

Web search for local communities in the Highlands of Scotland: A self-tutoring guide

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Web search for local communities in the Highlands of Scotland: A self-tutoring guide

MODULE I

How to get the most out of Google Web search

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MODULE I

How to get the most out of Google Web search

MODULE II

A concise guide to Google products, services, applications, and other offerings

MODULE III

**Alternatives to Google:
some other search tools worth a try**

MODULE IV

The best of the Web: a guide to some of the most information-rich resources on the Internet

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Google celebrates St. Andrews Day on November 30th

About this self-tutoring guide

This self-tutoring guide and online learning resource is designed to assist you to gain Web search and evaluation skills, learn about tips and techniques that will improve your searching, and how to explore the Web as a rich information resource. The guide focuses on Google¹ and how to acquire "Google literacy". It enables you to learn to use the numerous Google products, tools, and applications, and how to get the most out of Google's many search services, whether for personal, leisure, or business interests. Additionally, the guide also describes a diverse range of other Web search tools that are worth exploring as an alternative or as an adjunct to Google, together with an annotated listing of 100 outstanding websites and resources, grouped under a number of topic headings.

Google is now well established as the world's most popular search engine, but many of those seeking information through Google still don't use it as efficiently as they might, or to maximum effect. They don't make the most of its special commands, making little attempt to improve their search techniques, and how to use the different search operators to fine-tune search queries. Many users of Google probably hardly scratch the surface of what Google can do, and could significantly improve their search efforts and track down the information they seek by learning a bit more about the numerous simple and advanced strategies that Google offers to narrow or broaden searching and to refine search terms.

So this, then, is a guide about what you might call the finer points of Google searching. The tips and examples used, together with the checklists of the important points to bear in mind as you commence a search, will enable you to search Google much more effectively, and help you find information more rapidly. With just a little bit more knowledge you can get a great deal more out of Google.

The tutorial has been primarily designed for local communities in the Wester Ross area of the Highlands of Scotland, and many of the examples used for search strategies focus on that particular region. However, I hope it will also benefit those elsewhere in the Highlands keen to improve their Web search skills. Simply substitute the search terms given here with those of your own, from your own locality and/or relating to your special interests.

The guide is published in online form only at this time, but a print version may be published at a later date if there is sufficient interest.

The guide consists of a package of 4 self-tutoring modules in PDF format (a total of 170 pages), each liberally illustrated with screenshots of Google pages and many other websites and resources.

Module I, *How to get the most out of Google Web search*, deals primarily with Google Web Search, but also offers a potted history of Google, and briefly discusses the issues as they relate to Google's dominance as the world's most popular search engine. Additionally, it provides an overview of Google's page ranking algorithms, describes how Google works and tracks down information on the Web and delivers the results to you, together with some observations on the matter of privacy.

It should be noted that numbers given for results in search examples and search strategies will inevitably vary from day to day. Most of the sample searches in Module I were conducted during the early part of 2011.

Module II, *A concise guide to Google products, services, applications and other offerings*, is a comprehensive inventory of Google's numerous other products, services, applications, and desktop extensions. Over a hundred products are briefly described and evaluated, setting out their principal features, range of tools, and utility.

Module III, *Alternatives to Google: some other search tools worth a try*, looks at a number of other search engines and tools that you might wish to give a spin, or which might be used alongside Google from time to time. It also offers a critical assessment of speciality

and meta search engines, real-time search engines, question & answer search engines, as well as a number of vertical and blog search engines.

The final **Module IV**, *The best of the Web: a guide to some of the most information-rich resources on the Internet*, reviews and describes 100 of what arguably are among the very best, most authoritative, and most information-rich websites and resources.

Cross references to Google search services or other search tools described in Modules II, III, or IV are indicated by an → arrow sign.

