

S1 : How to optimize your Internet search with Google : 21 mn

S1.1 Google, the most popular search engine : 5 mn

Diapo Title S1

Internet, the abbreviation of International Network, was developed during the nineteen seventies. On this network, the first Website was launched in 1991.

In 20 years, the number of websites has dramatically increased and currently their number is more than 300 million.

Diapo : Netcraft

So, finding your way around, or even knowing where to start may be difficult. To help Internet users, tools had been developed since 1995.

Diapo : Yahoo

First, directories, like Yahoo, including hand selected websites, classified by topic into categories, with a small description of each site.

Here the version of Yahoo directory in 1998

Diapos : Altavista 1998 et 2011

Almost in the same time as directories, the first search engines were created, the most known being Altavista.

Here the home page of Altavista in 1998 and the current one.

Diapo Title S1.1

+ Diapo: Google

Now more than 60 % of all Web searches in the world go through Google, created in 1998, and immediately adopted by Internet users thanks to an original and relevant ranking of the results.

Diapo : Fonctionnement des moteurs

Search engines work differently from directories.

They work by sending computer programs known as "spiders", "crawlers" or "robots" out to search the web. The robots follow the links from page to page, collect the "full text" information, and store it in the database of the search engine.

Diapo : Google example with cystinosis

When you search for information about cystinosis, for example, Google looks through its database for documents that mention the same string of letters "cystinosis" somewhere into their text, and displays them.

As you will never have enough time to read all the results found, Google uses a special set of criteria to decide which pages to display first when you run a search. More than 200 criteria, the most famous of them named Page Rank.

Diapo : Page Rank

In this example, for every page found for "cystinosis", Google examines how many other websites link to it. Google interprets a link to a page as a vote, and considers that the most popular pages are the most relevant to your query.

Directories have now almost completely disappeared, due to various reasons, including their cost. So, to search for medical information on the Web, the most used tools are search engines, and above all, Google.

S1.2 Basic tips for Google search : 7 mn

Diapo Title S1.2

Here are some tips, the most important, to help you using Standard search or Advanced search.

Ecran : Standard search and Advanced search

Diapo : Writing search terms

Diapos Cystinosis

As you are typing your words, Google tries to help you by suggesting terms which might fit your search. For example, typing cystin suggests cystinosis, cystinuria.

You can select an option, for example cystinosis, or type the whole word to display the related results.

Google also helps correcting your misspellings. For example, cystinosis with a mistake suggests the correct term.

Diapo 11 : Search with two or more terms

*You generally run a search by using more than a single term. Using a space between terms displays the **Web pages** which contain **all of them**, separated or together in **the same document**.*

For example, thalassemia treatment

Supprimer le commentaire

It is equivalent to use the advanced search and type the two words in the field named All these words

Diapo 13 : Search with quoted phrases

Terms in quotes allow you narrowing your search. Using "thalassemia treatment" in quotes displays documents with this exact match and is different from using the terms without quotes which finds documents where the terms can be together or separated.

Supprimer le commentaire

In this example, it is equivalent to use the advanced search and type the two words in the field named This exact wording or phrase, without using quotes.

Diapo 15 : Search with the OR operator

Using OR between two terms or more will search for documents which contain at least one of them.

thalassemia treatment OR diagnosis displays documents containing thalassemia associated to treatment or to diagnosis or to the two terms.

thalassemia symptoms OR diagnosis is an example of what is called a query. A query is composed with one or more terms and may include operators like OR.

In the standard search, it is important to type OR in upper case letters.

Supprimer le commentaire

In this example, it is equivalent to use the advanced search and type thalassemia in the field All these words and symptoms and diagnosis in the fields named One or more of these words.

Diapos (2) : Mucopolysaccharidosis

The OR operator may be very helpful when different wordings of a disease display very different results due to the variety of main terms or synonyms used by websites. Like in this example with "mucopolysaccharidosis type III" also called "sanfilippo syndrome". Four spellings, four different results. Combining the four spellings with OR displays more complete results and is equivalent to the four separated searches.

Diapo 19 : Exclude terms from a search

Diapos (2) : Health inequalities

Google makes it possible to exclude documents containing unwanted terms by adding a minus sign before the terms you don't want.

