



# SEO Search Engine Optimization -2-

Prof. Romina Eramo
University of Teramo
Department of Communication Sciences
reramo@unite.it

Acknowledgment: Alessandro Celi (University of L'Aquila)

# What are search engines?

 A search engine is an automatic system that stores a large amount of data and classifies this data based on mathematical formulas, making the search for information within this large archive simple, fast and efficient.

# What are search engines?

- Inserting Web pages into search engine archives can occur in two ways:
- manually (through user reporting)
- automatically (through the crawler or spider or robot, a particular software that manages to visit millions of websites a day, inserting new pages and updating those already present in the archive).

 In addition to the classic web page search engines, new, increasingly targeted search engines are created every day. The Web is growing and at the same time the need for more precise and sectorspecific searches is increasing.

Vertical motors by topic: they are very specific search engines, for example <a href="https://yippy.com/">https://yippy.com/</a> to cluster the results, <a href="http://www.wolframalpha.com/">http://www.wolframalpha.com/</a> (AI technology) which does not provide websites but answers to questions <a href="http://www.volagratis.com">http://www.volagratis.com</a> for flights; there are others for job offers, blank pages to find telephone numbers and addresses, engines to search for guides and manuals...

Vertical motors by file types searched: certainly the

best known service is image search engines:

http://images.google.it

http://www.youtube.com (for videos)

There are also search engines for mp3, pdf, torrent files, etc...

Vertical engines by location: <a href="http://maps.google.it/">http://maps.google.it/</a>

Customizable Engines: it is the path used by almost all search engines to retain their users: Google Custom Search Engine

http://www.google.com/coop/cse/

Business engines: the idea that the same search engine can index company data as well as exploit that offered by the Internet is certainly interesting for companies. <a href="Altavista">Altavista</a> (now Yahoo) was certainly a precursor in this area. Google Cloud Search: <a href="https://cloud.google.com/products/search/">https://cloud.google.com/products/search/</a>

#### **Open source engines for internet and intranet:**

- Apache Lucene Search (Solr) http://lucene.apache.org/solr/
- Splunk https://www.splunk.com/
- Elastic search <a href="https://www.elastic.co/">https://www.elastic.co/</a>

- Engines that also search on hard disk:
- Windows or Mac OS search engine

# **Main Search Engines**

#### Major search engines

- Google > <a href="http://www.google.it">http://www.google.it</a>
- Yahoo > <a href="http://it.search.yahoo.com">http://it.search.yahoo.com</a> (uses Bing technology)
- Bing > <a href="http://www.bing.com">http://www.bing.com</a>

• Google he was definitely not the first to arrive on the scene (1998) but he became the leader in a very short time.

The word "Google" is a play on the word "Googol", which was invented by Milton Sirotta, to describe the number 1 followed by 100 zeros.

https://it.wikipedia.org/wiki/Googol

Google's main feature was certainly PageRank

 PageRank: an algorithm based on the premise that the importance of a web page can be assessed by the number of citations (links) pointing to it and present on other pages.

Its spider is called GoogleBot.

- Advanced search options:
   <a href="http://it.wikipedia.org/wiki/Google#Alcune\_opzioni\_di\_ricerca\_avanzata">http://it.wikipedia.org/wiki/Google#Alcune\_opzioni\_di\_ricerca\_avanzata</a>
- Google services: <a href="https://about.google/intl/it/products/">https://about.google/intl/it/products/</a>

- Yahoo Search, born as a Web Directory, has evolved and transformed into a search engine. First by partnering (Inktomi and Google), then by developing proprietary technology, then by joining Bing. Its spider was called Yahoo Slurp. The Web Directory has almost been abandoned.
- Yahoo services:
   <a href="http://it.wikipedia.org/wiki/Yahoo!#Voci\_correlate">http://it.wikipedia.org/wiki/Yahoo!#Voci\_correlate</a>
- In September <u>2021</u>, the Verizon group sells the controlling stake to the Apollo Global Management fund for \$5 billion: the new company will take the name of Yahoo!

• **Bing** ( *Windows Live Search* , initially called *MSN Search* ) is the name of a web search engine, developed by Microsoft, built to beat the competition from other adversaries such as Google and Yahoo!

MSN Search first launched in the fall of 1998 using Inktomi search results.

#### **Examples of searches in the 3 engines**

- We search for the keyword "books "in the 3 engines
- http://www.google.it/search?hl=it&q=libri
- http://it.search.yahoo.com/search?p=libri&fr=yfp-t-501&ei=UTF-8&rd=r1
- https://www.bing.com/search?q=libri&form=QBLH&sp=-1&pq=libri&sc=8-5&qs=n&sk=&cvid=5CBF9FF22A1F42ABAC27E326C3B00900
- Which engine delivers the most relevant results?

# The turning point in Search Engines : Google

- Google decides to use the popularity factor in MoRs: the mathematical formula of PageRank.
   The real turning point starts from here.
- Sergey Brian and Larry Page, two 25-year-old
   Stanford students, invented Google starting from
   Larry Page's Doctoral Thesis in Computer Science:
   << How to download all the contents of the World Wide Web
   onto a computer, not by brute force, but in a to make it
   usable>>. We're talking about 1996.

# The turning point in Search Engines: Google

• The idea of PageRank: counting the number of links pointing to a website.

However, it was not certain that popularity and quality went hand in hand.

They came to another important concept: **not all links are created equal. Some are worth more than others.** 

# The turning point in Search Engines: Google

 Google was not trying to provide answers based on the occurrence of keywords on a web page, but rather obtain the best search results based on the relevance of the expression within a given site, using the links that a web page receives and dozens of other factors (the distance between the keywords, the font size, uppercase and lowercase, etc..). [Early Version of Google]

- https://adwords.google.com/
- https://www.google.com/adsense
- "Is pay-per-click better? Is organic positioning better?".
- The answer is obviously "It depends".

### **Timing**

#### Pay per Click

Immediate
 activation.
 The moment the
 campaign is
 interrupted, the
 visits stop arriving.

#### **Position Organic**

 Many months may pass or they may never appear for the keywords that interest us. However, this is a long-term positioning.

### **Security of Results**

Pay per Click

**Position Organic** 

 You are sure to appear. Just pay!  You are not sure of anything, even after positioning yourself: algorithms are constantly evolving and we continually make mistakes.

### **Number of Keywords**

#### Pay per Click

 You position yourself exactly for the selected keywords.

#### **Position Organic**

 There can be many keywords, all those present on our pages. It is never a given that with keywords selected by us we will obtain good positioning.

### **Visibility**

#### Pay per Click

 It is also possible to appear on sites belonging to the Google network or which have joined Adsense.

#### **Position Organic**

 Your ads are visible in Google searches and on all those sites that use Google search features.

### **Targeted Messages**

#### Pay per Click

Certainly more targeted.
We can decide exactly
what to appear in our
messages and edit them
in real time whenever
we want.

#### **Position Organic**

 Sometimes a web page positions itself with marginal keywords that are not specific to the landing page. Changes are learned slowly.

#### Costs

#### Pay per Click

 Expensive but we have full control of the ROI.
 The more you spend the higher you get and that's not always a given. It also depends on the quality of the ads and landing page.

#### **Position Organic**

 With organic positioning, the results last over time and the costs are generally fixed. In the long term the costs are certainly lower than pay per click.

