sense.

➢ Even if your natural ranking is #1, you can still increase the ranking page's click rate by having a sponsored ad above it or in the righthand column. The AdGooroo survey showed that having a prominent paid ad on the same search results page makes your #1 natural ranking receive 20% more clicks.

Understanding Search Engine Results:

➤ In the search marketing field, the pages the engines return to fulfill a query are referred to as search engine results pages (SERPs). Each engine returns results in a slightly different format and will include vertical search results (specific content targeted to a query based on certain triggers in the query, which we'll illustrate shortly).

➤ **Understanding the Layout of Search Results Pages:**

shows the SERPs in Google for the query stuffed animals.

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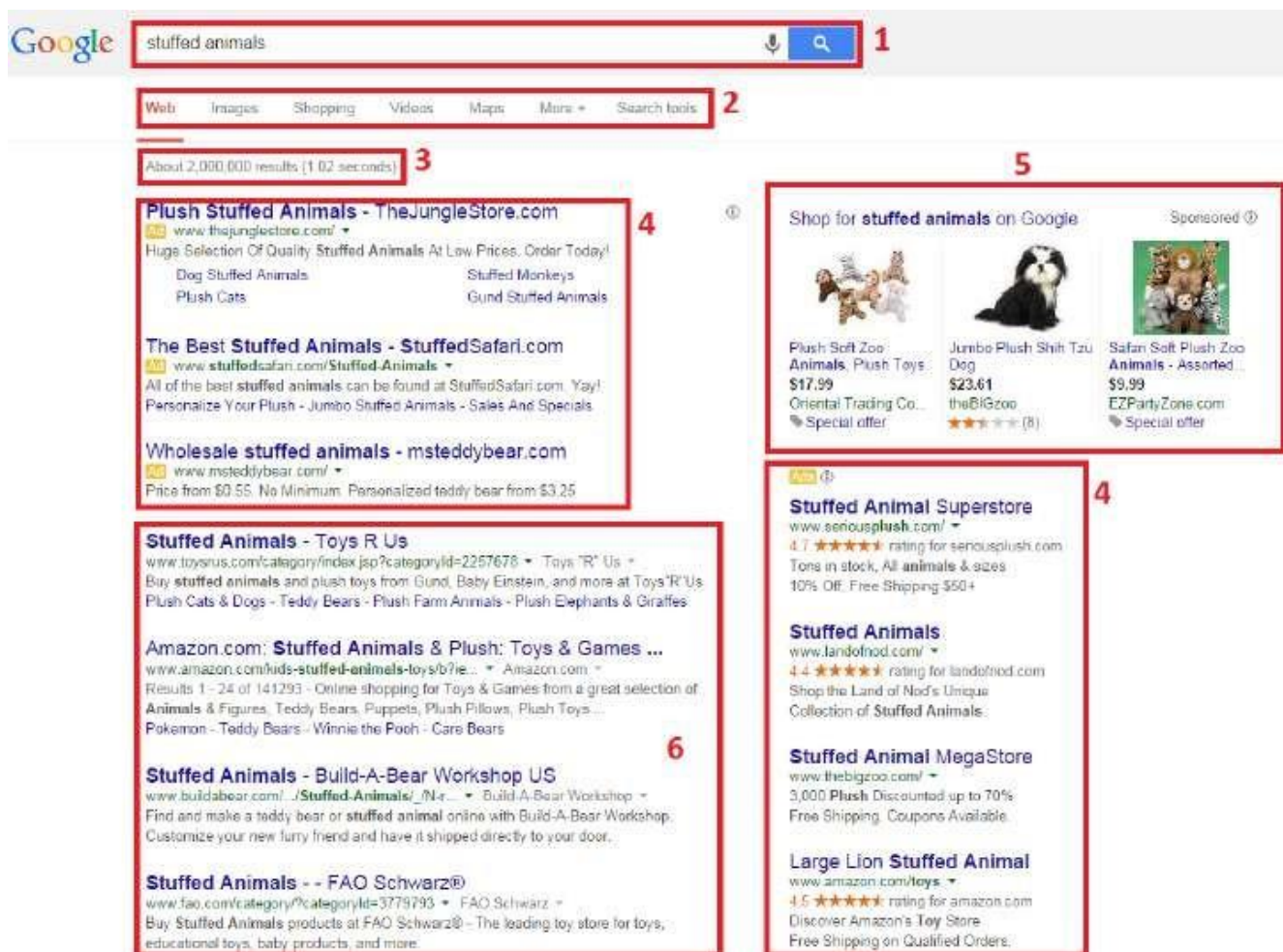
The various sections outlined in the Google search results are as follows:

(1)Search query box

(2)Vertical navigation

(3)Results information

(4)PPC advertising

(5)Google product search results

(6)Natural/organic/algorithmic results

Even though Yahoo! no longer does its own crawl of the Web or provides its own search results information (it sources them from Bing), it does format the output differently.

Below Figure shows Yahoo!'s results for the same query.

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The sections in the Yahoo! results are as follows:

(1) Vertical navigation

(2) Search query box

(3) Horizontal navigation

(4) PPC advertising

(5) Natural/organic/algorithmic results

(6) Navigation to more advertising

Below Figure shows the layout of the results from Microsoft's Bing for stuffed animals.

The sections in Bing's search results are as follows:

(1)Vertical navigation

(2)Search query box

(3)Results information

(4)Time-based refinement options

(5)PPC advertising

(6)Natural/organic/algorithmic results

(7)Query refinement options

➢ Each unique section represents a snippet of information provided by the engines. Here are the definitions of what each piece is meant to provide:

➢ **Vertical navigation:**
   o Each engine offers the option to search different verticals, such as images, news, video, or maps. Following these links will result in a query with a more limited index. In Above Figure for example, you might be able to see news items about stuffed animals or videos featuring stuffed animals.

➢ **Horizontal navigation:**
   o All three engines used to have some form of horizontal navigation, but as of June 2015 only Yahoo! continues to include it.

➢ **Search query box:**
   o All of the engines show the query you've performed and allow you to edit or reenter a new query from the search results page. If you begin typing, you may notice that Google gives you a list of suggested searches below. This is the Google autocomplete suggestions feature, and it can be incredibly

useful for targeting keywords. Next to the search query box, the engines also offer links to the advanced search page, the features of which we'll discuss later in the book. In addition, you will also see a microphone icon in the right of the search box that allows you to speak your query. In Google image search, this shows up as a camera icon that allows you to upload an image or get similar images back.

➢ **Results information:**
   o This section provides a small amount of meta-information about the results that you're viewing, including an estimate of the number of pages relevant to that particular query (these numbers can be, and frequently are, wildly inaccurate and should be used only as a rough comparative measure).

➢ **PPC (a.k.a. paid search) advertising:**
   o The text ads are purchased by companies that use either Google AdWords or Bing.
   o The results are ordered by a variety of factors, including relevance (for which click-through rate, use of searched keywords in the ad, and relevance of the landing page are factors in Google) and bid amount (the ads require a maximum bid, which is then compared against other advertisers' bids).

➢ **Natural/organic/algorithmic results:**
   o These results are pulled from the search engines' primary indices of the Web and ranked in order of relevance and importance according to their complex algorithms. This area of the results is the primary focus of this section of the book.

- ➢ **Query refinement suggestions:**
    - o Query refinements are offered by Google, Bing, and Yahoo!. The goal of these links is to let users search with a more specific and possibly more relevant query that will satisfy their intent.
    - o In March 2009, Google enhanced the refinements by implementing Orion Technology, based on technology Google acquired in 2006. The goal of this enhancement is to provide a wider array of refinement choices. For example, a search on principles of physics may display refinements for the Big Bang, angular momentum, quantum physics, and special relativity.
- ➢ **Navigation to more advertising:**
    - o Only Yahoo! shows this in the search results. Clicking on these links will bring you to additional paid search results related to the original query.

Be aware that the SERPs are always changing as the engines test new formats and layouts. Thus, the images in above is may be accurate for only a few weeks or months until Google, Yahoo!, and Bing shift to new formats.

- ➢ **Algorithm-Based Ranking Systems: Crawling, Indexing, and Ranking**

Understanding how crawling, indexing, and ranking works is useful to SEO practitioners, as it helps them determine what actions to take to meet their goals. This section primarily covers the way Google and Bing operate, and does not necessarily apply to other search engines that are

popular in other countries, such as Yandex (Russia), Baidu (China), Seznam (Czech Republic), and Naver (Korea).

The search engines must execute many tasks very well to provide relevant search results. Put simplistically, you can think of these as:

- Crawling and indexing trillions of documents (pages and files) on the Web (note that they ignore pages that they consider to be "insignificant," perhaps because the pages are perceived as adding no new value or are not referenced at all on the Web).
- Responding to user queries by providing lists of relevant pages.

In this section, we'll walk through the basics of these functions from a nontechnical perspective. This section will start by discussing how search engines find and discover content.

➢ Crawling and Indexing

To offer the best possible results, search engines must attempt to discover all the public pages on the World Wide Web and then present the ones that best match up with the user's search query. The first step in this process is crawling the Web. The search engines start with a seed set of sites that are known to be very high quality, and then visit the links on each page of those sites to discover other web pages.

The link structure of the Web serves to bind together all of the pages that were made public as a result of someone linking to them. Through links, search engines' automated robots, called crawlers or spiders, can reach the many trillions of interconnected documents.

In Figure Below, you can see the home page of USA.gov, the official U.S. government website. The links on the page are outlined in red.

Crawling this page would start with loading the page, analyzing the content, and then seeing what other pages USA.gov links to.
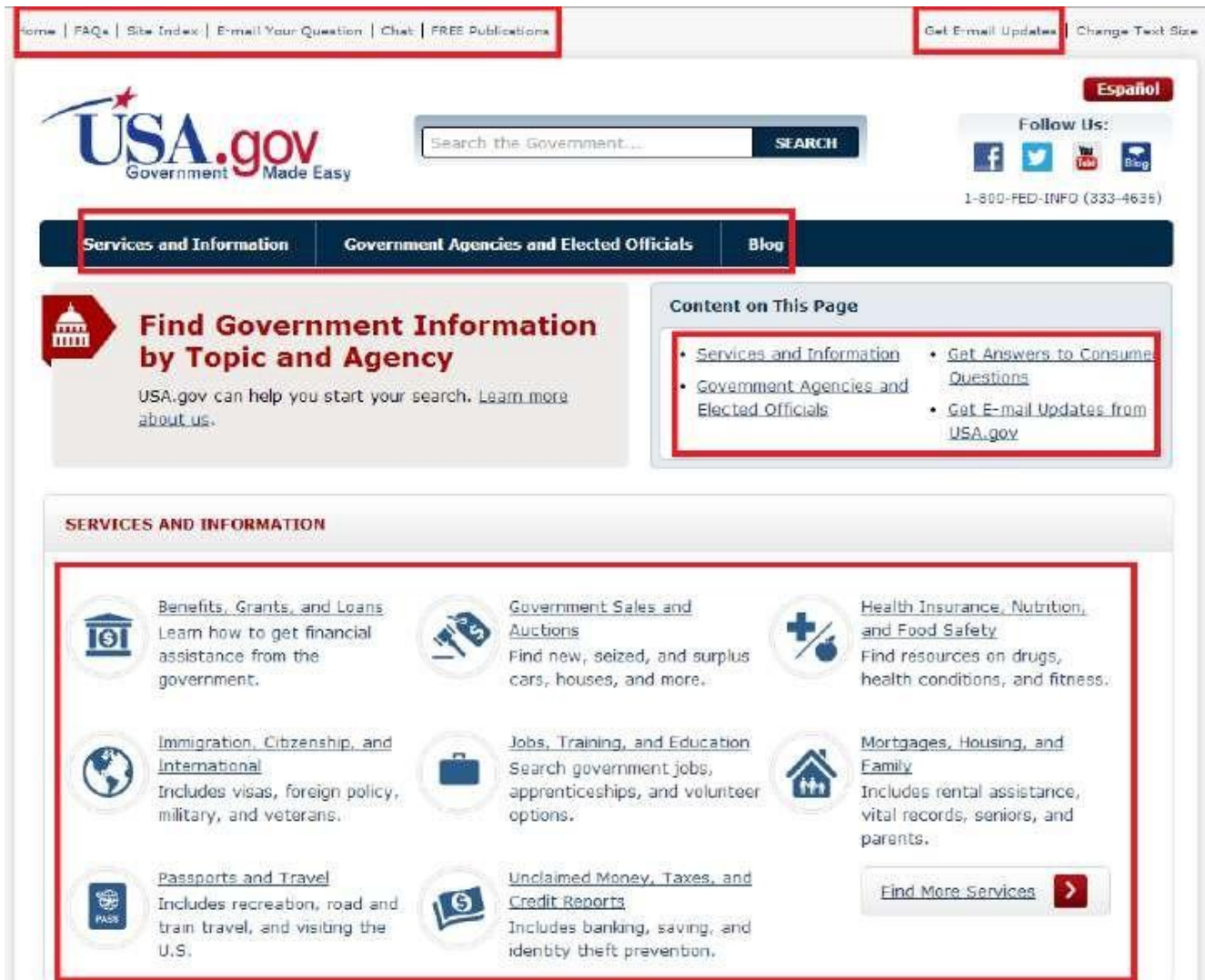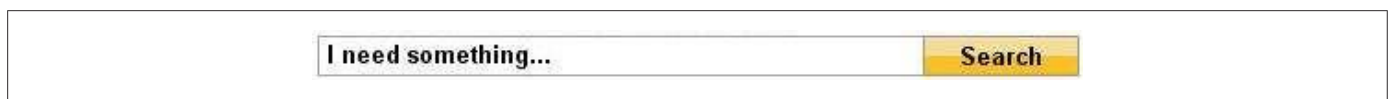
The search engine would then load those other pages and analyze that content as well. This process repeats over and over again until the crawling process is complete. This process is enormously complex, as the Web is a large and complex place.