A note about currency:

Google is well aware that the way people use and experience the Web is constantly evolving, and that nowadays there is a plethora of ways to access the Web, not only from desktop computers or laptops, but also through various mobile devices. As stated in a recent posting in Google's official blog at <http://googleblog.blogspot.com/2011/06/evolving-google-design-and-experience.html>, its goal is to "give you a more seamless and consistent online experience—one that works no matter which Google product you're using or what device you're using it on".

Constant revision and improvement is very much part of Google's overarching philosophy, and this not only includes updates to the look and feel of its various search tools, but also its classic home page. As a result this does also mean that some descriptions in this tutorial of special features, functions, and utility of the main Google search page may eventually become at least marginally out-of-date, until updated in subsequent editions of this self-learning resource.

*Hans M. Zell
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A bit of Google history

Nowadays Google is in the news or makes headlines almost every day and hardly needs any introduction for the millions of people all over the world who use the Web, and its name has become synonymous with Web searching. Naming it "Google" was clever – it has a nice ring to it, and rolls off the tongue smoothly. It is a play on the word "googol", said to have been coined by Milton Sirota, the nine-year-old nephew of Edward Kasner (1878–1955), an American mathematician. A googol is a number equivalent to ten raised to the power of a hundred (10^{100}). A googol is a very large number and this reflects "the company's mission to organize the immense, seemingly infinite amount of information available on the Web" (and see also <http://www.google.com/corporate/history.html>).

The brainchild of Larry Page and Sergey Brin, two graduate students in computer science at Stanford University, it was born out of a university research project and began as an experimental search engine called BackRub, a name chosen to convey its ability to analyze the links joining one website to another (and see a copy of the academic paper that launched it at <http://ilpubs.stanford.edu:8090/361>). It was then renamed Google and – initially operating out of a small office and attached garage – was launched in September 1998. Google's beta version was soon answering 10,000 search queries every day.

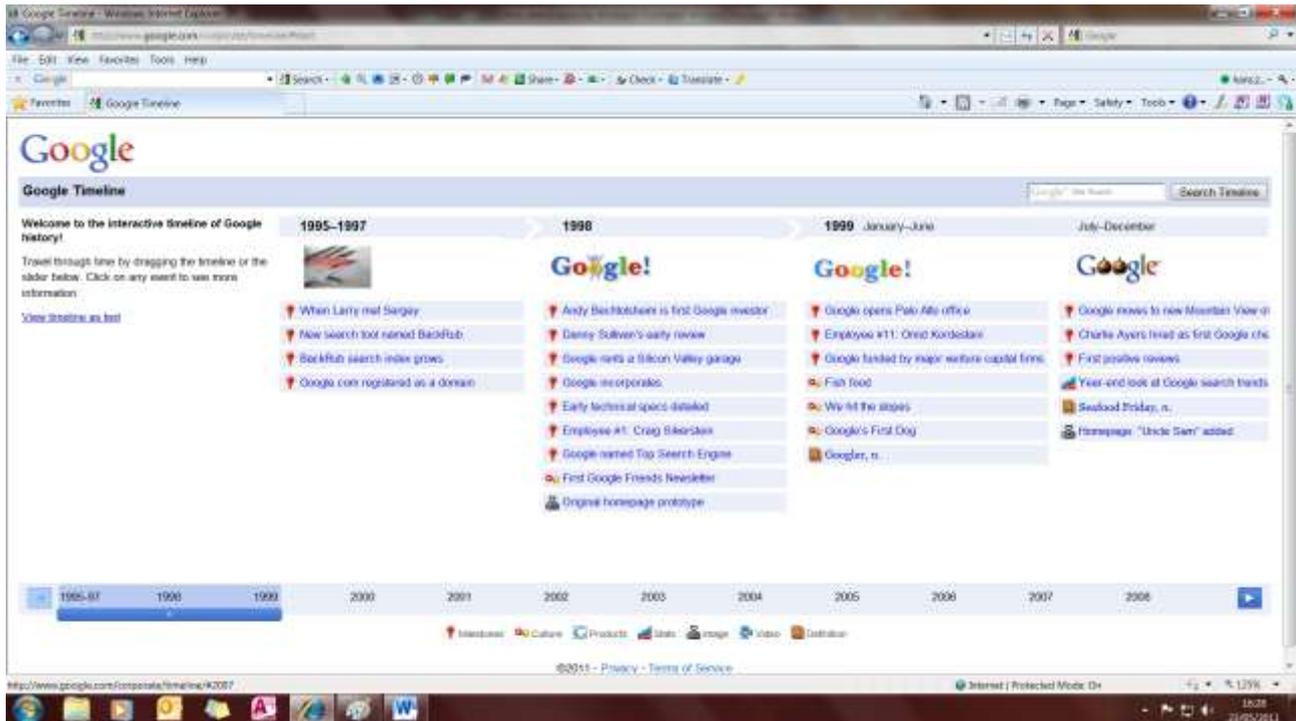
12 years on, Google reportedly makes 3 billion searches every day, its index of Web pages is now probably in excess of 10 billion, and the Google of today has become a media giant, with close to 25,000 employees worldwide, operating from a campus entitled Googleplex in Mountain View, California. While the Googleplex is its corporate headquarters, Google also operates out of more than twenty US and Canadian locations, as well as currently maintaining premises in over fifty locations in Europe, in Asia/Pacific, the Middle East, and Latin America.