#### **Sectors**

 In the case of highly competitive, highly inflated sectors, it may be more advantageous to work with PPC. But that's not true!

#### Pay per Click Position Organic

 With good work you can be in the top positions with most of the relevant keywords and for a long time.

 The best way to obtain visibility on search engines effectively is to use the right mix between pay per click and organic positioning, based on the results to be obtained, in how long, the products/services to promote, keeping costs low and optimizing times.
 Being present in both result areas increases the perceived value of the site (Branding).

 Various research (both Italian and international) has established that in general people click more in organic results. In any case, the target of people who click on PPC sponsored links is different from those who click on organic results.

Another reason to use both methods.

# **What is Search Engines Positioning?**

• It is the set of techniques used to make a web page visible in the SERPs, for a specific search carried out by the user. Therefore appear, as high as possible, in the results that the search engine presents at the time of the query, following the keywords entered by the user.

# **What is Search Engines Positioning?**

SERP stands for "Search Engines Results Page".
 SEOs therefore study the parameters that MoRs take into consideration to evaluate sites and position them in the SERPs.

These parameters can be divided into:

- Factors Internal to the web page (On-page)
- Factors External to the web page (Off-page)

### SEO

- SEO on language (creation of content suitable for the user target we are referring to and analysis of relevant keywords)
- SEO on architecture (optimization of the elements of each individual page and the internal interconnection between pages)
- SEO on reputation (increase in popularity, authority, relevance of the website to be positioned)

### **OnPage Factors**

 This part of the course analyzes all the internal factors of web pages useful for search engine optimization and determine better indexing and better positioning

### **OnPage Factors: Context Analysis**

- Who is my site aimed at?
- It 's important to start off on the right foot by analyzing the target audience my site is aimed at. Questions to ask yourself:

Who is looking for my product online?

How do my target users search online?

Where do my target users go to look for information online?

### **Context Analysis**

- It is therefore important to:
  - study the right language
  - analyze the habits of possible users
  - try to interest probable customers only with the language used.
- This requires a careful analysis of the contents to be included.
- They must be specific and targeted, such that they can be easily and interestingly received by potential buyers of our services or products.

### **Context Analysis**

- Therefore carry out a thorough market survey. As?
   Through targeted searches on search engines. Or in blogs, forums, social networks, specific sites, but also by going online, reading magazines and newspapers, interviewing people.
- <u>Behind every search there is a person</u>. Even if your site is aimed at a business audience, the person looking is always a man.

- The MoRs respond to direct requests from users, expressed through the so-called "keywords", typed in the search string. From these keywords derive the "natural" results or organic, an expression of the engines 'algorithm, as well as paid advertisements.
- Knowing what keywords are searched for by users on engines such as Google, Yahoo, Bing can determine the success of your business or not.

- The use that users make of search engines is not that of natural language, questions are not inserted, correct Italian and linear syntax are not used; users tend to express their needs concisely, for key concepts, with conventional abbreviations.
- It is important to "speak their language "and decline it according to the use that the MoRs make of it

- Analyzing the right keywords, based on the user target your site is aimed at, is a delicate operation, which requires knowledge of the searches carried out by potential customers.
- A good keyword analysis involves continuous discussions with the customer and continuous updates on the market trends of the keywords searched for on search engines.

- A useful tool: https://adwords.google.com/select/KeywordToolExternal
- The keywords searched online should be studied from the point of view :
  - quantitative (how many searches are there?)
  - seasonality (in what period do the searches take place?)
  - qualitative (which keywords bring the most sales?).

How do users search on Search Engines?

| Parole per query | 2009  | 2008  | 2007  |
|------------------|-------|-------|-------|
| 1 parola         | 20.4% | 21.1% | 24.5% |
| 2 parole         | 23.6% | 24.9% | 25.7% |
| 3 parole         | 21.8% | 21.9% | 20.7% |
| 4 parole         | 14.9% | 14.5% | 13.3% |
| 5 parole         | 8.7%  | 8.2%  | 7.5%  |

Data taken from the Motoricerca.net website

In 2009 only 20.4% of users searched on engines with a single word, the rest with multiple words.
 80 % of searches are therefore made up of more than one keyword. The tendency to specialize search keys, using multiple keywords seems to be increasing.

This is just a specific search, obviously a lot depends on the target, the country, the Search Engines used and many other factors.

 It depends, but in most cases it is not convenient to focus on single keywords.

- Don't just ask yourself the question:
   How many visits can this keyword bring?
- Also ask yourself this question:
   How many customers does this keyword bring me?

If we have to promote a generic manuals portal that includes all topics, therefore very vast and detailed, it may be necessary to aim for the positioning of the dry keyword " manuals ", but in the long term (we are talking about months or even years).

• If we have to promote a site with some manuals regarding specific topics (SEO, web marketing and search engines), it would be useless to focus on such a generic keyword, better than long tail.

If you decide to focus on a single keyword you need to know that:

- The target is certainly very broad and not very specific (difficult to study and analyze)
- This is a long-term promotion, of dubious success
- The resources needed may be exaggerated because the competition is very high
- better to start the positioning with long tails and then gradually reduce the tail

 Let's take the example of a site that talks about travel, or rather, let's be more specific, that talks about travel stories.

A phrase to use and optimize (long tail) could be "travel stories around the world with photos, images and videos "

A possible search key could be "world travel stories", or "world travel photos". Once this keyword has been positioned we could think about optimizing a key more specific "travel stories".

Create objective pages, targeted landing pages: then
pair our keyword with a location, to make it more
specific, "travel stories in Egypt" or much more
specific "travel stories in Sharm El Sheik with videos"
 .

- This solution will probably bring fewer visitors, compared to a more generic key, but the interest of the users who land on the site will be greater, because the visitors will be really interested in what we are offering them.
- A user > a problem > a landing page

- Example: promoting a hotel in Liguria.
- Useless keywords to land a user on your site, typically on the homepage:
- "3-star hotel in Liguria with swimming pool near the sea" includes too many services, solves too many problems at once, caters to too many people at once
- "Liguria hotel" too generic, infinite target.

#### How many problems can your Hotel solve?

- do you have a swimming pool?
- do you have a transportstation or something?
- are you cheap?
- do you have double rooms?
- do you have triple rooms?
- Valentine's Day offers?
- Christmas offers?
- offers at Easter?
- relaxing vacation?
- and if there is a couple with a child?

- What if a couple wants privacy?
- summer offers?
- do you have internet available?
- can you book?
- Is it open on New Year's Eve?
- does it have anything to do with the French Riviera?
- how many stars do you have?
- Is it luxury?
- How do I know availability?

#### How many problems can your Hotel solve?

- are there any last minute deals?
- special offers
- do you do animation?

- discos
- agreements with establishments or otherwise

# Don't put everything on the same page!

emotion with each key and try to satisfy it, creating an ad-hoc page!