The first step in this process is to build an index of terms. This is a massive database that catalogs all the significant terms on each page crawled by the search engine.

➢ **Retrieval and Ranking:**

For most searchers, the quest for an answer begins as shown in Figure Below.

The next step in this quest occurs when the search engine returns a list of relevant pages on the Web in the order it believes is most likely to satisfy the user. This process requires the search engines to scour their corpus of hundreds of billions of documents and do two things: first, return only the results that are related to the searcher's query; and second, rank the results in order of perceived importance (taking into account the trust and authority associated with the site). It is both relevance and importance that the process of SEO is meant to influence.

Relevance is the degree to which the content of the documents returned in a search matches the user's query intention and terms. The relevance of a document increases if the page contains terms relevant to the phrase queried by the user, or if links to the page come from relevant pages and use relevant anchor text.

You can think of relevance as the first step to being "in the game." If you are not relevant to a query, the search engine does not consider you

for inclusion in the search results for that query. We will discuss how relevance is determined in more detail in "Determining Searcher Intent and Delivering Relevant, Fresh Content" on next section.

- ➢ **Determining Searcher Intent and Delivering Relevant, Fresh Content:**
    - o Modern commercial search engines rely on the science of information retrieval (IR). This science has existed since the middle of the 20th century, when retrieval systems powered computers in libraries, research facilities, and government labs. Early in the development of search systems, IR scientists realized that two critical components comprised the majority of search functionality: relevance and importance (which we defined earlier in this chapter). To measure these factors, search engines perform document analysis (including semantic analysis of concepts across documents) and link (or citation) analysis.
    - o The professional SEO practitioner does not necessarily need to use semantic connectivity measurement tools to optimize websites, but for those advanced practitioners who seek every advantage, semantic connectivity measurements can help in each of the following sectors:
        - ▪ Measuring which keyword phrases to target
        - ▪ Measuring which keyword phrases to include on a page about a certain topic

- Measuring the relationships of text on other high-ranking sites and pages
- Finding pages that provide "relevant" themed links
  - o Although the source for this material is highly technical, SEO specialists need only know the principles to obtain valuable information. It is important to keep in mind that although the world of IR has hundreds of technical and often difficult-to-comprehend terms, these can be broken down and understood even by an SEO novice.

➢ **Analyzing Ranking Factors:**

Moz periodically conducts surveys of leading SEOs to determine what they think are the most important ranking factors. Here is a high-level summary of the top nine results, in priority order (as suggested by the referenced study):

- Domain-level link authority features
- Page-level link metrics
- Page-level keywords and content
- Page-level keyword-agnostic features
- Domain-level brand metrics
- Usage and traffic/query data
- Page-level social metrics
- Domain-level keyword usage
- Domain-level keyword-agnostic features

Here is a brief look at each of these:

- **Domain-level link authority features:**

Domain-level link authority is based on a cumulative link analysis of all the links to the domain. This includes factors such as the number of different domains linking to the site, the trust/authority of those domains, the rate at which new inbound links are added, the relevance of the linking domains, and more.

- **Page-level link metrics:**

This refers to the links as related to the specific page, such as the number of links, the relevance of the links, and the trust and authority of the links received by the page.

- **Page-level keywords and content:**

This describes the use of the keyword term/phrase in particular parts of the HTML code on the page (<title> tag, <h1>, alt attributes, etc.).

- **Page-level features other than keywords:**

Factors included here are page elements such as the number of links on the page, number of internal links, number of followed links, number of "nofollow" links, and other similar factors.

- **Domain-level brand metrics:**

This factor includes search volume on the website's brand name, mentions, whether it has a presence in social media, and other brand related metrics.

- **Page-level traffic/query data:**

  Elements of this factor are click through rate to the page in the search results, bounce rate of visitors to the page, and other similar measurements.

- **Page-level social metrics:**

  Social metrics considered include mentions, links, shares, likes, and other social media site based metrics. It should be emphasized that many SEO practitioners believe that this is a ranking factor even though studies have since shown otherwise, and representatives from Google clearly state that social signals are not part of their algorithm.

- **Domain-level keyword usage:**

  This refers to how keywords are used in the root or subdomain name, and how impactful that might be on search engine rankings.

- **Domain-level keyword-agnostic features:**

  Major elements of this factor in the survey include the number of hyphens in the domain name, number of characters in the domain name, and dofmain name length.

- ➢ **Using Advanced Search Techniques:**
  - One of the basic tool of the trade for an SEO practitioner engines themselves.
  - They provide a rich array of commands that can be used perform advanced research , diagnosis , and competitive analysis.

- **-Keyword:** Excludes the keyword from the search results. For example, loans -student shows results for all types of loans except student loans.
- **+ keyword** : Allows for forcing the inclusion of a keyword..
- **"key phrase":** Shows search results for the exact phrase—for example, "seo company". You can also use "" to force the inclusion of a specific word.
- **keyword1 OR keyword2:** Shows results for at least one of the keywords—for example, google OR Yahoo!.
- **Advanced Google Search Operators:**

Google supports a number of advanced search operators that you can use to help diag- nose SEO issues. Below Table gives a brief overview of the queries, how you can use them for SEO purposes, and examples of usage.

Search operator	What it does	Example
" "	Search for results that mention a word or phrase.	"steve jobs"
OR	Search for results related to X or Y.	jobs OR gates
|	Same as OR:	jobs | gates
AND	Search for results related to X and Y.	jobs AND gates

-	Search for results that don't mention a word or phrase.	jobs -apple
*	Wildcard matching any word or phrase.	steve * apple
( )	Group multiple searches.	(ipad OR iphone) apple
define:	Search for the definition of a word or phrase.	define:entrepreneur
cache:	Find the most recent cache of a webpage.	cache:apple.com
filetype:	Search for particular types of files (e.g., PDF).	apple filetype:pdf
ext:	Same as filetype:	apple ext:pdf
site:	Search for results from a particular website.	site:apple.com
related:	Search for sites related to a given domain.	related:apple.com
intitle:	Search for pages with a particular word in the title tag.	intitle:apple
allintitle:	Search for pages with multiple words in the title tag.	allintitle:apple iphone

inurl:	Search for pages with a particular word in the URL.	inurl:apple
allinurl:	Search for pages with multiple words in the URL.	allinurl:apple iphone
intext:	Search for pages with a particular word in their content.	intext:apple iphone
allintext:	Search for pages with multiple words in their content.	allintext:apple iphone
weather:	Search for the weather in a location.	weather:san francisco
stocks:	Search for stock information for a ticker.	stocks:aapl
map:	Force Google to show map results.	map:silicon valley
movie:	Search for information about a movie.	movie:steve jobs
in	Convert one unit to another.	$329 in GBP
source:	Search for results from a particular source in Google News.	apple source:the_verge

before:	Search for results from before a particular date.	apple before:2007-06-29
after:	Search for results from after a particular date.	apple after:2007-06-29
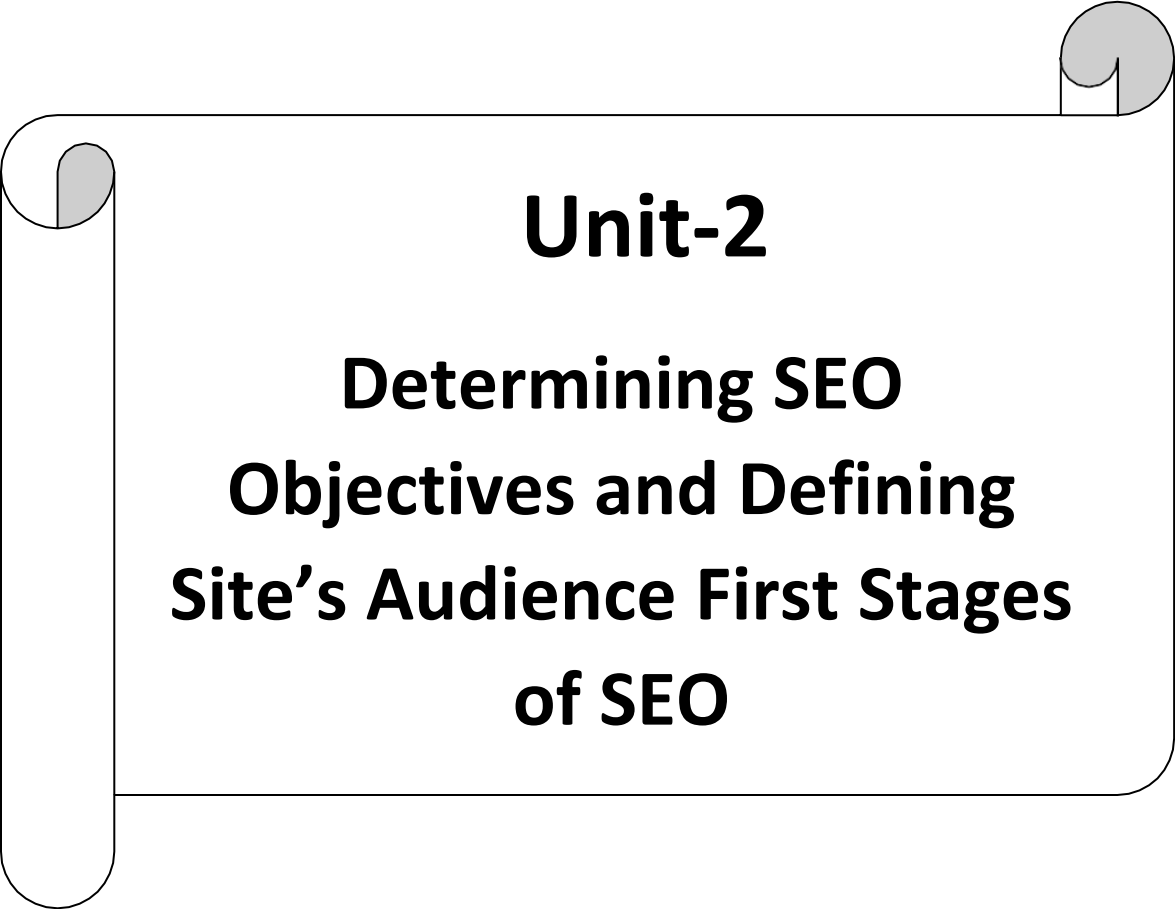
➢ **Vertical Search Engines:**
- Vertical search is the term people sometime use for specialty search engine that focus on a limited data set …
- Example of vertical search provide by the major search engines are image , video , news , and blog search…
- Vertical search result can provide significant opportunities for the SEO practitioner…
- Vertical Search from the Major Search Engines : The big three engines offer a wide variety of vertical search product….
    - **Google:** Google Maps , Google Image , Google Product Search ,Google News , Google Blog Search ,Google Book Search etc...
    - **Yahoo!:** Yahoo! News , Yahoo! Image , Yahoo! Video , Yahoo! Shopping , etc….
    - **Bing:** Bing Image , Bing video , Bing News , Bing Health , etc …

➢ **Country-Specific Search Engines:**
- At this stage , search is truly global is the dominant search engine in many countries , but not all them.
- How you optimization your website depends heavily on the target market for that site..