Google initially prospered as a private company, but on April 29, 2004 – after much speculation and anticipation, and to tremendous press interest – it announced that it had filed a registration statement with the Securities and Exchange Commission for a proposed initial public offering of its Class A common stock, and Google shares began trading on the Nasdaq Stock Market on 19 August 2004, at \$85 per share. As at early 2011 shares were trading at something close to \$610. Google is now probably the most valuable brand in the known universe. Google's net worth, or its market capital, was estimated to be approximately \$195 billion in January 2011. No company in history has grown as fast as Google. Its annual advertising revenue is reportedly now in excess of \$21bn.

The Googleplex campus is something more akin to a commune than the headquarters of a modern corporation. Staff travel to Googleplex in Wi-Fi enabled commuter buses, enjoy free food and unlimited supplies of ice cream, can play table tennis and roller hockey or shoot pool; or they can amuse themselves with large rubber exercise balls on the floors, use swimming pools, as well as having access to workout rooms and benefiting from health care. Complimentary massages are thrown in for good measure. In addition to Google staffers' regular projects, the company encourages its employees to spend 20% of their time working on what they think will most benefit Google, on any project they might fancy. This, Google believes, empowers them to be more creative and innovative. Google staff work in high-density clusters of three or four staffers, sharing spaces with couches and dogs – "this improves information flow and saves on heating bills," says Google! And the Google Cafés provide healthy lunches and dinners for all staff, who may also look after their organic vegetable gardens. To give you an inside peek of Google's headquarters, have a look at a "Life in the Google Plex" photo essay published by *Time* magazine in 2006 http://www.time.com/time/photoessays/2006/inside_google/index.html, or check out Google's own pages about "The Google Culture" at <http://www.google.co.uk/corporate/culture.html>. Meantime, with its explosive growth over a period of a dozen years, the company has already outgrown Googleplex and plans to move to a bigger facility soon.

There is an interesting interactive timeline of Google's eventful history at <http://www.google.com/corporate/timeline/#start>, where you can travel through time by dragging a timeline slider. Click on any event to see more information, including, for example, the development of the Google home page, from the original prototype of 11 November 1998

to the one used currently; or view the first April Fool's joke in 2000, which began its annual foray in the Silicon Valley tradition of April 1 hoaxes.



Google's interactive timeline

Google is now one of the world's most powerful websites, deservedly enjoying enormous popularity, most of it achieved by the power of word-of-mouth marketing. With its clean and uncluttered searching interface, it is now widely considered as the supreme Web search tool, consistently delivering good results even with just one- or two-word searches. From its humble beginnings as a small-player search engine, it can be said that it has progressed to the status of a cultural icon, and might now almost be described as one of the wonders of the world.