## **Tools for analyzing keywords**

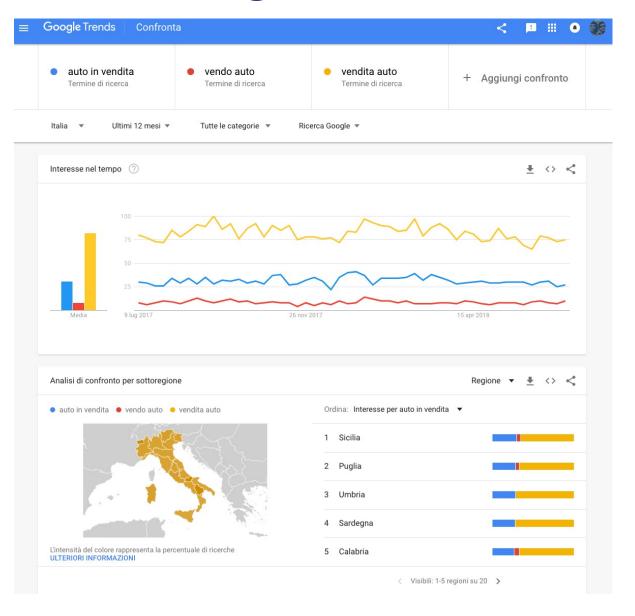
- There are some questions to ask yourself before starting to study the keywords of a site:
- What are the most searched keywords?
- Which are the most searched for ones related to my target?
- There are numerous useful tools for preventive keyword

## **Tools for analyzing keywords**

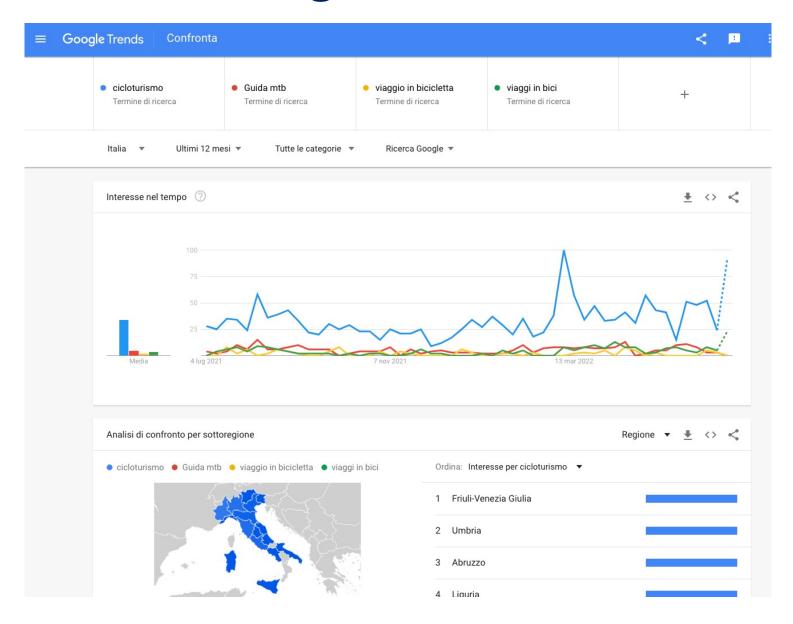
 Google Trends – Useful for checking market trends and the popularity of certain keywords. It is a free tool that allows you to view the popularity of search queries made on Google that contain the specified keywords. It allows you to compare up to 5 search keys and provides information on popularity over time, by geographical area and on the main related search phrases.

http://www.google.com/trends

## **Google Trends**



## **Google Trends**



## **Tools for analyzing keywords**

 Trellian Free Search Term Suggestion Tool – Uses search data from many search engines together to determine the most searched keywords based on a query.

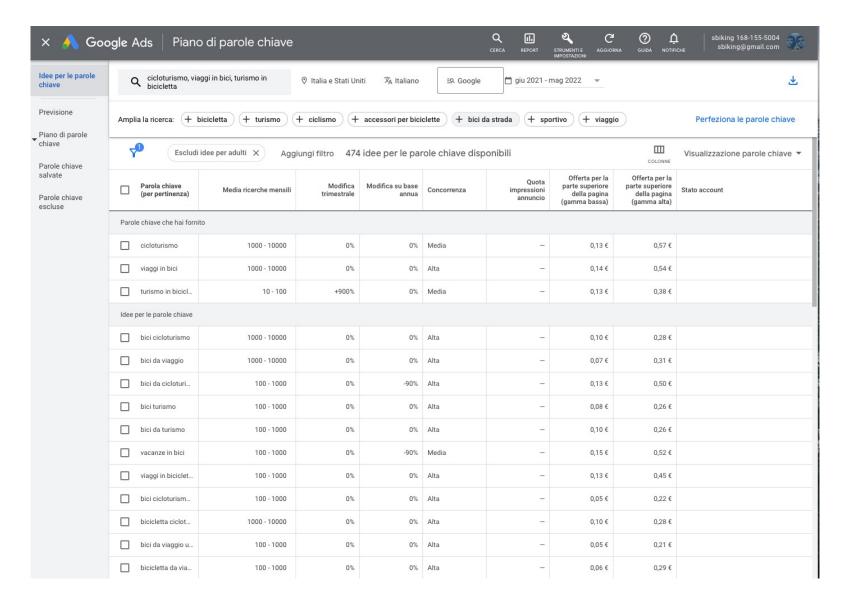
http://www.keyworddiscovery.com/search.html

### **Tools for analyzing keywords**

 Google Keyword Tool – Uses Google search data to determine the most searched keywords, based on a user-given query.

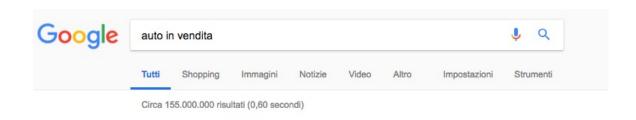
https://adwords.google.it/select/KeywordToolExternal

## Google Ads



#### Related google searches

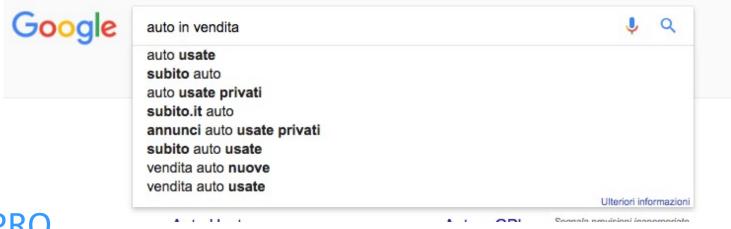
 Google Contextual Targeting Tool - Uses Google search data to determine semantically contextual keywords.



#### Ricerche correlate a auto in vendita

auto usate annunci auto usate privati
subito auto subito auto usate
auto usate privati vendita auto nuove
subito.it auto vendita auto usate

## **Google Suggest**



#### **PRO**

- Helps formulate queries
- Reduces spelling errors
- It saves jokes

#### **Against**

 It automatically suggests the most popular searches, consequently killing the long tail ....

## Google Suggest

#### Remedy

try to optimize your pages by studying the queries suggested by Google Suggest (perhaps focusing on the keywords at the top of the list, which should be those where the user's mouse "falls" most frequently)

#### The choice of domain name

- If we are registering a domain for our business it is best to use a name linked to the company (the company name for example). **Brand is very important!**
- However, when there is no existing activity behind it and a new brand needs to be decided, it is good to keep in mind that:
  - it must be easy to remember
  - it must be relevant to the theme of the site
  - it must be easy to pronounce

#### The choice of domain name

- How much does the domain name affect positioning?
- It depends on the search engine.
- For Bing, based on many tests carried out, it is very important to have the search key in the URL, not only in the domain name, but also in the pages.
- For Google it matters enough , but it's not the most important thing.
- For Yahoo little, link popularity matters much more.