- According to ComScore , Google is receiving 62 % of all searcher performed worldwide...
- Here is some data on countries where other search engine are the major players :
    - China : Baidu (http://www.baidu.com) News reported in February 2009 that Baidu had more than 73%market share in China in 2008
    - Russia : The company's market share in Russia comprises about 50%of all searches….
    - South Korea : Naver (http://www.naver.com) to have about 77% market share in South Korea in 2007.

Unit-2

Determining SEO Objectives and Defining Site's Audience First Stages of SEO

➢ Setting SEO Goals and Objectives:

- SEO , Once a Highly Specialized Task Relegated To The Back Rooms , of a web site development team , is now a mainstream marketing activity….

  This dramatic rise can be attributed to three emerging teams :
  - o Business can earn significant revenues by leveraging the quality and relevance of this for direct sales , customer acquisition and awareness campaigns…
  - o Visibility in search engines creates an implied where searcher associate quality , relevance with sites that rank highly for their query..
  - o Dramatic growth in the interaction between offline and online marketing necessitates investment by organization of all kind in a successful search strategy..

➢ Developing an SEO Plan Prior to Site Development:

- It is widely understood in the industry that search engine optimization should be built in, as early as possible to the entire site development strategy from choosing a Content Management System (CMS) and planning site architecture to on page content development.
- SEO plans have many moving parts , and SEO decision can have a significant impact on other department such as development , other marketing groups and sales…
- Getting that inputs as soon as possible will bring the best result for a business at the least possible cost…

➢ **Understanding Audience and Finding Niche:**

- A nontrivial part of an SEO plan is figuring out who you are targeting with your website.

- This is not always that easy to determine.

- As you will see in this section , many factors enter into this including the competition , the particular strengths or weakness of your own company and more……

  ▪ **Mapping Your Products and Services:**

    o As we outlined in the preceding section a , critical SEO activity is to understand who is searching for what you trying to promote , which requires understanding all aspects of your offering…

    o You also should consider business development and the company's expansion strategy at the outset of the SEO planning process..

  ▪ **Segmenting Your Site's Audience :**

    o This is very important background information for the SEO practitioner .

    o For example : Site A may be a website that sells gadgets.

    o As a result the site's developers go out and implement a brilliant campaign to rank for the terms they consider relevant.

➢ **SEO for Raw Traffic:**

- Optimizing a site for search engines and creating keyword targeted content helps a site rank for key search terms.

- Which typically leads to direct traffic and referring links as more and more people find, use, and enjoy what your produced…

- Thousand of site on the web leverage this traffic to serve adverting , directly monetizing the traffic sent from the engine…

- Here are some factors to think about when considering SEO for raw traffic **:**
  - o **When to Employ** : Use it when you can monetize traffic without actions or financial transaction on your site …
  - o **keyword targeting** :keyword targeting in this scenario can be very broad..
  - o **Page & content creation** :you also need to employ good on page creation (title , headlines , internal linking etc..)

➢ **SEO for E-Commerce Sales:**

- One of the most direct monetization strategies for SEO is driving relevance traffic to an e – commerce shop to boost sales..
- Here are some factors to think about when considering SEO for E-Commerce Sales :
  - o **When to Employ** : Use it when you have product / services that are directly for sale on your website…
  - o **keyword targeting** : your often find that more specific the query brand inclusive , product inclusive & so on the more likely the visitor are to make the purchase…
  - o **Page & content creation** : Manual link building is an option here , but scalable strategies that leverage a company or customers can be equally or even more , valuable…

➢ **SEO for Mindshare/Branding:**

- A less popular but equally powerful application of SEO is the its use for branding purpose…
- Bloggers , social media community website , content producers , news outlets , and dozens of other web publishing…

- Here are some factors to think about when considering SEO for mindshare/branding :
  - o **When to Employ**: Use it when branding , or communicating a message, is your goal …
  - o **keyword targeting**: A keyword focus is less critical here your likely have a few broad terms that receive the more achievable and the better target..
  - o **Page & content creation**: Make an accessible site , use good link structure , apply best practices , and focus on links for domain authority rather than specific keywords…

➢ **SEO for Lead Generation and Direct Marketing:**
- Although lead generation via the Web is less direct than an ecommerce transaction.
- It is arguably just as valuable and important for building customers, revenue, and long-term value.
- Millions of search queries have commercial intents that can't be (or currently aren't) fulfilled directly online.
- Here are some factors to think about when considering SEO for lead generation and direct marketing:
  - o **When to employ** : Use it when you have a non-ecommerce product/service/goal that you want users to accomplish on your site or for which you are hoping to attract inquiries/direct contact over the Web.
  - o **Keyword targeting** : As with ecommerce, choose phrases that convert well, have reasonable traffic, and have previously performed

- o ***Page and content creation/optimization*** : Although you might think it would be easier to rank high in the SERP for lead-generation programs than for ecommerce, it is often equally challenging.

➢ SEO for Reputation Management:
- Since one's own name—whether personal or corporate—is one's identity, establishing and maintaining the reputation associated with that identity is generally of great interest.
- Imagine that you search for your brand name in a search engine, and high up in the search results is a web page that is highly critical of your organization.
- SEO for reputation management is a process for neutralizing negative mentions of your name in the SERPs.
- You may accomplish this using social media, major media, bloggers, your own sites and sub-domains, and various other tactics.

➢ SEO for Ideological Influence:
- For those seeking to sway public (or private) opinion about a particular topic, SEO can be a powerful tool.
- By promoting ideas and content within the search results for queries likely to be made by those seeking information about a topic, you can influence the perception of even very large groups.
- Here are some factors to think about when considering SEO for ideological influence:
  - o ***When to employ*** *:* Use it when you need to change minds or influence decisions/thinking around a subject.

   o ***Keyword targeting*** : It's tough to say for certain, but if you're engaging in these types of campaigns, you probably know the primary keywords you're chasing and can use keyword research query expansion to find others.

➢ **The Major Elements of Planning:**
- As any experienced SEO consultant will tell you, you should incorporate your SEO strategy into the site planning process long before your site goes live.
- Your strategy should be well outlined before you make even the most basic technology choices, such as the hosting platform and your CMS.
- Regardless of when you start, there are a number of major components to any SEO plan that you need to address long before you research the first title tag.
- ▪ **Technology Choices :**
  - o As we already suggested, SEO is a technical process, and as such, it impacts major technology choices.
  - o For example, a CMS can facilitate—or, possibly, undermine—your SEO strategy.
- ▪ **Market Segmentation :**
  - o Another critical factor to understand is the nature of the market in which you are competing.
  - o In some markets, natural search is intensively competitive. December 2012 Google results for *credit cards*.

- o In this market, Visa, MasterCard, American Express, and Discover all fail to make the **#1** position in Google's results, suggesting that the market is highly competitive.

- **Branding Considerations :**

  - o Of course, most companies have branding concerns as well.

- **Competition :**

  - o Your SEO strategy can also be influenced by your competitors' strategies, so understanding.

  - o what they are doing is a critical part of the process for both SEO and business intelligence objectives……

➢ **Identifying the Site Development Process and Players:**
- Before you start the SEO process, it is imperative to identify who your target audience is, what your message is, and how your message is relevant..
- There are no web design tools or programming languages that tell you these things.
- Advertising messages need to be well thought out and prepared.
- You do not want your team bickering over whether to optimize for "hardcore widget analysis" or "take your widgets to the next level.
- Ongoing feedback is essential because the success of your project is determined solely by whether you're meeting your goals.
- A successful SEO team understands all of these interactions and is comfortable relying on each team member to do his part.
- Establishing good communication among team members is essential.

➢ **Defining Site's Information Architecture:**
- Whether you're working with an established website or not, you should plan to research the desired site architecture (from an SEO perspective) at the start of your SEO project.
- This task can be divided into two major components: technology decisions and structural decisions.
- **Technology Decisions :** your technology choices can have a major impact on your SEO results. The following is an outline of the most important issues to address at the outset:

- *Dynamic URLs :*
  - Although Google now states that dynamic URLs are not a problem for the company, this is not entirely true, nor is it the case for the other search engines.
- *Session IDs or user IDs in the URL :*
  - It used to be very common for CMSs to track individual users surfing a site by adding a tracking code to the end of the URL.
- *Superfluous flags in the URL :*
  - This probably does not bother Google, but it may bother the other search engines, and it interferes with the user experience for your site.
- *Links or content based in JavaScript, Java, or Flash :*
  - Search engines often cannot see links and content implemented using these technologies.
  - Make sure the plan is to expose your links and content in simple HTML text.
- *Content behind forms (including pull-down lists) :*
  - Making content accessible only after the user has completed a form (such as a login) or made a selection from an improperly implemented pull-down list is a great way to hide content from the search engines.
  - **Structural Decisions :** One of the most basic decisions to make about a website concerns internal linking and navigational structures….

- ➢ **Auditing an Existing Site to Identify SEO Problems:**
  - Auditing an existing site is one of the most important tasks that SEO professionals encounter.
  - SEO is still a relatively new field, and many of the limitations of search engine crawlers are non-intuitive.
  - In addition, many web developers, unfortunately, are not well versed in SEO.
  - Even more unfortunately, some stubbornly refuse to learn, or, worse still, have learned the wrong things about SEO.
  - This includes those who have developed CMS platforms, so there is a lot of opportunity to find problems when conducting a site audit.

- ➢ **Identifying Current Server Statistics Software and Gaining Access:**
  - We will discuss in detail the methods for tracking results and measuring success, and we will also delve into how to set a baseline of measurements for your SEO projects.
  - But before we do that, and before you can accomplish these tasks, you need to have the right measurement systems in place.

- ➢ **Determining Top Competitors:**
  - Understanding the competition should be a key component of planning your SEO strategy.
  - The first step is to understand who your competitors in the search results really are.
  - It can often be small players who give you a run for your money.
  - **For example,**

o Consider the previously mentioned credit card search in Google Visa, MasterCard, position in the Google results.

o Affiliates tend to be the most adept at search engine optimization and can be the most lax in abiding by the search engines' terms and Condition….

➢ **Assessing Historical Progress:**

- This section will explore methods for measuring the results from your SEO efforts…

➢ **Benchmarking Current Indexing Status:**

➢ The search engines have an enormous task: that of indexing the world's online content—well, more or less.

➢ The reality is that they try hard to discover all of it, but they do not choose to include all of it in their indexes.