Remplacer le commentaire actuel

Two ways to run your search :

In the standard search, type your query :

"health inequalities" -"social determinants"

In the advanced search :

Type health inequalities in the field named This exact wording or phrase and "social determinants" with quotes in the field named Any of these unwanted words

Par le commentaire suivant

In the standard search, type your query :

"health inequalities" -"social determinants"

S1.3 Tips for a more effective search : 9 mn

Diapo Titre S1.3

Here are some tips to help you improving the effectiveness of your search.

Diapo : Carefully select search terms

For example,

What are the effects of **growth hormone** therapy on **children** with **Prader-Willi** syndrome ?

It is neither necessary nor useful to type the whole question.

So first remove the stop words, which are common terms with no precise meaning : what, are, the, of, on, with

Focus on the specific terms of your query.

The terms effects, syndrome, and even therapy, are not essential.

Your query will be relevant if you type : growth hormone children prader willi

Diapo

Diapo : Limit the number of search terms

For example

What are the side effects of treatments for multiple sclerosis ?

After removing the stop words, **side effects treatments multiple sclerosis** could be a good option for your query. A more simple option is to focus on the central topic of your search and type **multiple sclerosis** in the search box which allows you broadening the scope of information and identifying more relevant sources within you can search for your specific information.

Diapo : Think of word variations and synonyms

An example with a search on kidney cysts

Search terms may have multiple endings, like cyst, cysts, and cystic. Google is not currently very effective in managing these word variations.

For a more complete search you also have to be aware of synonyms, like renal cysts.

So, a search about kidney cysts will be more exhaustive by typing in the search box :

cyst OR cysts OR cystic kidney OR renal

Google will search for documents containing at least one of the three first terms cyst, cysts, cystic, associated to kidney or renal or to the two terms. For example, documents containing kidney cysts or renal cysts or cystic kidney,...

Diapo

Diapo : Identify alternative terms

Reading the first page of the results displayed for a query may help you identifying alternative terms like synonyms.

Diapo exemple

A search for temporal arteritis displays Web pages containing the synonym giant-cell arteritis.

So you can then run a new search by combining the two terms with the OR operator.

Diapo : Pay attention to the URL's

Démo Google

In this example, we are going to search for information on CAPS syndromes, a group of inflammatory diseases.

Reading the URL's of the Web pages may help you having a first idea of their quality, and often identifying new sources of information.

If it is not obvious to evaluate the quality, as for this document, click on its title to search for the information source, generally available on the homepage of a website. Clicking on the website logo is an option to display the homepage and helps you identifying the source of the document, and, in addition, getting information on the different types of CAPS syndromes.

For this other document (**PRINTO**), the sources are displayed through three logos, but it is not possible to click on them. A solution is to erase the part of the URL after the domain name *www.printo.it* and press Enter.

The website belongs to an international network on pediatric rheumatology and contains a lot of documents on the corresponding diseases in many languages.

Diapo : Filter your search

Démo Google

It may be a very useful tip.

For example for websites which have not an effective tool to search inside their content or which have no search tool at all like **PRINTO**, the network of pediatric rheumatology.

Diapo exemple

We are going to search for all the information about systemic vasculitis available in **PRINTO** website. Using Google Advanced search is easier than Standard search to do it.

Remplacer la diapo 33 par la nouvelle (Powerpoint ci-joint)

Type systemic vasculitis in the field Exact wording and the domain name of PRINTO, www.printo.it in in the field Search within a field or domain.

All the documents containing systemic vasculitis only provided by PRINTO website are displayed.

Another example with a search on Kawasaki disease, a systemic vasculitis, on the sites from National Institutes of Health in the US, also known as NIH. The domain name of all NIH websites ends with .nih.gov.

Remplacer la diapo 36 par la nouvelle

Using the Advanced search, typing Kawasaki disease in the field Exact wording and .nih.gov in the field Search within a field or domain, displays documents provided only by NIH websites.

So, in this example, filtering a search may on quality websites helps you improving the effectiveness of your search.

Diapo : Discover the new features proposed by Google

Démo Google

Google often proposes new features. Here are two among the latest :

After running a search, for example, on sickle-cell disease, click on the Reading level menu.

The results are split by reading level, basic, intermediate or advanced.

Clicking on Dictionary displays a lot of definitions from various websites.

Diapo : Three actors for a Web search

Without search engines, without Google, a Web search would be a tremendous challenge.

Google plays a major role by collecting and ranking the information available on the Internet.

The websites are another actor in charge of the quality, the organization and the visibility of their resources through search engine optimization.

By selecting search terms, by building relevant queries, by evaluating the information, you are another major actor of a Web search, and not the least.