#### The choice of domain name

With Google, if you want to push a dry key, having a domain with that key in the name is very important.
 E.g.: position the website <a href="www.manuali.it">www.manuali.it</a> for the keyword "manuals". The domain extension also matters a lot.

the "keywords in the URL "topic later.

### **Prepare the site for Search Engines**

- We have seen that indexing can occur automatically ( spider) or manually (direct reporting).
- the homepage of our site via either method, it will probably index all the pages that are 'connected'.

### **Prepare the site for MoRs**

If it doesn't index them it means there are linking problems:

- The site is not fully connected. There are isolated pages that do not receive links either from the homepage or from other pages
- We have blocked the indexing of certain pages using robots, or particular tags/attributes
- We use javascript links
- We use flash menus

### **Prepare the site for Search Engines**

- Engine technologies change often. It is worth keeping in mind.
- What works today does not necessarily mean it will work forever.
- An excellent rule is to always replicate a text menu at the bottom of the page. In this way you are always sure that the URL can be reached by spiders.
- There are also other useful methods to speed up indexing

#### Sitemap protocol

- xml schema for:
- provide information to MoRs on all pages of the site
- indicate the most important pages
- when pages are edited

This is all useful to enable intelligent scanning and more upto-date search results.

http://www.sitemaps.org/it/protocol.php

https://www.xml-sitemaps.com/

#### The contents seen by Search Engines

- After having memorized the web pages, the Search Engines "break up "the page, eliminate what they do not consider useful and break down the useful parts into keywords. Through complex algorithms they manage to assign a certain priority to keywords (composed of more or fewer words, attached or distant from each other, ...).
- The goal is to understand which pages to return based on a query, with what priority and order.

#### The contents seen by Search Engines

- Obviously they don't understand the semantic meaning of the text, but through their advanced algorithms, they still manage to 'understand' what the page is about (in broad terms).
- Let's take two pages:
  - one suitable for *selling a trip* .
  - the other created only to tell a journey.

#### The contents seen by MoRs

- A user who visits the first page will expect to find travel offers, flights, hotels etc.; he is probably inclined to purchase a trip.
- On the second page you expect to find a story describing a travel itinerary; he therefore just wants to spend a moment of relaxing reading, perhaps dreaming of a holiday on the Caribbean beaches.

#### The contents seen by Search Engines

 For this reason, search engines will try, as far as possible, to always respond in a specific and differentiated way to their users, offering clear information on holidays to the former and a novel to the latter.

 Conclusion: It is unthinkable to always optimize web pages in the same way.

- This is the title of the page.
   It is inserted inside the tags <head> </head> that come before the tag <body>.
- The tag is as follows: <title>My Title</title>
- The *Title* is the most important internal factor of the page.

 It must be kept in mind that, in addition to its importance in terms of optimization, it is shown to users in the SERPs, following their searches on the engines, highlighting in *bold* the exact words searched for by the user, if present in the title itself.
 A well-written title greatly increases the chances that a user will click on the link to our page in the MoR results

- There are some rules to keep in mind when we write the titles of our pages:
  - 1). Each web page has its own unique and original title.

It is unthinkable that for the entire site, all pages have the same title. A strong recommendation not to make this mistake because it is really important.

- **2).** If we do not have a precise branding strategy, it is useless to include the name of the site or your brand in the title of the page .
- Examples of *Title* :

Wrong: Agenzia Giovanni – Viaggi nel Mondo

**Correct**: Viaggi nel Mondo

• However, if you want to insert your brand, it is better to put it in the last part of the *Title*: *Travel in the World* - *Giovanni Agency* 

**3).** Don't put a series of keys in the *Title*. It is always better to create a sentence that intrigues the user and , if you don't succeed, that is at least as close as possible to what the user really wants at that moment .

#### Example:

Trips around the world at discounted prices organized by Agenzia Giovanni

• Examples of *Title*:

Wrong: Travel, World, Hotel, Holidays, Travel

**Correct**: Travel around the World: the experience of

those who have already been there

**Correct**: Travel around the World: dive into the

adventure of a perfect holiday

Phrases that intrigue the reader.

In this case the user is looking for travel experiences.

**4).** Text prominence. The closer the *Title keys* are to the beginning, to the left, the more relevant they will be considered by search engines.

#### Examples of *Title*:

Wrong: The experience of those who have been

there: Travels around the World

**Correct**: Travels around the World: the experience of

those who have been there

**5).** The length of the *Title* should be between 60 and 70 characters. This is not a rule to be followed to the letter. Each page has its own title and it may therefore happen that you have longer or shorter *titles*. Various tests have shown that Google only indexes the first 11 words of the title

**6).** Try to summarize the content of the page in 70 characters (11 words), respecting the aforementioned points, with an eye on the main keyword or keywords for which we intend to position the page .

- Writing effective titles is a very difficult job!
- An example could be:
  - <title>World Travel: holidays and adventure in the most exciting places on earth</title>
  - This seems like a good title. 76 characters. In Google it will probably appear truncated:
  - World Travel: holidays and adventure in the most exciting places...

#### **Character Count Tool**

Tool to check character length :
 <a href="http://www.i-dome.com/microtools/conta-lettere.phtml">http://www.i-dome.com/microtools/conta-lettere.phtml</a>

There are many others obviously ©

- <meta name="description" content="page description">
- Search engines display the contents of this tag in the SERPs under the title of the page. For Google this is not always true: it often uses parts of the text on the page relevant to the searched keyword.

- Many illustrate this tag as unimportant, but this is not the case. The text inserted inside is used by the Search Engines to understand the context of the page. Even if he apparently ignores it in the searches carried out.
- The text contained in the meta-description must not be a repetition of the title, but an accurate description of the content of the page. It must be a natural continuation of the title and entice the user to click

- Google offers some tips on how to write a good description :
- 1. Use different descriptions for each page
- 2. Include clear and important information
- 3. Insert descriptions written by the author, not programmed automatically (this is not always possible)
- 4. Use high quality information

 The maximum length of the meta description shown in Google SERPs is 150 characters. You need to concentrate on a text that is more or less long like this. Use a maximum of 200 characters (it is always better to stay under 150).

#### Example:

- <title>World Travel: holidays and adventure in the most beautiful places on earth</title> [ 70 characters]
- <meta name="description" content="World Travel, an alternative way to travel: in a group, alone, holidays in a 4x4 car and motorbike, exploration and adventure, at discounted prices."> [ 148 characters]

#### **Meta Keywords**

- <meta name="keywords" content="">
- This tag is ignored by many search engines. Even Google apparently seems to ignore it .
- Various tests have shown that a certain consistency between the title, description and keywords and text contained between body tags is well liked by Google. So why ignore it?
- Example:
  - <meta name="keywords" content="travel, world, traveling,
    holidays, adventure, car, motorbike, in a group, alone">

### **Title Meta Description unwanted?**

• Sometimes it happens that in the Google SERPs, for certain searched keywords, you see your site presenting a different title and description from the way we entered them. Indeed, the text present in these tags is not found on the entire page.

### **Title Meta Description unwanted?**

- Where did this alternative Title and Description come from?
- You are certainly present in Dmoz and the alternative phrases are those that the Open Directory Project editor inserted when inserting your site.
- Lately Google also uses other sources to display the title of a page. For example, anchor texts.