➢ When you launch a new site or add new sections to an existing site, or if you are dealing with a very large site, not every page will necessarily make it into the index.
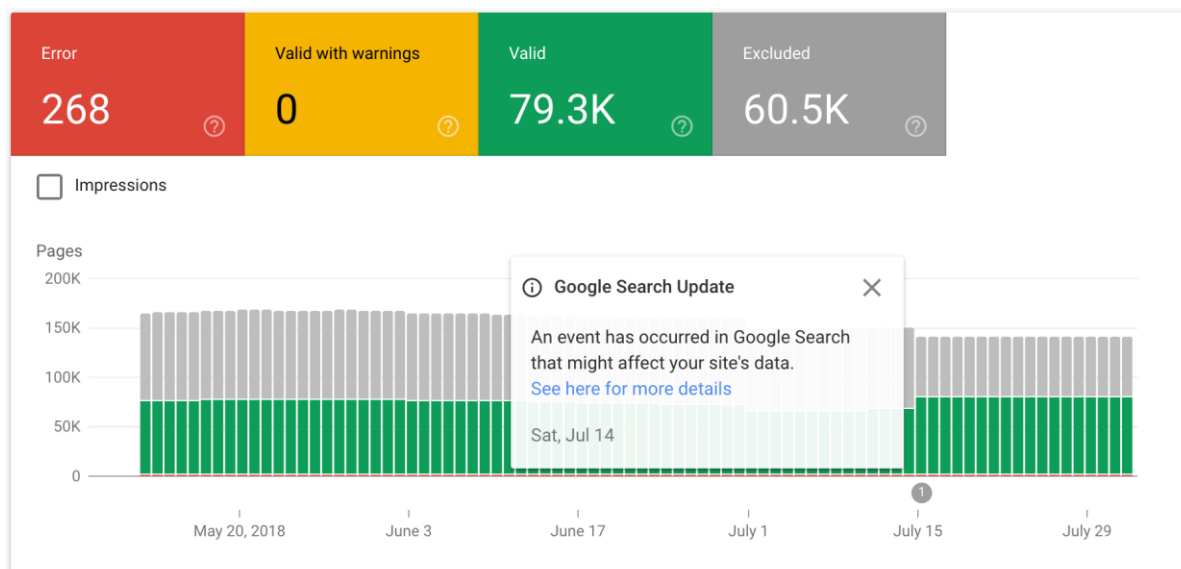
- To get a handle on this you will want to actively track the indexing level of your site.
- Keeping a log of the level of indexation over time can help you understand how things are progressing.
- Related to indexation is the crawl rate of the site.

➢ **Benchmarking Current Rankings:**
- Many companies want to use this as a measurement of SEO progress over time, but it is a bit problematic, for a variety of reasons.
- Here is a summary of the major problems with rank checking :
  o Google results are not consistent.
  o Different geographies (even in different cities within the United States) often give different results.
  o Different data centers give different results.

➢ **Benchmarking Current Traffic Sources and Volume:**
- The most fundamental objective of any SEO project should be to drive the bottom line.
- For a business, this means delivering more revenue with favorable ROI.
- As a precursor to determining the level of ROI impact, the SEO practitioner must focus on increasing the volume of relevant traffic to the site.
- More relevant traffic should mean more revenue for the business….
- Today's web analytics tools make the gathering of such data incredibly easy..

- Google Analytics (http://www.google.com/analytics) and Yahoo! Web Analytics (http://web.analytics.yahoo.com)

> **Leveraging Business Assets for SEO:**

- Chances are your company/organization has a lot of valuable commodities beyond the website that can be put to good use to improve the quality and quantity of traffic you receive through search engine optimization efforts.

- We discuss some of these things in the subsections that follow.

  o Other Domains You Own/Control

  o Partnerships On and Off the Web

  o Customers Who Have Had a Positive Experience

Page	Pageviews	Unique Pageviews	Avg. Time on Page
	100.00% (6,111)	100.00% (4,681)	00:05:23 (0.00%)
1. /courses/yoast-seo-wordpress-2018/	474 (7.76%)	367 (7.84%)	00:01:06
2. /courses/	454 (7.43%)	310 (6.62%)	00:00:59
3. /topic/yoast-seo-wordpress-2/	246 (4.03%)	166 (3.55%)	00:07:21
4. /topic/yoast-seo-wordpress/	218 (3.57%)	149 (3.18%)	00:11:37

- ➢ **Combining Business Assets and Historical Data to Conduct SEO/Website SWOT Analysis:**
  - A classic staple of business school is the SWOT analysis—identifying the strengths, weaknesses, opportunities, and threats faced by a business or project.
  - By combining data from your business asset assessment and historical tracking data (and visitor analytics), you can create some very compelling analyses of your organization and its marketplace…
  - Identifying *strengths* is typically one of the easier objectives:
    - What sources of traffic are working well for your site/business?
    - Which projects/properties/partnerships are driving positive momentum toward traffic/revenue goals?
    - Which of your content sections/types produces high traffic and ROI?

- **Determining the *weaknesses* can be tougher (and takes more intellectual honesty and courage):**
    - What content is currently driving low levels of search/visitor traffic?
    - Which changes that were intended to produce positive results have shown little/no value?
    - Which traffic sources are underperforming or under-delivering?

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Unit-3

Developing an SEO Friendly Website

➢ **Making site accessible to Search Engine :**
- The first step in the SEO design process is to ensure that your site can be found and crawled by the search engines.
- This is not as simple as it sounds, as there are many popular web design and implementation constructs that the crawlers may not understand.
- **Indexable Content :**
  - To rank well in the search engines, your site's content—that is, the material available to visitors of your site—should be in HTML text form.
  - Images , Flash files , java applets ,and Other nontext content is , for the most part, virtually invisible to search engine spiders advance in crawling technology…
- **Spiderable Link Structures :**
  - search engines use links on web pages to help them discover other web pages and websites.
  - For this reason, we strongly recommend taking the time to build an internal linking structure that spiders can crawl easily.
  - Many sites make the critical mistake of hiding or obfuscating their navigation in ways that limit spider accessibility, thus impacting their ability to get pages listed in the search engines' indexes.
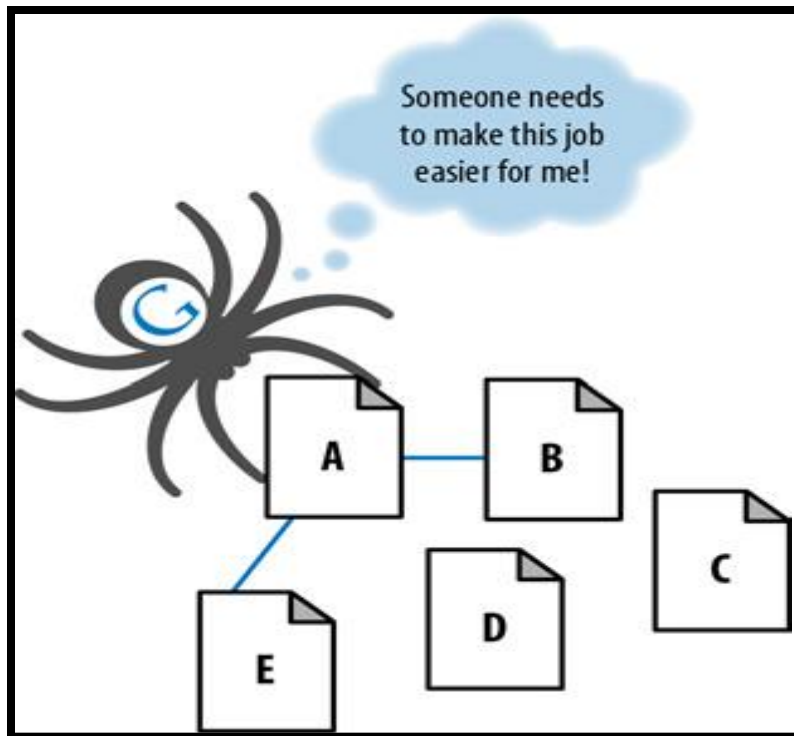
- **Creating an optimal Information Architecture :**
  - Making your site friendly to search engine crawlers also requires that you put some thought into your site information architecture.
  - A well-designed architecture can bring many benefits for both users and search engines.
  - Shows what it looks like when you apply this logic to the popular website , Craigslist.org.

| Cabinet | Drawer | Folder | File | Document |

Filing Category → **Site Analogue**

Cabinet → **Fully Qualified Domain**
(e.g., seattle.craigslist.org)

Drawer → **Primary Site Category**
(e.g., Housing)

Folder → **Secondary Site Category**
(e.g., Apartments for Rent)

File → **Tertiary Site Category**
(e.g., 2 Bedroom Apartments)

Document → **Individual Page/Item**
(e.g., 2 Bedroom Capitol Hill Loft Apartment)
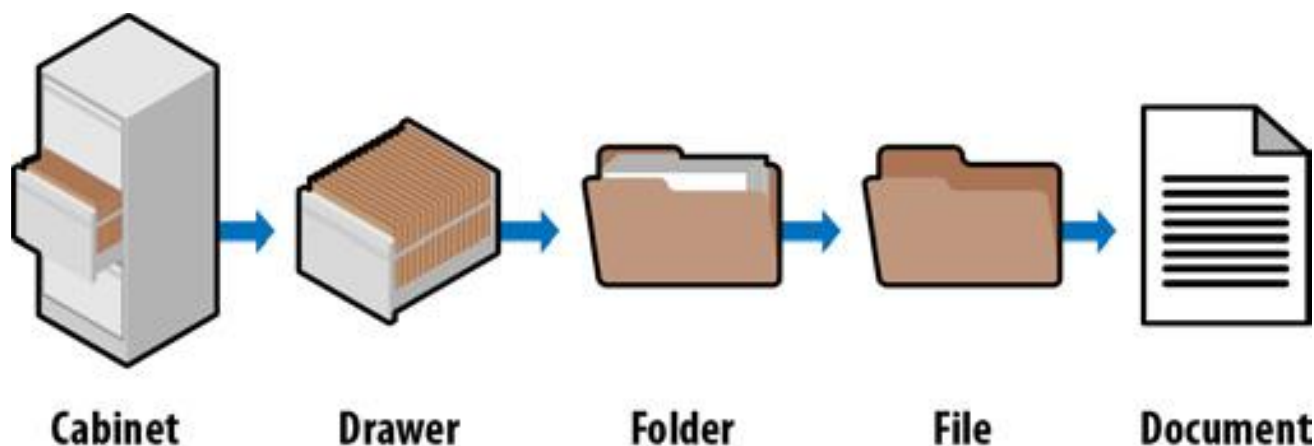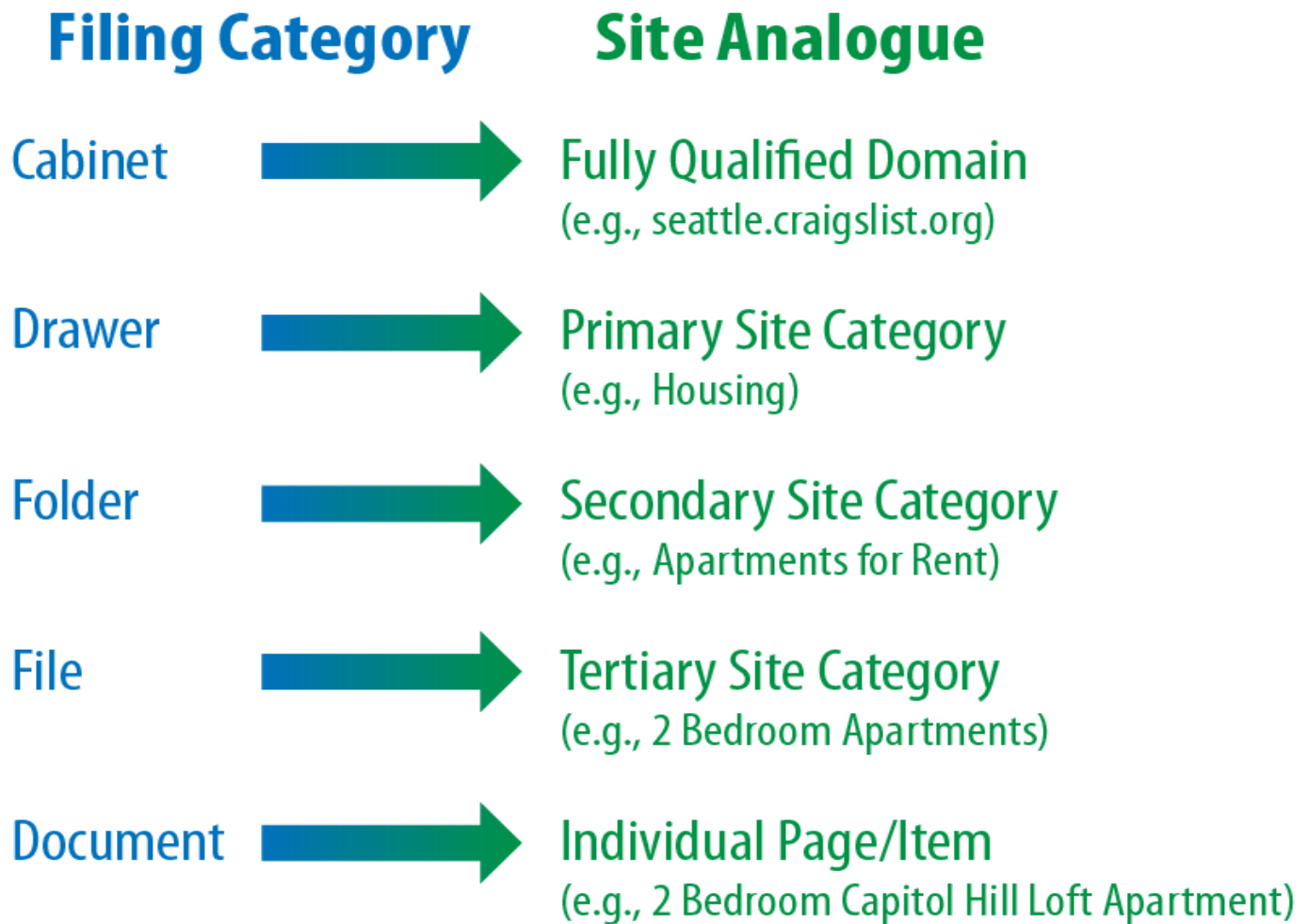
- **Root Domains, Subdomains & Microsites :**
  - Among the common questions that arise when structuring a website (or restructuring one) are whether to host content on a new domain, when to use subfolders, and when to employ microsites.
  - **When to Use a Subdomain :**
  - If your marketing team decides to promote a URL that is completely unique in content or purpose and would like to use a catchy subdomain to do it, using a subdomain can be practical.
  - Maps.google.com is an example of where the marketing considerations make a subdomain an acceptable choice.