It is difficult to keep up-to-date with Google's constant stream of new products and services, many of which are well beyond search services and tools. For example in May 2010 it announced the launch of → **Google TV** (see Module II), and it looks as though the company now seeks to achieve TV supremacy by marrying the technology of television with the power of the Internet. Its somewhat controversial → **Google Street View** mapping exercise (see p. 45) now extends to all seven continents, even those living in Antarctica, the odd penguin included!

An extension of Google Street View, using the same technology, is the new → **Google Art Project** <http://www.googleartproject.com/> recently unveiled. It is a collaboration of the Internet giant and some of the world's leading art museums. It will let you explore and look at world famous paintings in the most astonishing detail, displayed online in a super-high resolution and with remarkable zooming facilities. It is a magical resource.

In December 2010 Google strayed into Amazon territory by launching its long-awaited Google Ebook store <http://books.google.com/ebooks>, although that is not offered in the UK as yet. And most recently it was reported that Google scientists have tested driverless cars in California. Today, there seems to be no end to a myriad range of new experimental products and other offerings launched by Google almost every week.

As a recent article in *The Economist* aptly put it ("How long will Google's magic last?" <http://www.economist.com/node/17633138>) Google is neither a conventional company nor a one-trick pony and is a force to be reckoned with: "Looking ahead, Google executives depict a world in which the firm not only helps people to find information they are looking for, but delivers it to them before they know they need it", and that the company is an Internet dynamo that needs to keep evolving fast if it is to avoid becoming a digital dinosaur.

Google under scrutiny

Google has many virtues, but it has also had its shares of sins and errors. Not everybody is enthusiastic about "Googlemania", lately a good measure of opposition has emerged, while others say that Google has lost some its shine and its idealism, tries to be all things to all people, and wants to have a foot in everything. Moreover, words like "Googlemonster" have been coined by critics who think the Google juggernaut is getting too big and much too powerful, and that in its dominance it is in danger of becoming a new Microsoft. And as Google gets even stronger every day, fears have been expressed about its level of influence, as clearly it is not healthy for too much potential power to be vested in just a single search engine.

When Google went public six years ago concerns were also voiced that the newly acquired corporate wealth might taint or corrupt Google's shiny corporate culture and the high principles that the founders espouse, namely its stated commitment to always placing the interests of the user first; that its mission is to facilitate access to information by the entire world; to become an institution "that makes the world a better place"; and its belief that "you can make money without doing evil". While some may find it a bit difficult to stomach this moral high ground, and the holier-than-thou corporate image which the company so relentlessly tries to convey, since the Google founders famous edict is to do no evil, journalists, critics, and analysts have inevitably always held Google to a higher standard than some other corporate giants.

Google's tentacles are everywhere when it comes to search, information and communication, media, mobile technology, and more, with new services or offerings launched almost every week. The company is now extraordinarily powerful, and it surrounds itself with teams of lawyers and councillors, and has lobbyists in Washington DC and elsewhere. Some say Google has grown too fast too soon, and ask whether Google still is the big friendly giant, or is now turning into a greedy Goliath.

Today Google has to confront challenges from governments in many parts of the world, who are concerned about issues of privacy, dominance, and anticompetitive practices. Many are concerned about Google's size, that its activities monopolize knowledge, or invade users' privacy. Sometimes the company seems to have been quite insensitive to how people, governments, newspaper proprietors, authors, publishers, or other companies, will react to its constant innovations. Google are not usually in the habit to ask for permission, they simply do what they want to do, and then hope everybody will love it. And so, for example, it had to face several lawsuits from authors and publishers alarmed about copyright violations as it relates to the Google's digitization programme and the → **Google Books/Library Project**. It has also faced several antitrust probes in past years, most recently US federal investigations whether Google has abused its dominance in Web search advertising.