### **Title Meta Description unwanted?**

 However, there are special tags to exclude the use of such alternative titles and descriptions:

To prevent the DMOZ description from being used :

```
<meta name =" robots " content =" noodp ">
```

To prevent the Yahoo! description from being used:

```
<meta name =" robots " content =" noydr ">
```

To prevent the DMOZ and Yahoo! description from being used:

```
<meta name =" robots " content =" noodp , noydr ">
```

For all engines:

```
<meta name =" robots " content ="NOODP">
```

Only for Google:

```
<meta name =" googlebot " content ="NOODP">
```

#### **Text contained in the Body**

- The keyword 'push 'must always be present in the body.
- It is important that those that appear after the opening of the <body> tag are present in the first lines of text. Let's give an even stricter limit: the first 100 characters (calculated in the html after the body) are the most significant on the page.

#### The Headers (H1, H2, Hx)

 The main key or the phrase that contains the main topic of the page must be inserted inside the <h1> </h1> tags . Not the exact same sentence contained in the title.

 It is possible to use multiple h1s on the page but it is not a good practice.

#### The Headers (H1, H2, Hx)

 'secondary 'topics, which specialize the main topic, must be inserted inside the <h2> </h2>.

And so on with the other Hx.

 However, follow the W3C rules of use, applying the Hx to scale on the page, according to the natural use of the headings for the various topics.

### The Emphasis of the Text

When we want to give some sentences greater relevance than the rest of the body of the text, we can use one of these tags, thus ordering that part of the text to appear for example in *italics* (*italic* - <*i>*<*i>*<*i>*), **in bold** (**bold** - <**b>**</**b>**) or <u>underline</u> (<u></u>).

Spiders are sensitive to these commands and, like the reader, they also attach particular importance to the text thus presented.

#### **Image Alt**

- The *Alt* is the descriptive *tag of the image* we are showing to our users.
- In case of non-visibility of the same, due to *server problems* or other, it is able to make up for the inconvenience by showing alternative information; it is therefore a text considered relevant for search engines.

#### **Keywords present in the URL**

 The Search Engines give great importance to the keywords inserted in the URL: in the domain, in the folders, in the name of a file. It adds something more to the understanding of the topics of the page. Never abuse.

 To separate two keywords, what is better, using the hyphen (-) or the underscore (\_)?

#### **Keywords present in the URL**

- Example of use for the keyword *house in the countryside:*
- (-) house-in-the-countryside (will consider both the keys 'house 'and 'countryside', as well as 'house in the country')
- (\_)casa\_in\_countryside (it will only consider the key 'house in the countryside ')

Google currently does not distinguish between '\_' and '-'.

#### Other...

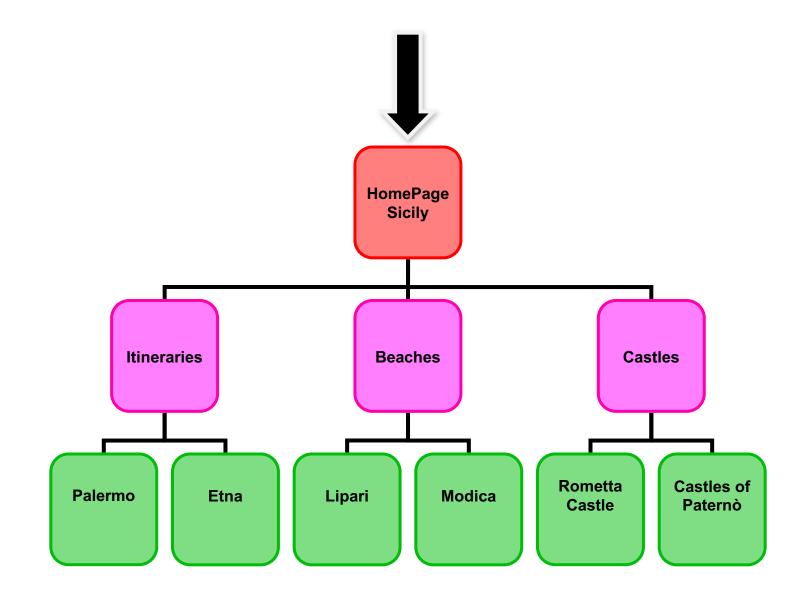
The Navigation Structure

Dynamic URLs and Static URLs

• Url Rewrite

Examples of Optimized Pages

- A good navigation structure of the site allows users to visit all the pages easily and with just a few clicks, allows immediate use of the contents and becomes much more attractive for search engines.
- A classic navigation structure of websites is the hierarchical or " tree " one, which allows users, by browsing the site in depth, to reach the information they need in an increasingly detailed and specific way.



- When a user enters our site for the first time, regardless of the entry page, they must immediately find the answers to three fundamental questions:
- 1) where am !?
  - 2) where have I been?
  - 3) where can I go?
- A good navigation structure of a site must answer these questions.

- When we talk about the structure of a website we talk about hierarchical structure and hypertextual structure.
   We then begin to design the navigation after having created the categorization content and labeling activities.
- In essence: catalog the contents, group them, name them and establish hierarchies.

Navigation links must fulfill at least three fundamental needs:

- 1. Provide the visitor with a main site navigation structure that is logical and as simple as possible;
- 2. Allow Search Engines spiders to identify all pages of the site;
- 3. Link pages that develop similar or related concepts.

The common navigation scheme encountered on websites is:

- Left vertical bar -> <a href="http://www.libreriadelsanto.it">http://www.libreriadelsanto.it</a>
- Tabs at the top / Drop-Down Menu -> <a href="http://www.libreriadelsanto.it">http://www.libreriadelsanto.it</a>
- Upper horizontal bar ( list of links above ) -> http://www.aruba.it
- Centered list of categories -> <a href="http://directory.virgilio.it">http://directory.virgilio.it</a>

- More (vertical bar on the right, horizontal bar at the bottom of the footer, or many navigation menus together)
- Too many navigation menus lead to user confusion and often to an enormous increase in links within a page.
   Let's say that no more than three menus can fit on one page. E.g. https://www.libreriadelsanto.it/

## A logical division of the menus could be this:

- Main menu: it is the menu that groups together the most important items, present on all pages of the site and allows access to significant areas of the site, regardless of where the visitor is located;
- Local or secondary menu: These are menus that belong to several specific subsections and that vary in content, but preferably do not vary in location; e.g. books->sacred writing->subcategories

- Contextual menu: it is the menu that allows access to a certain page starting from the content of a specific page of the site (related contents);
- Footer menu: it is represented by a series of text links, positioned at the bottom of the page, which usually recall the main menu or in any case the "fixed" pages of the site.

- Another *useful* navigation method, much appreciated by users and also by search engines, is the *path* or *Breadcrumb* (bread crumbs); it is nothing more than an indication to the user of where he is within the site.
- You are here : Home Page > Itineraries > Etna
- The keywords homepage and Itineraries will have a link back to respectively

www.sicilia.org and www.sicilia.org/itinerari.html

- It is recommended to add a more "flat" system to this navigation model, for example a **site map**, containing on a single page the list of links to the main resources of the site, possibly accompanied by a short description.
- The last but not least goal of careful internal link design is to use them to connect pages that develop similar or related concepts.

• These links between related pages break the "static" scheme offered by the navigation menus and represent a very useful tool to allow both the user and the search engine spider to move easily between semantically linked texts, providing a clear indication on the link between the text in which the link appears and the text to which it points.

• This correlation is extremely important for search engines and becomes even more marked when the text used within the link (anchor text) includes one or more keywords used on the page to which the link leads.