- One good reason to use a subdomain is in a situation where doing so can look more authoritative to users, as a result of creating separation from the main domain.

- **Microsites :** There is a lot of debate about microsites, and although we generally recommend that you do not saddle yourself with the hassle of dealing with multiple sites and their SEO risks and disadvantages, it is important to understand the arguments, even if there are only a few, in favor of doing so.
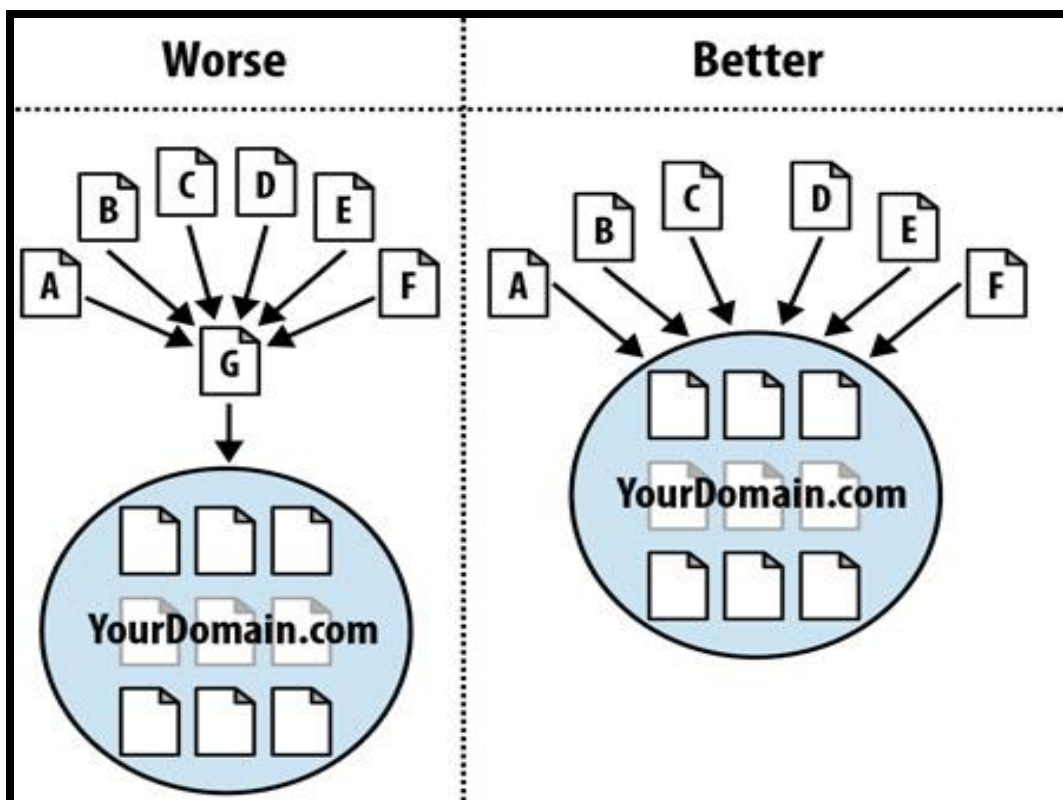
- **Optimization of Domain Names / URLs :**

  o Two of the most basic parts of any website are the domain name and the URLs for the pages of the website.

  o This section will explore guidelines for optimizing these important elements.

- **Optimizing Domains :**

  o When a new site is being conceived or designed, one of the critical items to consider is the naming of the domain, whether it is for a new blog, a company launch, or even just a friend's website.

- **Picking the Right URLs :**

  o Search engines place some weight on keywords in your URLs.

  o Be careful, however, as the search engines can interpret long URLs with numerous hyphens in them (e.g., *Buy-this- awesome-product-now. html*) as a spam signal.

  o What follows are some guidelines for selecting optimal URLs for the pages of your site(s).

- **Keyword Targeting :**

  o The search engines face a tough task: based on a few words in a query (or sometimes only one), they must return a list of relevant results, order them by measures of importance, and hope that the searcher finds what she is seeking.

  o This practice has long been a critical part of search engine optimization, and although other metrics (such as links) have a great deal of value in the search rankings, keyword usage is still at the core of targeting search traffic.

  o The first step in the keyword targeting process is uncovering popular terms and phrases that searchers regularly use to find the content, products, or services your site offers.

o Now, keyword relevance is much more aligned with the usability of a page from a human perspective.

o Keyword usage includes creating titles, headlines, and content designed to appeal to searchers in the results , as well as building relevance for search engines to improve your rankings.

- **Content Optimization :**

o *Content optimization* relates to how the presentation and architecture of the text, image, and multimedia content on a page can be optimized for search engines.

o Having the right formatting or display won't boost your rankings directly, but through it, you're more likely to earn links, get clicks, and eventually benefit in search rankings.

- **Duplicate Content Issues :**

  o Duplicate content can result from many causes, including licensing of content to or from your site, site architecture flaws due to non-SEO-friendly CMS….

  o Thus, today we're faced with a world of "duplicate content issues" and "duplicate content penalties."

  o Here are some definitions that are useful for this discussion:

    ▪ *Unique content*

    ▪ *Duplicate content filter*

    ▪ *Duplicate content penalty*

    ▪ *Duplicate content filter*

Phase I: Google finds duplicate content

Hey! I've seen this content before…

ilvspam.com

"So we beat on, boats against the current, borne back ceaslessly into the past"

Prepared By: Creative Design & Multimedia Institute
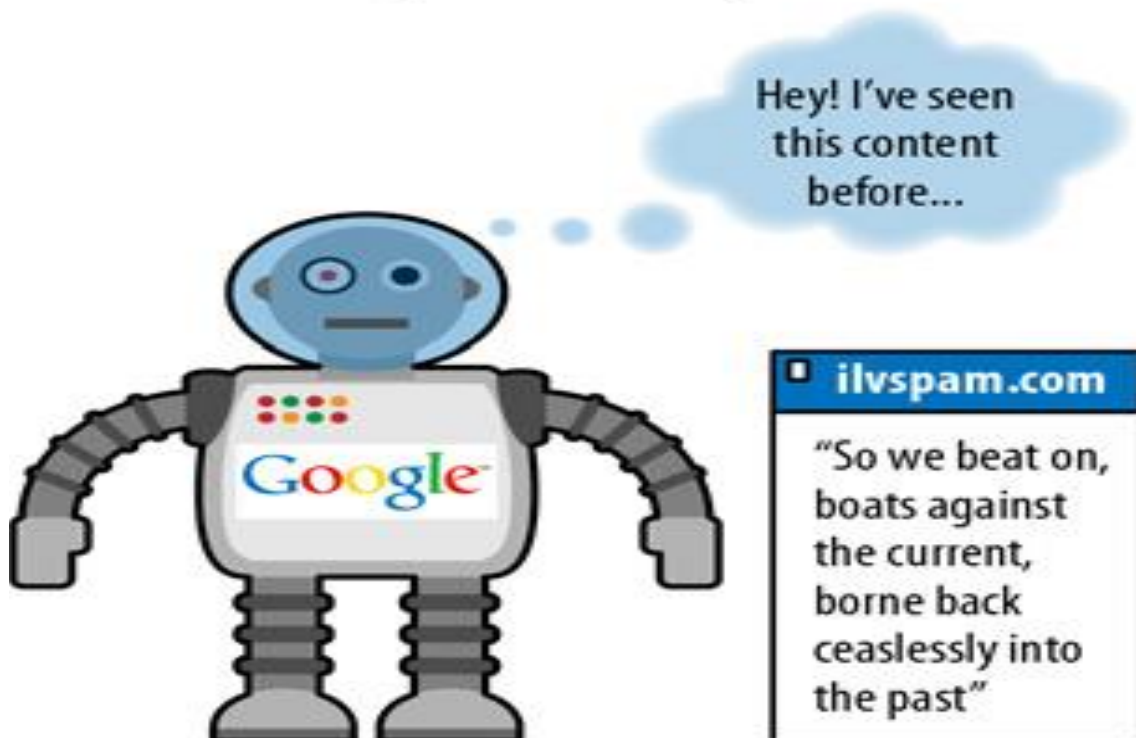
- **Controlling content with cookies and session IDs :**

  o **What's a Cookie? :**

    - A *cookie* is a small text file that websites can leave on a visitor's hard disk, helping them to track that person over time.

    - Cookie data typically contains a short set of information regarding when you last accessed a site, an ID number, and, potentially, information about your visit.
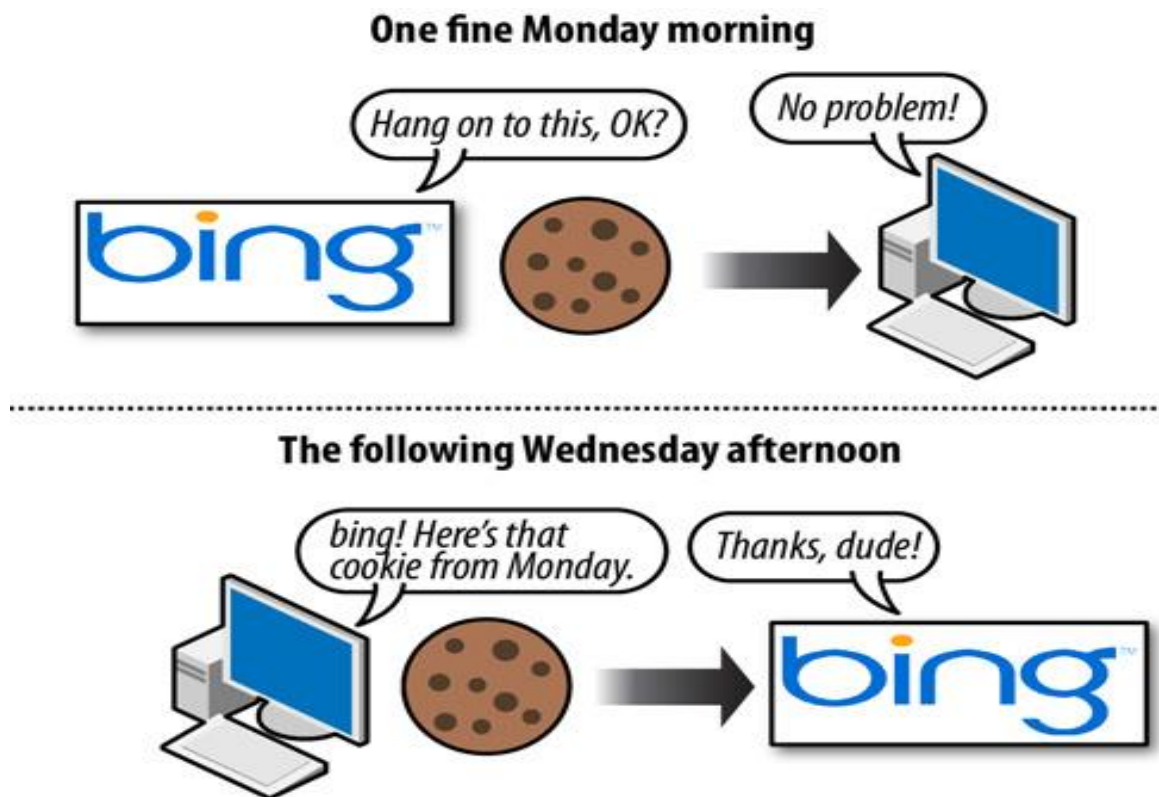
  o **What Are Session IDs?**

    - *Session IDs* are virtually identical to cookies in functionality, with one big difference…

- When you close your browser (or restart), session ID information is (usually) no longer stored on your hard drive. Figure 6 illustrates…..