Meantime, the company's activities in mainland China (though they have now relocated to Hong Kong) made them appear that despite the "do no evil" motto the company would seem to put profits before ethics and a social conscience after all.

It could also be argued that while Google's mission is "to organize the world's information and make it universally accessible and useful", the fact that it guards its own intellectual property quite ferociously – and rarely gives away much about its own technology – is incompatible with its stated mission, and some might say is quite hypocritical.

Google's privacy policy

Many Google users may not realize that Google has put a unique identifier as a permanent "cookie" (small bits of code stored on the user's computer, to remember users' preferences) on their computer's hard drive. Originally, this was a kind of super cookie, and Google set the preferences cookie to expire not until 2038 in order to maintain users' preferences, but its current practice is that cookies will now automatically expire after 18 months for users who don't return to the search site. However, the cookies of users who continue to click on Google for search during this time period will automatically renew.

Thus Google knows what you have searched for, your IP address, your location, and your browser configuration, and aims to customize search results based on your IP number (and see *also* → **Can search engines tell who you are?** on p. 16). All perfectly harmless, one might say, and Google and others say that that this can't be considered to be spying, as there is no intention to sell anything to the users. The latter is of course debatable, but it is argued that, for Google Web Search, it is collecting this information to provide you with better searches; that it is only tracking the search habits and Web surfing trends of an anonymous individual; and that it does not collect personally identifiable information unless a user explicitly agrees to provide it for a number of the personalized services it offers, other than Google Web Search (and see Module II for a description of some of these services). It is true that Google doesn't force you to reveal anything really personal about yourself. However, it is probably also true to state that Google is gradually nudging some users towards revealing more and more about themselves, in return for access to some of its personalized services.



Google setting out its privacy principles

If you are in any way concerned about issues of privacy, read what Google states about transparency, and its privacy principles, at <http://www.google.com/privacy.html>; and particularly its privacy policy at <http://www.google.com/privacypolicy.html>.

You can also watch a good short YouTube video, "Google Search Privacy: Plain and Simple" which addresses the issues of privacy, and that of cookies, and which can be found at <http://www.youtube.com/watch?v=kLgJYBRzUXY>.

How Google works and the Google page ranking system

Google's page ranking system, how Google "thinks", and the indexing methods by which it tracks down information on the Web and delivers the results to you, is a complex matter and has been much discussed and analyzed. To be an effective Web searcher you don't really need to know about the Web crawlers Google uses to explore the Web, finding content and retrieving it for storage, or the intricacies of Google's search technology. However, a little bit of information might be helpful.

The software behind Google's search technology conducts a series of simultaneous calculations requiring only a fraction of a second. It uses more than 200 "signals", including its patented

page rank algorithm, to examine the entire link structure of the Web to determine which pages are most important. It then conducts a hypertext-matching analysis to determine which pages are relevant to the specific search being conducted. Google says "by combining overall importance and query-specific relevance, we're able to put the most relevant and reliable results first". Relevant perhaps, or likely, but reliability is of course quite another matter.

Here is what Google states further about its page ranking system at <http://www.google.com/corporate/tech.html>

- *PageRank Technology:* PageRank reflects our view of the importance of Web pages by considering more than 500 million variables and 2 billion terms. Pages that we believe are important pages receive a higher PageRank and are more likely to appear at the top of the search results.

PageRank also considers the importance of each page that casts a vote, as votes from some pages are considered to have greater value, thus giving the linked page greater value. We have always taken a pragmatic approach to help improve search quality and create useful products, and our technology uses the collective intelligence of the web to determine a page's importance.

- *Hypertext-Matching Analysis:* Our search engine also analyzes page content. However, instead of simply scanning for page-based text (which can be manipulated by site publishers through meta-tags), our technology analyzes the full content of a page and factors in fonts, subdivisions and the precise location of each word. We also analyze the content of neighbouring Web pages to ensure the results returned are the most relevant to a user's query.