Example: <a href= " http://www.sicilia.org/itinerari.html
" > Itineraries Sicily</a>

Don't put too many links on the same page.

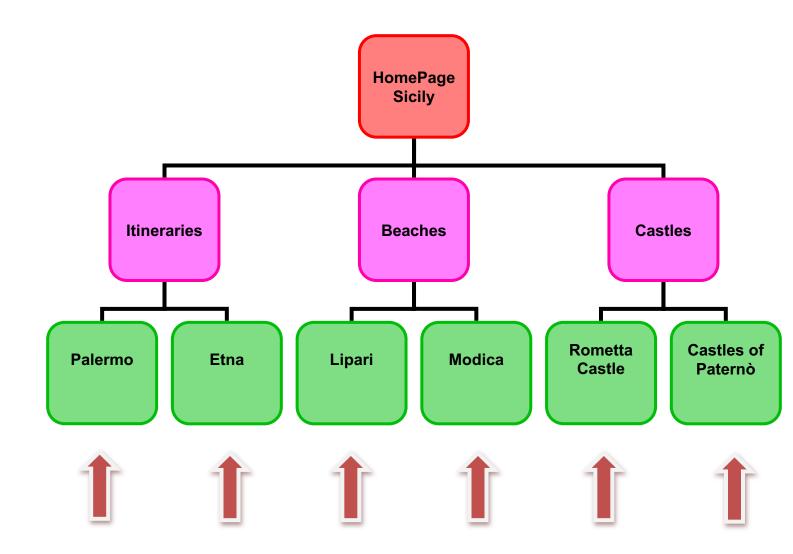
- Some tend to explode all the menus on all the pages, then insert all the links to all the pages of the site on each web page.
- It is a wrong practice, especially if the site is made up of many pages.

## Too many links per page are wrong:

- Google recommends inserting around 100 links per page (100kb limit?)
- certainly creates confusion for the user who cannot quickly find what he was looking for and gets lost among the hundreds of entries
- The contextualisation of the page is lost (it is better to link to a
  few pages but in context and in an intelligent way, so as to be
  able to reach all the pages of the site in just a few clicks,
  especially the closely linked ones)

#### Each page is a Welcome Page.

- By working with search engines, accesses can arrive on any page of the site, or rather especially in the leaves of the navigation tree.
- Each page is therefore a Welcome Page and from each page it must be possible to navigate all the pages of the site, moving to each section easily and with just a few clicks. Each page therefore must have its own good navigation structure, not just the homepage or main category pages.



 Let's start immediately with the clear distinction between the two URLs:

#### Static URLs :

http://www.miosito.it/computer.html

http://www.miosito.it/article.asp

http://www.miosito.it/computer/12/notebook/124.html

http://www.miosito.it/computer/notebook.php

#### Dynamic URLs:

http://www.miosito.it/notebook.php?id=124

http://www.miosito.it/notebook.asp?id=124&cat=computer&

idcat=12&state=1&set=0

 The symbols that allow us to recognize the nature of a url:

```
?, &, %, +, =, $, cgi-bin, .cgi
```

- If the URL of a web page contains one (or more than one)
  of these symbols, then it is a dynamic URL.
- The ? symbol, for example, announces a query string or a system variable that allows you to identify the parameters for which the dynamic page can return different information.

- The ?, in other words, indicates to the server that what follows represents one or more URL parameters.
- The symbol = indicates the value of the parameter.
- The & symbol divides the parameters we send to the server with our request.
- Many search engines can't read what follows the symbol?
   (or they can only read it if it contains a small number of variables). It is said that this part of the URL is not SEF (Search Engine Friendly).

- Generally we use dynamic URLs when we have a site that relies on a database that contains all the information to be written on the web page.
- For example, if we have a news site, with a url like <a href="http://www.miosito.it/notizie.php?id=23">http://www.miosito.it/notizie.php?id=23</a>.
  - The page that displays the news will always be the same *ordini.php*, but the id of the news to be displayed will change and therefore the content of the news.

- In the past, search engines stated that they were not able to index this type of URL well, especially in cases where sites had more than one *variable in the URL*.
- Even in the eyes of search engines these 2 urls were different:

http://www.miosito.it/notizie.php?id=23&cat=2
http://www.miosito.it/notizie.php?cat=2&id=23

- Subsequently, the Search Engines have made progress: they are able to break down the URL, the variables contained in it and understand that they are identical URLs.
- However, as the variables in the URL increased, the possible combinations of *URLs* appeared infinite and therefore even Google itself declared that it did not interpret URLs with more than 3 parameters well.

- Recently some search engines (Google first and foremost)
  have declared that they have solved this problem and no
  longer detect any difficulties in indexing these *URLs*. But
  it's always better to be foresighted.
- Another important factor regarding the rewriting of the URL from dynamic to static is the usefulness for positioning, given that we replace anonymous indexes with keywords in context, which increase the relevance of the page on certain topics.

- If the URLs are created including our main keyword, the advantages are considerable.
- Example:

```
http://www.miosito.it/product.php?id=124&cat=12 in
```

- http://www.miosito.it/computer-12/notebook-124.html
- However, be careful not to overdo it with the keywords in the URL and with their repetitions.

- A url like this is excessively long:
   http://www.miosito.it/computer/notebook/acer/aspire/65
   00/15\_4/modello-base/nero/123-2.html Some
   engines may have difficulty navigating this url . Given the large number of slashes(/), they might mean that these are many levels of depth
- Other wrong url (over-optimized):
   <a href="http://www.miosito.it/acer-computer/computer-acer/notebook-acer/124.html">http://www.miosito.it/acer-computer/computer-acer/notebook-acer/124.html</a>

## **URL** recommendations

Each page must ALWAYS be linked with the same url.

A common mistake (especially when using CMS) is linking a page with various urls:

http://www.nomesimo.it

http://www.nomesimo.it/index.php

http://www.nomesimo.it/index.php?id=1

All these urls lead to the same page. Search Engines interpret them as different URLs and therefore should point to different pages.

## **URL** recommendations

#### Using .htaccess to perform 301 redirects

If it is not possible to resolve the problems of double and triple URLs linking to the same page on a technical level, we must intervene with 301 redirects via .htaccess .

http://www.libreriadelsanto.it/reparti/libri/1671.html http://www.libreriadelsanto.it/reparti/libri/1671-1.html

## Other factors

Other factors useful for positioning or penalizing?

There are around 200 factors that influence positioning on Google.

# **Speed**

- The reachability and speed of a site are very important!
- Watch out for repeated or long downs.
   A sufficiently long down could lead to a site being removed from the index.
- Slow server response times can cause the crawler to lose interest in our pages.

Check with the webmaster tools or other tools:

<a href="https://developers.google.com/speed/pagespeed/insights/?hl">https://developers.google.com/speed/pagespeed/insights/?hl</a>
<a href="https://developers.google.com/speed/pagespeed/insights/?hl">https://developers.google.com/speed/pagespeed/insights/?hl</a>
<a href="https://developers.google.com/speed/pagespeed/insights/?hl">https://developers.google.com/speed/pagespeed/insights/?hl</a>

and... ACT!

# **Old age**

" old " site ranks better than a young site.

#### Factors:

- Domain seniority
- Old age of the site pages
- Always the same topic discussed over the years
- It has been receiving the same links from themed pages for several years.