- The website you were interacting with may remember your data or actions, but it cannot retrieve session IDs from your machine that don't persist..

- In essence, session IDs are like temporary cookies…

- **Content Delivery and Search Spider Control:**
  - On occasion, it can be valuable to show search engines one version of content and show humans a different version.

o This is technically called "cloaking," and the search engines' guidelines have near-universal policies restricting this behavior.

o In practice, many websites, large and small, appear to use some forms of cloaking without being penalized by the search engines.

o However, use great care if you implement these techniques, and know the risks that you are taking.

- **Cloaking and Segmenting Content Delivery :**

o Before we discuss the risks and potential benefits of cloaking-based practices, take a look at Figure , which shows an illustration of how cloaking works.
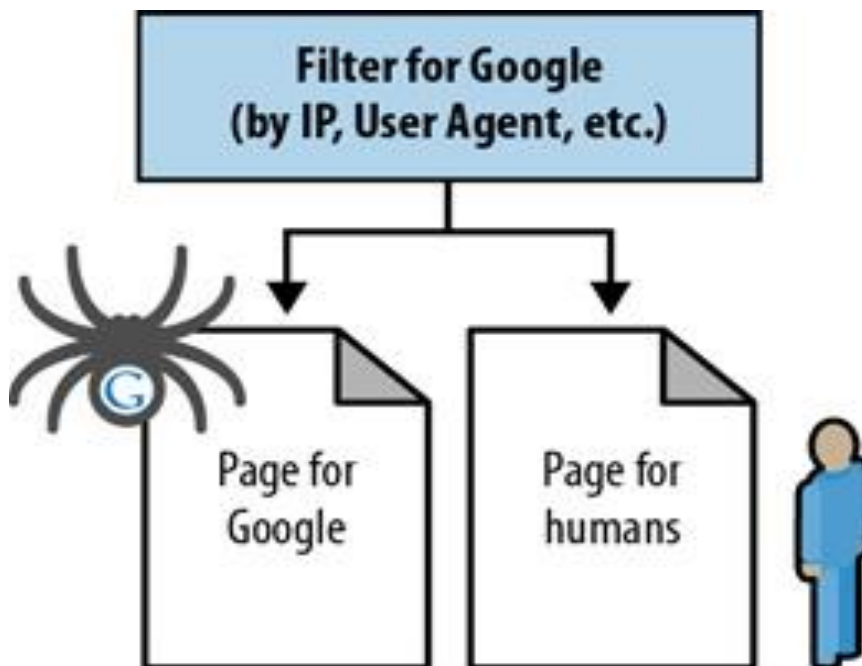
- **Redirect :**

o A *redirect* is used to indicate when content has moved from one location to another.

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- *For example,* suppose you have some content at http://www.yourdomain.com/old.html , and you decide to restructure your site.

- As a result of this restructuring, your content may move to *http://www.yourdomain.com/critical-keyword.html* .

- A *redirect* is used to indicate when content has moved from one location to another.

- *For example,* suppose you have some content at *http://www.yourdomain.com/old.html* , and you decide to restructure your site.

- As a result of this restructuring, your content may move to *http://www.yourdomain.com/critical-keyword.html*.

- **Content Management System (CMS) Issues:**

  - When looking to publish a new site, many publishers may wonder whether they need to use a CMS, and, if so, how to ensure that it is SEO-friendly.

  - It is essential to determine whether a CMS is necessary before embarking on a web development project.

  - You can use the flowchart in Figure to help guide you through the process.

  - Due to the inexpensiveness of customizable, free platforms such as Drupal, Joomla, WordPress, and Mambo, it is increasingly rare for a publisher to develop a static site, even when a CMS isn't required.
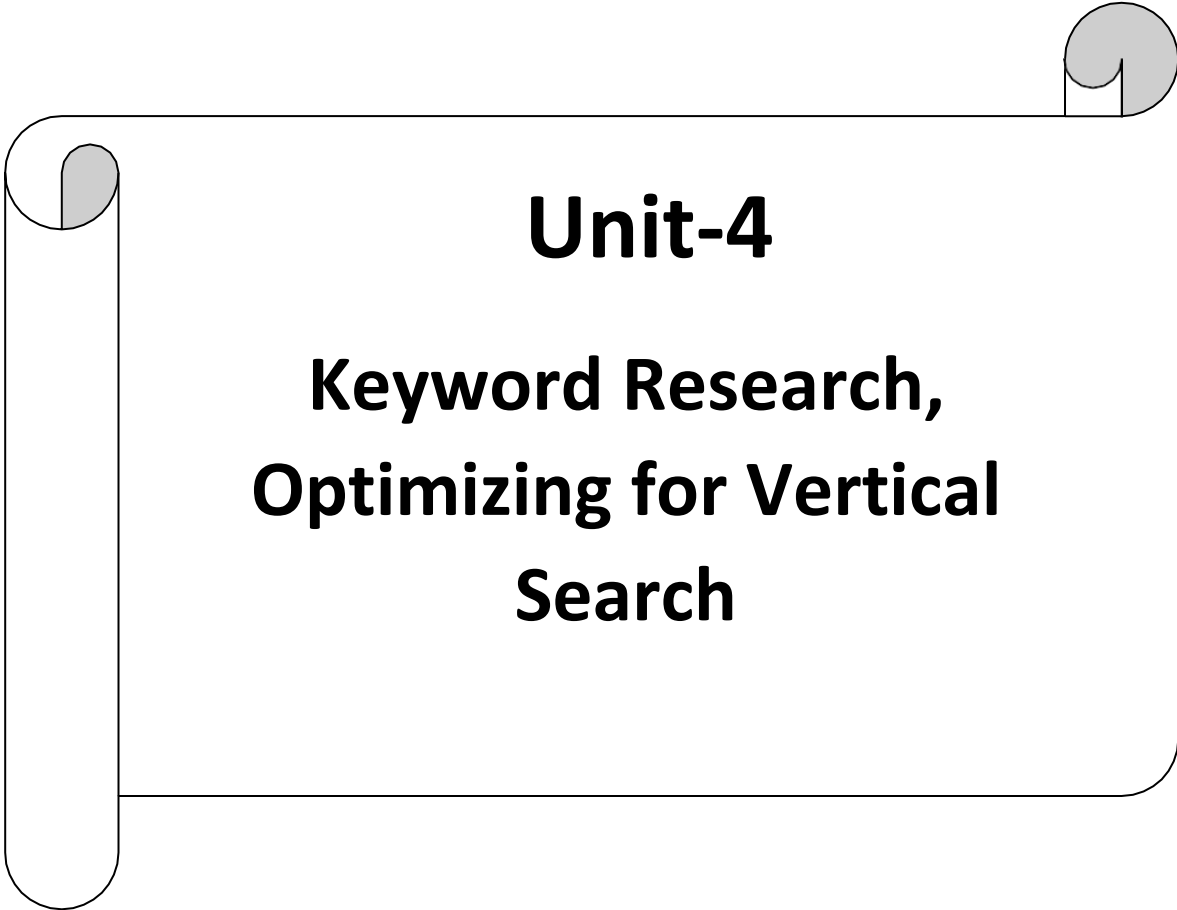
Do You Need A CMS For Your Site?

Do you need to update your site's content more than 1x/month? — **YES** →

NO ↓

Are you planning to run a blog on your site? — **YES** →

NO ↓

Will non-web developers be updating/maintaining content on the site? — **YES** →

NO ↓

Do you require the ability to manage your site's content from remote locations (w/o downloading specific software)? — **YES** →

NO ↓

A static site without a CMS is probably OK.

A Content Management System (CMS) is a smart decision.

- **Optimizing Flash :**

  - Flash is popular on the Web, but it presents challenges to the search engines in terms of indexing the related content.

  - This creates a gap between the user experience with a site and what the search engines can find on that site.

  - It used to be that search engines did not index Flash content at all.

- In June 2008, Google announced that it was offering improved indexing of this content (
  http://googlewebmastercentral.blogspot.com/2008/06/improved-flash-indexing.html)
- This announcement indicates that Google can index text content and find and follow links within Flash files.
- However, Google still cannot tell what is contained in images within a Flash file…
  - *Different content is not on different URLs*
  - *The breakdown of text is not clean*
  - *Flash gets embedded*
  - *Flash doesn't earn external links like HTML*

- **Best practices for Multilanguage / country Targeting :**
  - **Targeting a Specific Country :** Starting with the basics of international targeting, it is important to let the search engines know where your business is based in as many ways as possible.
  - These might include :
    - Hosting your site locally, not abroad
    - Including the physical local address in plain text on every page of your site
    - Setting Google Webmaster Central geting to your country of interest.
    - Verifying your address with Google Maps
    - Getting links from in-country websites
    - Using the local language on the website

Unit-4

Keyword Research, Optimizing for Vertical Search

- **The Theory Behind Keyword Research:**

  o Keyword research is one of the most important, valuable, and high-return activities in the search engine marketing field.

  o Through the detective work of dissecting your market's keyword demand, you learn not only which terms and phrases to target with SEO, but also more about your customer base as a whole.

  o Keyword research enables you to predict shifts in demand, respond to changing market conditions, and ensure that you are producing the products, services, and content that web searchers are already actively seeking.

  o Every search phrase that's typed into an engine is recorded in one way or another, and keyword research tools such as the ones we discuss in this chapter allow you to retrieve this information.