To build and constantly expand its massive index, and establish page rankings for everything it picks up, Google uses a vast number of computers to crawl the Web, collectively known as GoogleBots (also known as "crawlers" or "spiders"). The indexing update – in effect building up a completely new index of billions of Web pages each time it is updated – is a task of some magnitude and is spread over more than 10,000 servers, or "server farms" as they are called, placed in different data centres of the world. The computer power required to do is is unimaginably huge. Google won't reveal the figures, and all we know is that it involves millions of ordinary computers cabled together in various locations of the world.

Google's system of ranking its search results has been the subject of heated debate, perhaps not so much among the general public or the academic community but among Web-based businesses selling products and services, who are anxious to get a top ranking when a Google user types in a particular keyword search. A whole new industry, called search engine optimization consultants (or SEO consultants/services), has arisen to advise website owners how to improve their rankings on Google. Some unscrupulous webmasters, and SEO services, in a bid to manipulate Google's search technology, have been trying to achieve this by hook or by crook, for example to try to get the top spot for a large number of common shopping terms.

The Google PageRank™ appears in the → **Google Toolbar** (see also Module II) that millions of people have installed on their Internet Explorer or Firefox browser, using a ranking system from one to ten for each site. As Google indicates above, the basic thinking behind the system, and the ranking algorithm, is that each hyperlink amounts to a "vote" for the site; and the assumption is that if many others link to the site it is likely to be a site of some importance and quality. While this assumption seems to make sense in principle, it is open to interpretation—and manipulation. There are probably flaws in the interpretation insofar a good listing and high page ranking for a website does not always and not necessarily indicate a link to one of high quality, although it will clearly be a highly popular site with a lot of traffic, and one which vast numbers of people access as a source of information.

However, as Google states, in delivering search results it also takes into account other factors, such as the proximity of search terms or phrases in the documents. Its ranking algorithm analyzes not only the number of other pages that link to a page but also the importance of other links, measured in terms of the number of links to each of them, which is all part of what Google calls "Hypertext-Matching Analysis" as described above. Google has always argued that

its search engine algorithm is fair because (i) it is automatic, and (ii) not manipulated by human hands.

As far as manipulation is concerned, Google is well aware of numerous shady practices; it counters the attempts by webmasters to cheat on their rankings by penalizing them with a page rank of zero. On its webmasters' tools Help-Search Engine Optimizers pages at <http://www.google.com/support/webmasters/bin/answer.py?answer=35291> Google warns about unethical SEO services and their attempts to manipulate search engine results unfairly, or their bogus claims that they have a "special relationship" with Google.

To further counter abuse, Google now also uses ranking methods and techniques well beyond its original hyperlink analysis – and continues, on an ongoing basis, to make adjustments to their algorithms and the formulas they use to rank Web pages – although the company doesn't divulge much information about how this is being achieved, or about how its technology now determines what is important and what is not. And that, inevitably, can cause some controversy. However, it is clear that Google tweaks its algorithm on a very regular basis, perhaps even daily, in an effort to offer searchers better results, leading them to Web resources of high quality, and to combat the dubious practices of Web spammers. This is what Google has stated about its most recent changes on the Google blogspot pages in February 2011 <http://googleblog.blogspot.com/2011/02/finding-more-high-quality-sites-in.html>:

Many of the changes we make are so subtle that very few people notice them. But in the last day or so we launched a pretty big algorithmic improvement to our ranking—a change that noticeably impacts 11.8% of our queries—and we wanted to let people know what's going on. This update is designed to reduce rankings for low-quality sites—sites which are low-value add for users, copy content from other websites or sites that are just not very useful. At the same time, it will provide better rankings for high-quality sites—sites with original content and information such as research, in-depth reports, thoughtful analysis and so on.