# **Quantity and Quality**

 A lot of grammatically correct and semantically complete text represents a very important factor, but even some spelling errors can help...

Content is king!

# Update Frequency and Site Growth Level

- Content update frequency
- Level of growth in the number of pages on the site over time
- Increase and improvement of the contents of a page over time (comments, other information, contextual links,...)

## **Semantic Domain**

- The overall topic of the site is important .
- Google likes a themed site.
- With a themed site you can surpass the big names!
- contextual relationships between the contents of the site and the terms used for the user's

## **Bounce Rate**

- The bounce rate of a site is very important.
- The bounce rate indicates the percentage of users who leave the site after visiting only one page.
- High value: unattractive site
- Low value: well-made and pleasant site for users.
- See Google Analytics

# Domain Extension and Geolocation of Hosting

- Domain extension matters
- A .it domain that speaks Italian has more chances of positioning than a .co.uk domain that speaks Italian.
- Hosting geolocation matters, but not too much.

# **Uniqueness of contents**

- It is extremely harmful and absolutely penalizing to create a site composed solely, or largely, of non-original content.
- Even if duplicate content is located in only one section of a site, it could undermine the value of the entire site.
- The percentage of original content compared to duplicates is important. (insert comments or other original info)
- If the site consists of some duplicate content it may lose positions in SERP.

# **Outgoing Links**

- In-context, high-quality outbound links can bring benefits.
- Outbound links to low quality and/or SPAM sites can lead to heavy penalties, as can participation in link farms.
- It is possible to be banned because of these links.

# No spam

The use of Spamming techniques (Keyword Stuffing, hidden text, etc.)

THEY ALWAYS AND ONLY BRING TROUBLE!

# **On-Page Optimization**

#### Steps:

- 1. Analyze keywords and competition (google searches, web tools, google webmaster tools, google analytics,...)
- 2. Analyze the behavior of the Google spider (Apache log and webmaster tools)
- 3. Optimize Tags (Title, Description, H1,...) / create different tags for each page
- 4. Optimize the navigation structure
- 5. Eliminate excess links on pages, add links in context

# **On-Page Optimization**

## Steps:

- 6. Rewrite the URLs.
- 7. Perform 301 redirects from old to new.
- 8. Work on content: optimization, emphasis in the text, contextual links to other pages
- 9. Analyze the results with Google analytics and re-perform the optimization operations
- 10. Analyze the results in the webmaster tools and more optimizations.

Interesting <u>summary guide</u> on on-page factors with comparison between various Italian SEOs

## What are keywords for?

- The strategy used to choose, use and track the performance of keywords and keyphrases represents one of the most important factors in determining the success or otherwise of a site.
- By success we mean bringing visitors to the site, who continue browsing and then complete the site's objectives. In most cases, you are looking for qualified traffic, not indiscriminate traffic.

## What are keywords for?

#### We want that:

- the pages of our site are indexed
- our pages are considered important for the keywords searched by users
- users recognize themselves when they see a page from our site in the results

#### **How users query Search Engines**

- Every internet browsing session begins with a want or need. Anyone who arrives at a site through the keywords entered into a search engine already shows their state of mind and what they want.
  - You already have clear ideas > Brand Search
  - Needs information > research and refinement (more complete sentences)

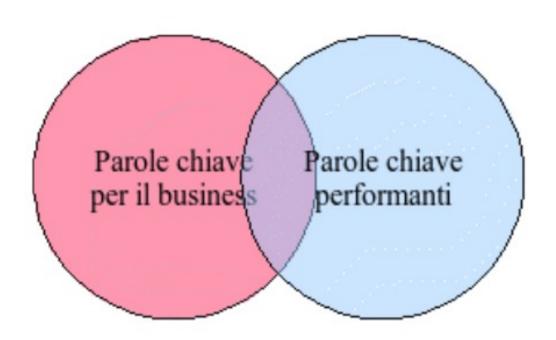
### **Keywords and Objectives**

Optimizing a site for search engines is always driven by the site's objectives. Goals answer the question "how do we want our site to become more relevant?" "

#### We want to increase:

- Absolute visibility
- The downloaded brochures?
- Contacts at the sales office ?
- Sales of products and/or services online?
- Page views (do we sell advertising)?
- The number of newsletter subscribers?

# **Keywords and Objectives**



#### Who is our audience

- The winning keywords are those that express an interest in our products and services (and our market in general), always in the language actually used by our visitors.
- A not uncommon mistake is to use too professional or refined language; When analyzing keywords it is essential to take into account the age, education level and demographic aspects of our target visitors

# Criteria: general words

- General words relating to our scope of products and/or services are very useful for attracting and welcoming people who do not have clear, precise or fixed ideas about a brand or company
- People who rely on more general words are less informed and less advanced in the decision-making process
  - They will need more information or stimuli that convince them to continue with a "conversion", i.e. request for further information, purchase, etc.
  - More time will pass before making a decision, such as making a purchase
  - Perhaps they are looking for something very different from the products and/or services we offer.

# Criteria: general words

- The traffic arriving at the site will often be off-target. A search for "house" probably doesn't mean "record company" or " parent company"
- Remaining general, the competition for good visibility in search engines is often higher and more demanding.

# Criteria: specific words

- Specific words are used by people who already have, or think
  they already have, clear ideas about what they want to find.
  They are people " qualified " for our products and/or services,
  more inclined to take a short -term action, such as a purchase,
  as long as they recognize themselves on the site chosen by the
  search engine,
- More specific searches are generally made up of a verb, noun and any qualified adjectives (e.g. German school book, Rome-London flights).

# Criteria: geographical words

#### Geographical words

 A paradox of the internet is that, if the visibility of the sites is worldwide, many of the needs for products and/or services are rooted in the territory, that is, they are "local" (e.g. plumber Rome Tiburtina, Gallucci supermarket L' Aquila)

#### Criteria: common attributes

- In some sectors, the adjectives in the search words are discriminating within the decision-making process. For flights, you might search for "low cost" or "last minute." For Milan, we could search for "official" to prevent our search from landing on amateur sites or to protect it from potentially counterfeit products. For online sales, it is better to specify online or the online or online variants; many sites promote products and services online without offering the possibility of purchasing online.
- The word "free" or "free" is never out of fashion.

#### **Criteria: words of actions**

With action words, an internet user expresses the activity he wants to complete. This type of user is a great visitor for us because they are further along in the decision making process. Typical words include "buy", "sell" "I search", "compare", "find".

### Criteria: words to inform yourself

• These are "frequently asked "questions relating to the market for our products and/or services. The searches are of the type "how to ... ", what to give... ", "what to do. .. ", or "guide to... ", "resources... ", "ideas... ", "examples... ". Question words in Italian are: what, who, how, how come, where, why, which, when and how much.

#### Criteria: superlatives and comparatives

 Sometimes just any adjective is not enough: we need the best superlative, the largest majority comparative, the least expensive minority comparative.