Search engine keyword demand

Popular queries	"Long Tail" queries
Stock quotes	Chart of Argentinian Market in 1994
NFL	Draft picks for Seattle Seahawks
Laptop reviews	Dell m1210 battery life estimates

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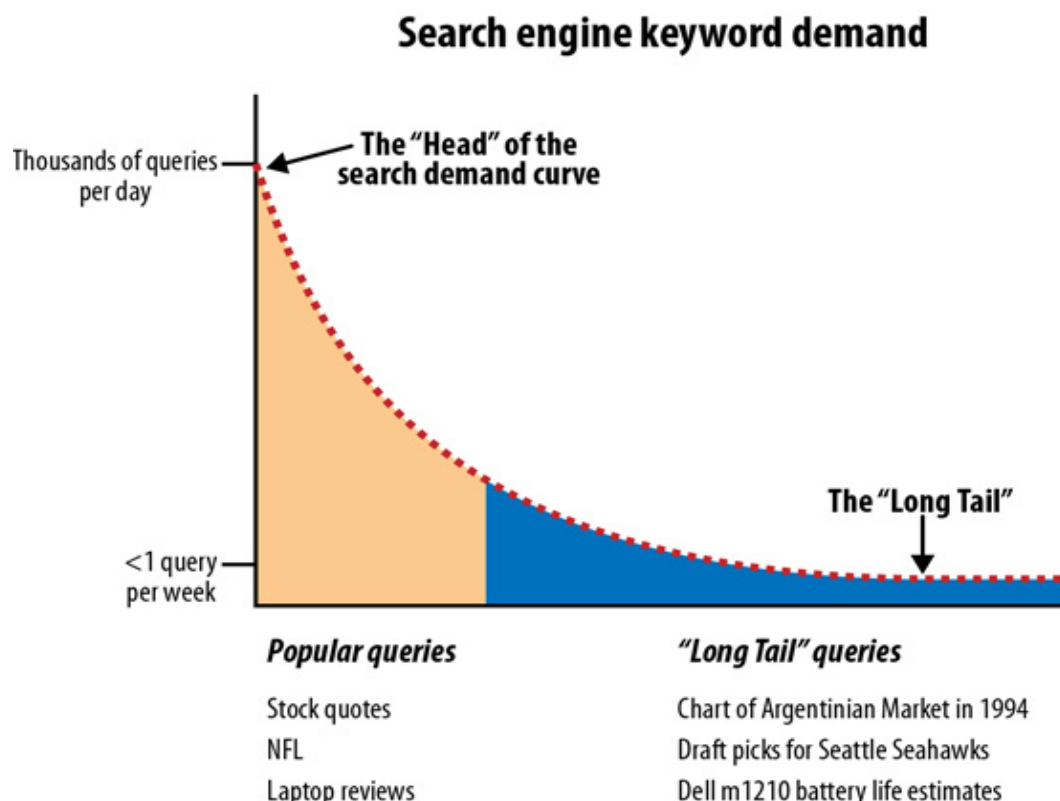
- **Traditional Approaches : Domain Expertise Site Content Analysis :**

  o One of the smartest things you can do when initially conducting keyword research is brainstorm original ideas with business participants before getting keyword tools involved.

  o This can be surprisingly effective for coming up with numerous critical keywords.

  o Start by generating a list of terms and phrases that are relevant to your industry and pertain to what your site or business offers.

  o The brainstorming phase should ideally result in a list of several dozen to several hundred or more keyword searches that will bring relevant visitors to your site.

- **Keyword Research Tools :**

  o A wide variety of options are available for performing keyword research, including tools provided by the search engines, tools developed by third parties, and tools for complex keyword analysis of terms culled during research.

- **Determining Keyword Value/Potential ROI**

  o Once you have obtained the raw keyword data by doing research with your favorite tools, you need to analyze which keywords have the highest value and the highest ROI.

- **Leveraging the long Tail of keyword Demand:**

  o The long tail of search is where 70% of search queries occur.

o Only 30% of those precious queries happen in the more obvious terms that people use, the so-called "head terms".

o The long tail of search queries in a given industry is typically not visible via any of the major keyword research services or search engine ad databases (Google AdWords, Yahoo! Search Marketing)

o In these instances, there is a method to find those terms that can carry value, but it requires a good amount of research and analysis.

- **Identifying Long-Tail Patterns :**

  o You can also take another stab at determining long-tail information. As a hypothetical example

  o using *digital camera*, here are 40 searches for two different brands and models of digital cameras from the Keyword Discovery database….

- **Each of these received only one search:**

  o *consumer comments on nikon 5.1 mp coolpix l3 digital camera*

  o *new nikon coolpix p3 8 1mp digital camera memory*

  o *nikon 3 2mp coolpix digital camera*

  o *nikon 5 1mp coolpix s1 digital camera and cradle*

  o *nikon 6mp coolpix digital camera*

  o *nikon 7 1mp coolpix 7900 digital camera*

- **Trending, Seasonality, and Seasonal Fluctuations in Keyword Demand:**

  o One of the subtleties of keyword research, and of any fully developed SEO strategy, is that the use of keywords varies significantly over time.

  o For instance, major holidays inevitably lead to bursts of keyword volume related to those holidays.

  o Examples could be searches such as *Halloween costumes*, *gift ideas for Christmas*, or *Valentine's candy….*

  o If you want to write holiday-related content, it will be important to have your site visible in the SERPs for those search queries prior to that holiday's buying season so that you'll get optimum traffic for those terms.

  o To investigate this further, let's examine the Google Trends data for a period of 12 months for the search term *halloween costume ideas….*
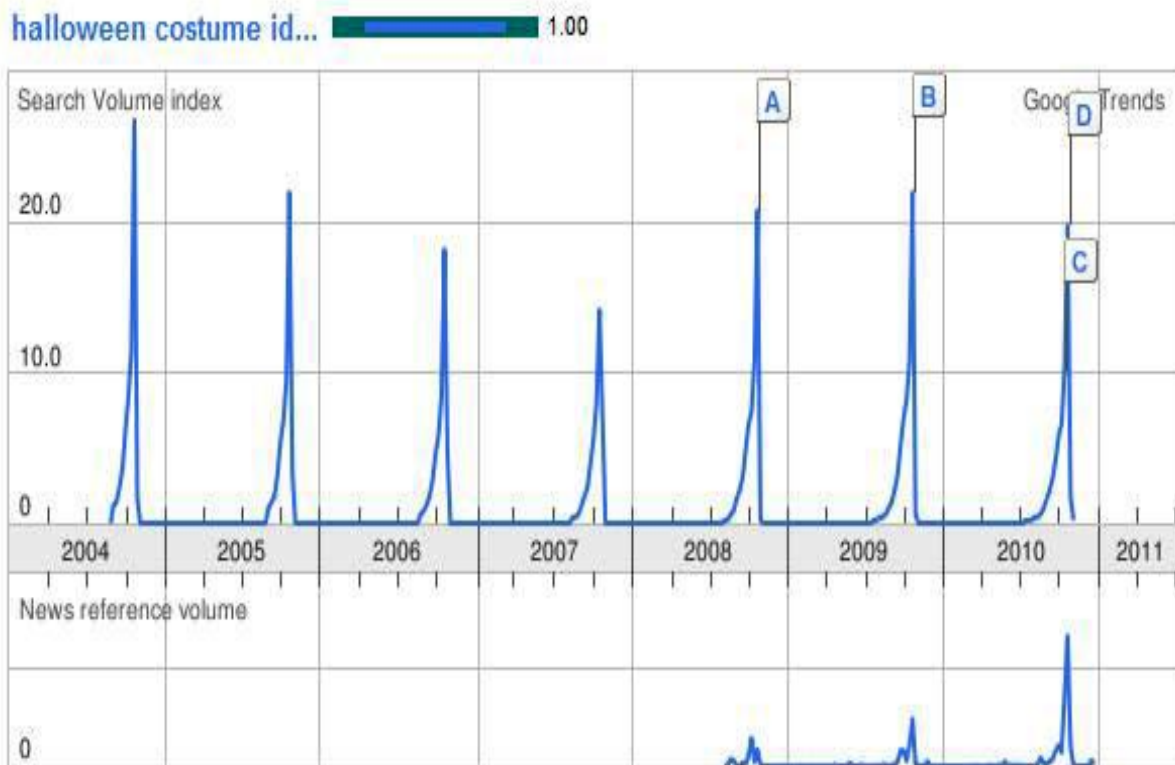
- **The Opportunities In Vertical Search :**

  o Vertical search has been around for almost as long as the major search engines have been in existence.

  o Some of the first vertical search engines were for image search, newsgroup search, and news search, but many other vertical search properties have emerged since then, both from the major search engines and from third parties.

  o This chapter will focus on strategies for optimizing your website for the vertical search offerings from Google, Yahoo!, and Bing.

  o We will also spend some time on You Tube, which in January 2009 became the second-largest search engine on the Web.

- **Optimizing for Local Search :**

  - In 2010, Bing released data showing that 53% of Bing's mobile search volume was local in nature (*http://searchengineland.com/microsoft-53-percent-of-mobile-searches-have-local-intent-55556*)....

  - In 2011, Google published data indicating that 20% of its desktop search volume had local inten(*https://sites.google.com/a/pressatgoogl.com/googleplaces/metrics*)

  - Being that this is a large and growing segment, search engines have sought to increase their advertiser bases by moving aggressively into providing local directory information….

  - Applications such as Google Maps, Yahoo! Local, and Bing Maps have introduced disruptive technology to local directory information by mashing up maps with directory listings, reviews/ratings, satellite images, and 3-D modeling—all tied together with keyword search relevancy….

  - This area of search is still in flux, as evolutionary changes continue to come hard and fast.

  - Despite rapid innovation in search engine technology, the local information market is still extremely fractured.

  - There is no single dominant provider of local business information on the Internet.

  - According to industry metrics, online users typically go to multiple sources to locate, research, and select local businesses.

o Traditional search engines, local search engines, online yellow pages, newspaper websites, online classifieds, industry-specific "vertical" directories, and review sites are all sources of information for people trying to find businesses in their area.

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- **Optimizing for Image Search :**

    o Optimizing for image search can be a smart strategy for many search marketers.

    o Even if you're working on a site that you don't feel truly lends itself to an image optimization strategy, you may be able to leverage images or photos on your website for SEO.

    o Some e-tailers report poor conversion on image search traffic, and lots of the people coming in appear to be focused on stealing their images.

- o You need to weigh the benefit of image search capability against the costs and other opportunities for SEO on your site.

- o A significant amount of traffic can come from image search, and the number of people competing effectively for that traffic is much lower than it is in general web search.

- o Industries that don't immediately seem to provide compelling subjects for images may enjoy greater potential in this area, because the competition might never clue in to the advantages of integrating images into their sites and into an overall search marketing strategy.

- o There are a few different ways that image search optimization can help to improve traffic and conversions for your site:

  - *Subtle reputation management*

  - *Shopping via image search results*

  - *Increased chances of showing up in Universal/Blended Search results*

- **Optimizing Through Flickr and Other Image Sharing Sites :**

  - o Flickr is one of the strongest image sharing sites in terms of search optimization potential.

  - o No other image sharing site has the same level of domain authority, crawl ability, keyword-focusing signals, and cross-referencing potential (the ability to link to your website from photo pages)

Google   monsey condo   [Search]   Advanced Search
Preferences

Web   Show options...

Monsey Condo for Sale on Flickr - Photo Sharing!
More details at **Condo** for Sale in **Monsey** at my personal blog. Would love advice at the blog post.
www.flickr.com/photos/rustybrick/660856355/ - Cached - Similar -

Monsey, NY 10952 - presented by Naomi Streicher Real Estate Broker
Monsey real estate and homes for sale in **Monsey**. ... Remarks: AVAILABLE IMMEDIATELY!FULLY RENOVATED TRI-LEVEL 5 BEDROOM **CONDO**. ...
www.**monseycondo**.com/ - Cached - Similar -

My **Condo** For Sale in **Monsey** - Home For Sale
Who knew that when I bought my **condo** in **Monsey** that I would be looking to sell a year and a half later? Well I am potentially looking to sell my **condo** now.
www.cartoonbarry.com/.../my_**condo**_for_sale_in_**monsey**_ho.html -
Cached - Similar -

- **Optimizing for Product Search :**

  o Google Product Search is less popular than some of the other Google-owned properties..

  o However, top rankings for product-based businesses in Google Product Search are critical.

  o This Product Search one box can appear anywhere on the page— top, middle, or bottom.

  o Figure 9-9 shows an example for the search *canon powershot*.

- **Optimizing for News , Blog & Feed Search :**

  o News, blog, and feed search is another large potential area of opportunity for optimization.

  o This has a bearing not only on obtaining traffic directly from the search engines, but also in promoting your business in whole new ways.

  o Getting plugged in to news search, for example, can bring you plenty of quality traffic, but it can also result in your site being spotted by

major media editors and writers, as well as bloggers who consume that media.

o This is the type of exposure that can lead to numerous links.

o Blogs and RSS feeds offer a similar dynamic of getting your content in front of new readers through new channels….

o Optimization for news, blogs, and feeds is an area that applies to a wide range of sites.

o Figure depicts a sample search result that shows the impact of using keywords in blog page titles.