# **Criteria: handwriting**

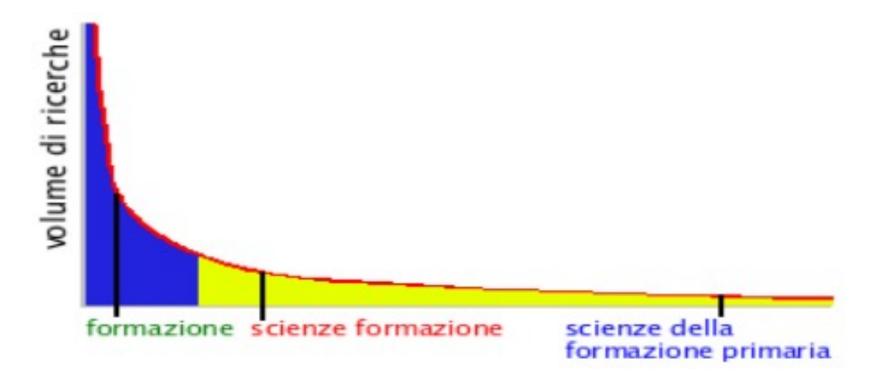
- It is always best to check the behavior of the main search engines for hyphenable words, such as email, email. Generally they are able to recognize alternatives, but not always.
- If the company name or a keyword can be written both attached and detached, both variations need to be considered.
   Particularly in the case of a multi-word mark, many people are likely to write it with detached words.
- Search Engines are indifferent to uppercase and/or lowercase.

# Criteria: stop words

- Stop words are common words, such as " un ", " e ", " è ", " il", " del " (articles, prepositions, etc...). They give little semantic value to the indexing process of a web page.
- They are ignored by search engines during searches if they are not inserted between quotes or if they are not part of the keyphrase itself (e.g. credit cards).

# The long tail

 The opposite technique to a selection of generic words is represented by the choice of many very specific phrases with low search volume.



# The seasonality of research

- The needs and desires that internet surfers express in their search engine consultations are often closely linked to the different seasons of the year. There are few people in Italy who start looking for a beach holiday in Abruzzo in the month of December (maybe they will do it for next summer). In December you are more likely to look for toys. The search for a new car, for example, spikes when there are government incentives available.
- Consulting <u>Google Trends</u> is an excellent way to check the presence or absence of the seasonal effect.

# **Google Trends**



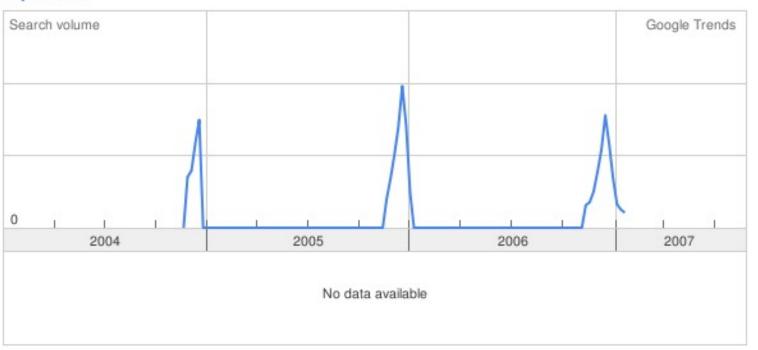
pandoro

Search Trends

Tip: You can compare searches by separating with commas.

#### Trend history





No news a

### Summary of keyword selection

- Internet surfers use language that defines a problem or need,
   i.e. " I'm looking for a house in Rome ", " I'm traveling to Cuba ";
- The terminology used is simple and not like a professional in the sector ( I'm looking for a house instead of real estate ads )
- Most searches consist of 1-3 words or phrases of words
- Common words (stop words) are ignored
- Word order is important

### Summary of keyword selection

- A website will generally have multiple distinct sections and each will have its own vocabulary
- Reports on site access (web analytics) can provide information on the words that already bring traffic to the site from search engines

# Web Analytics: Keywords

|     | Parola chiave 😸 Nessuna 😸                   | Visite ↓ | Pagine/Visita | Tempo<br>medio sul<br>sito | % visite<br>nuove | Frequenza di<br>rimbalzo |
|-----|---|----------|---------------|----------------------------|-------------------|--------------------------|
| 1.  | matrimonio.it Brand                         | 63.967   | 20,91         | 00:16:29                   | 22,96%            | 7,10%                    |
| 2.  | matrimonio Generica                         | 21.361   | 18,82         | 00:14:14                   | 26,62%            | 8,60%                    |
| 3.  | forum matrimonio Specifica                  | 5.096    | 20,49         | 00:18:15                   | 26,16%            | 4,49%                    |
| 4.  | accondiature sposa Correlata                | 3.808    | 7,45          | 00:03:33                   | 55,02%            | 27,97%                   |
| 5.  | libretto messa matrimonio Specifica         | 3.406    | 7,05          | 00:06:22                   | 37,49%            | 28,89%                   |
| 6.  | matrimonio.it forum Brand                   | 2.892    | 18,84         | 00:17:01                   | 21,96%            | 5,91%                    |
| 7.  | bouquet sposa 2010 Stagionalità esplicita   | 2.774    | 11,41         | 00:05:35                   | 51,87%            | 16,44%                   |
| 8.  | www.matrimonio.it Brand                     | 1.867    | 21,86         | 00:17:22                   | 15,43%            | 6,75%                    |
| 9.  | scarpe da sposa Correlata                   | 1.409    | 9,61          | 00:06:20                   | 48,97%            | 16,96%                   |
| 10. | partecipazioni matrimonio modelli Specifica | 1.210    | 9,24          | 00:09:31                   | 44,13%            | 39,34%                   |

#### The first lists

- The first step coincides with drawing up lists of potential keywords for our website. We will need the lists later to " seed " some keyword research tools.
- Identify different content areas
  - A general reception area, like the home
  - An area of in -depth study, such as products
  - An institutional area , like who we are, where we are

Each area of the site offers a distinct opportunity for visibility in search engines and therefore needs its own list of keywords.

#### The first lists

- The first list to start with is the most general one: the words oriented to our main activity on the internet. This list is useful for our home page and other general pages.
- You can start by observing what the competition has done: judging, analyzing, improving...

#### Criteria for populating lists

When writing a keyword list, the most important aspects are generally:

- Popularity (percentage of searches)
- Competition (how many pages respond to the word or phrase)
- Profitability (how likely is it that the word or phrase will bring visitors to the site who will complete the intended objectives, immediately or in a subsequent session?)

#### **Keyword tools**

- https://adwords.google.it/select/KeywordToolExternal
- http://www.google.it/trends
- http://www.keyworddiscovery.com/search.html
- Related google searches
- Semantic search engines: <a href="http://clusty.com">http://clusty.com</a>

#### **Measure results**

- http://www.google.it/analytics
- https://search.google.com/search-console/about



Il sito https://www.bike99.it/ è ora associato alla proprietà di Google Analytics <a href="https://www.bike99.it">https://www.bike99.it</a>

A: Webmaster del sito https://www.bike99.it/,

Dai sistemi di Google risulta che il tuo account Search Console relativo al sito https://www.bike99.it/ sia ora collegato a una proprietà web di Google Analytics. Se non te lo aspettavi, è possibile che un altro proprietario del sito abbia creato o modificato il collegamento in Search Console.

#### Azione consigliata:

1 Verifica che l'associazione sia corretta
Assicurati che l'URL del sito web corrisponda alla
proprietà di Google Analytics a cui desideravi venisse
associato. Se non hai fatto tu la richiesta o se hai
cambiato idea, puoi modificare il link del sito web nel

Modifica il link del sito web

# **SEO**Search Engine Optimization

#### by Alessandro Celi

Master in Web Technology – L' Aquila alessandro.celi@univaq.it