- **Other : Mobile , Video/Multimedia Search :**

  o Mobile search queries focus more heavily on immediately decisions.

  o Estimates suggest that 30% of mobile searches are to find an address or directions.

  o Mobile search sites may therefore want to focus on driving foot traffic and offline conversions rather than trying to generate purchases online.

  o The iPhone helped drive the growth of this market, because of its intuitive user interface and larger screen size (when compared to feature phones).

  o Figure shows an example of a search result on an iPhone.

- **Video Search Optimization :**

  o Video search optimization is in its infancy, but it is growing rapidly.

  o The increasing penetration of high-bandwidth Internet connections is going to drive more and more demand for online video content.

  o The problem is that video search engines have not yet been able to look inside the videos to tell what their content is from a human **"eye"** perspective.

  o For that reason, they rely on other on-page factors, the metadata within the video file itself, and inbound links and anchor text to determine what a video is about….

  o *Video upload sites :*

  o These are video search engines that require or allow you to upload your videos to them.

  o Examples include :

    ▪ You Tube

    ▪ AOL Video

    ▪ MySpace

    ▪ Flickr

    ▪ Yahoo! Video

Unit-5

Tracking Results and Measuring Success

An Evolving Art Form: The Future of SEO

- **Why Measuring Success is Essential to the SEO Process :**

  o Although quantifying deliverables and measuring progress are important for external reporting purposes, it is just as important for SEO practitioners to measure the efficacy of their own efforts so they can make timely adjustments as necessary.

  o As you will see in this chapter, numerous tools are available to aid in this process.

  o Quantifying organic search traffic by search engine and keyword

  o Identifying poorly performing pages

  o Identifying the best-performing pages (in terms of traffic and conversions)

  o Tracking search engine crawler activity on the site

  o Determining the number of indexed pages

  o Determining whether the indexed pages are getting search traffic

  o Determining whether best-selling product pages are indexed and getting search traffic

  o The best data measurements are those that potentially result in an action being taken in response.

  o Think of this as data-driven decision making.

- **The Tracking Cycle : Produce, Launch, Measure, Refine :**

  1. Define an SEO campaign and set goals.

  2. Discuss your strategy.

3. Establish a baseline.

4. Proceed with your project.

5. Collect data.

6. Refine your campaign.

- **Using Analytics as a Business Case for SEO**

  You could include a variety of metrics in a business case, such as :

  o Revenue

  o Lead generation

  o Margin

  o Branding value

  o Reach

  o Other action triggers (newsletter sign-ups, contact requests, demo requests, accepting a free trial, viewing a specific piece of content, etc.)

- **Measuring Search Traffic :**

  o Classic web analytics data is an incredible asset to SEO.

  o Here are some examples of ways to utilize this data for SEO purposes :

    o Look at your daily referral reports to detect newly received inbound links..

    o Look at the search terms people use to come to your site to spot long-tail search opportunities.

- Measure the results of your campaigns by tracking the increase in conversions you are driving over time.

- Web analytics are a must-have for any web publisher.
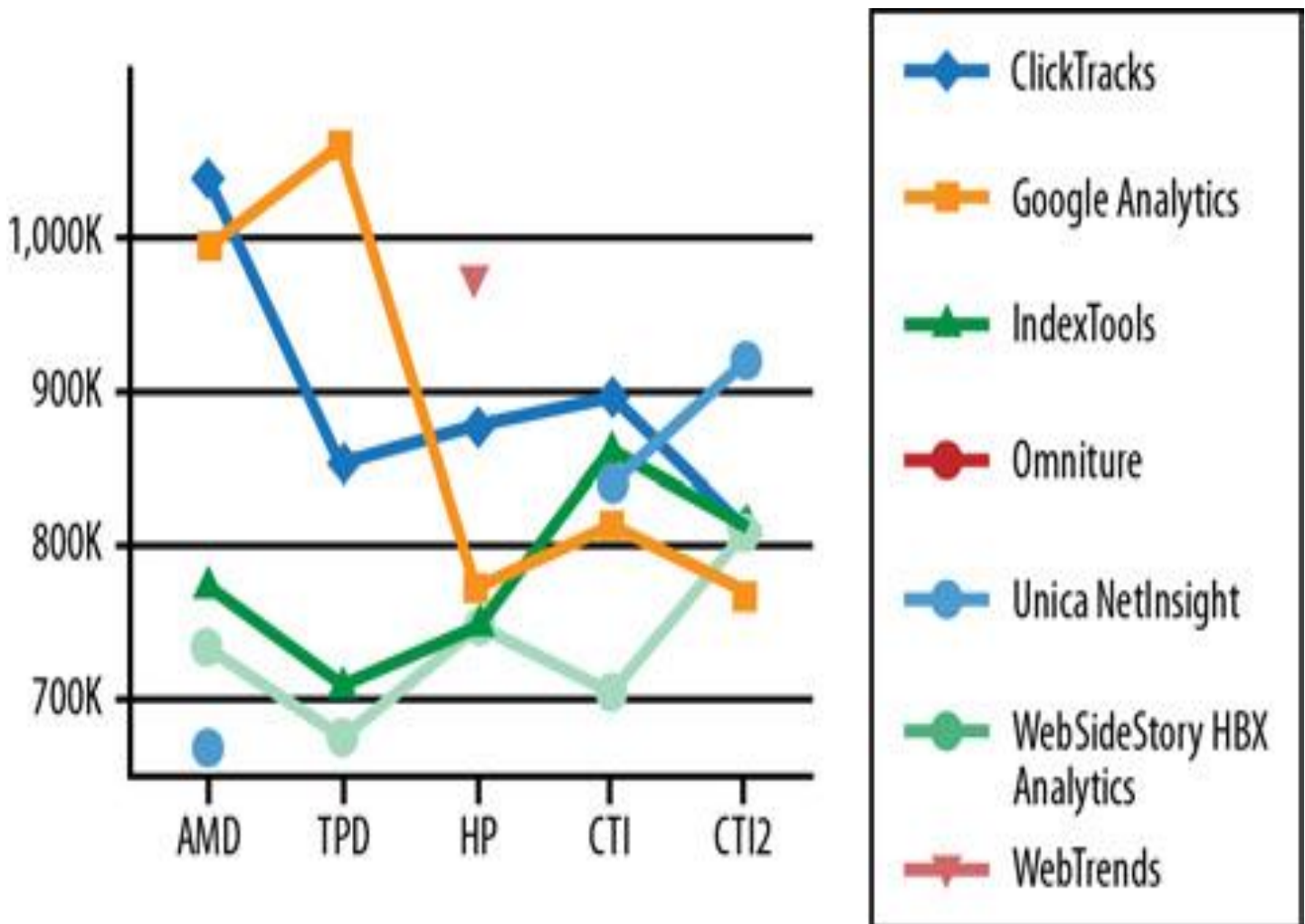
- **Typing SEO to Conversion and ROI :**

  o It is important to tie your SEO campaign to the results it brings to the business.

  o Key to that is measuring the conversions driven by organic SEO traffic.

- o Here are some of the most common types of conversions :
    - *Sales/sales revenue :*
    - *Email /blog /newsletter subscriptions :*
    - *Sign-ups :*
    - *Downloads :*
    - *Contact forms and phone calls :*
    - *Visitors who share :*
    - *Visitors who link :*
    - *Visitors who publicize :*

- **Competitive and Diagnostic Search Metrics :**
    - o we have focused on the basics—the dollars and cents of determining whether you have succeeded in your SEO campaign.
    - o As we noted at the beginning of the chapter, these should be your first priority in your analytics efforts.
    - o In this section, we will start looking at metrics that you can use to diagnose specific SEO issues.
    - o An example of this would be finding out that a major section of your site is not indexed.
    - o Another example is seeing how your traffic growth compares to that of your competitors….

- **Search Engine and Competitive Metrics :**

- o Numerous tools allow you to monitor your site and those of your competitors, providing insight into your SEO progress.

- o You can also use these tools to figure out what your competitors are doing from an SEO perspective.

- o This type of intelligence can provide you with new ideas on how to adapt your strategy to get better results.

- o Better knowledge of your competitors' strategy is certainly one valuable goal.

- **The Ongoing Evolution Of Search :**

- o Search has come a long way, and will continue to progress at a faster and faster pace.

- o Keeping up with these changes, the competitive environment, and new and emerging technologies provides both a challenge and an opportunity.

- **More Searchable Content and Content Types :**

- o The emphasis throughout this book has been on providing the crawlers with textual content semantically marked up using HTML.

- o However, the less accessible document types—such as multimedia, content behind forms, and scanned historical documents are being integrated into the search engine results pages (SERPs) more and more.

- o As search algorithms evolve in the ways that the data is collected, parsed, and interpreted.

- o Engines Will Make Crawling Improvements

- o Engines Are Getting New Content Sources

- o Multimedia Is Becoming Indexable

- **Search Becoming More personalized and User Influenced :**

  - o Personalization efforts have been underway at the search engines for some time.

  - o As we discussed earlier in this book, the most basic form of personalization is to perform an IP location lookup to determine where the searcher is located, and tweak the results based on that location.

  - o However, the search engines continue to explore additional ways to expand on this simple concept to deliver better results for each user.

  - o It is not yet clear whether personalization has given the engines that have invested heavily in it better results overall or greater levels of user satisfaction..

  - o But their continued use of the technology suggests that, at the least, their internal user satisfaction tests have been positive.

- **Increasing Important of Local , Media and Voice Recognition Search :**

  - o New forms of vertical search are becoming increasingly important.

- o Areas that the search engines have already embraced include local search and mobile search.

- o In addition, voice recognition–based search is an area in which all the major engines are actively investing.

- **Local Search :**

  - o Local search was an active business before the advent of the Internet, when the Yellow Pages as supplied by your phone company were the tool of choice.

  - o As the World Wide Web gained prominence in our lives, the Yellow Pages began migrating online.

  - o Some of the major players are CitySearch, Local.com, and Superpages.

  - ▪ **Local Search :**

    - o You can find these local search engines at (*http://maps.google.com*, *http://local.yahoo.com*, and *http://www.bing.com/maps*).

  - ▪ **Mobile Search :**

    - o With over 1 billion mobile phones in use worldwide (*http://www.digitalbuzzblog.com/2011-mobile*), the opportunity for mobile search has begun to grow rapidly…

    - o An April 2011 Google study showed that search engines were the most visited sites on mobile devices, with 77% of those surveyed reporting their use (*http://www.clickz.com/clickz/*)

- o The ever-expanding versatility and power of tablet and mobile devices—from indispensable utility apps, to immersive multimedia players, to massively multiplayer online games, to paradigm-shifting hardware advances such as the iPhone's multitouch display, proximity sensor, GPS, and gyroscopes— will fuel this growth.

- **Voice-Recognition Search :**

  - o When users are mobile they must deal with the limitations of their mobile devices, specifically the small screen and small keyboard.

  - o Voice search could be a great way to improve the mobile search experience.

  - o Speech recognition technology has been around for a long time, and the main challenge has always been that it requires a lot of computing power.

- **Increased Market Saturation and Competition :**

  - o One thing you can count on with the Web is continued growth.

  - o Despite its constantly growing index, a lot of the pages in Google may be low-quality or duplicate-content-type pages that will never see the light of day.

  - o The Web is a big place, but one where the signal-to-noise ratio is very low.

  - o One major trend emerges from an analysis of Internet usage statistics.

- o According to Miniwatts Marketing Group, as of March 2011, 78.3% of the North American population were using the Internet (*http://www.internetworldstats.com/stats.htm*), so there is not much room for growth here.

- o This data is telling us that in terms of the number of users, North America is already approaching saturation.

- o There is some room for growth in Europe and Oceania/Australia, where penetration rates hover at around 60%, but not that much.

- **SEO As an Enduring Art Form :**

  Today, SEO can be fairly easily categorized as having five major objectives :

  - o Make content accessible to search engine crawlers.

  - o Find the keywords that searchers employ (i.e., understand your target audience) and make your site speak their language.

  - o Build content that users will find useful, valuable, and worthy of sharing.

  - o Earn votes for your content in the form of editorial links and social media mentions from good sources by building inviting , shareable content and applying classic marketing techniques to the online world.

  - o Create web pages that allow users to find what they want extremely quickly, ideally in the blink of an eye.