We can't make a major improvement without affecting rankings for many sites. It has to be that some sites will go up and some will go down. Google depends on the high-quality content created by wonderful websites around the world, and we do have a responsibility to encourage a healthy web ecosystem. Therefore, it is important for high-quality sites to be rewarded, and that's exactly what this change does.

The life span of a Google query

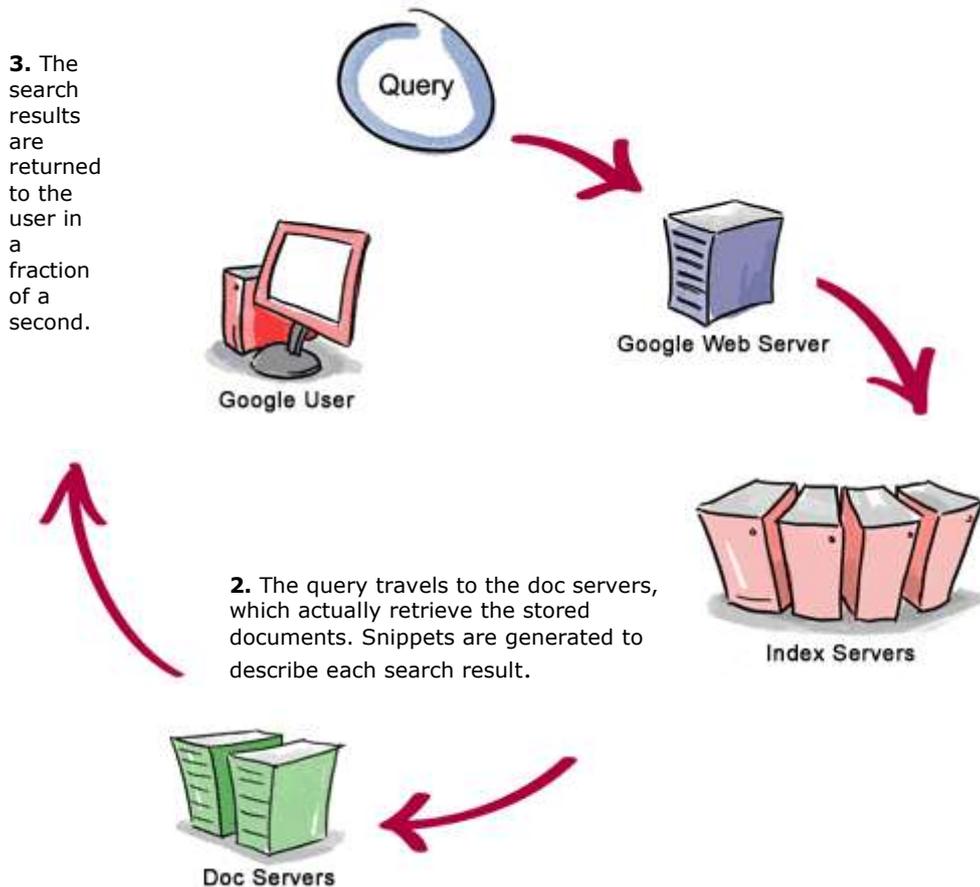
The life span of a Google query normally lasts less than half a second, yet involves a number of different steps that must be completed before results and the "snippets" it generates can be delivered to a person seeking information.

"Snippets" are the first two lines of text appearing below the search results, and which are extracts from parts of a Web page, which Google thinks is most relevant to your search query.

Also as part of the above process Google checks whether the search term(s) are spelt correctly and, if not, it offers search terms with the correct spelling. In the index servers the search results are prepared and ranked on page content, usage, relevance and link data; and relevant adverts are chosen for placement adjacent to the search results it displays—all in just a fraction of a second!

The illustration on page 15 shows how it works.

1. The web server sends the query to the index servers. The content inside the index servers is similar to the index in the back of a book - it tells which pages contain the words that match the query.



2. The query travels to the doc servers, which actually retrieve the stored documents. Snippets are generated to describe each search result.

Above illustration reproduced from <http://www.google.com/corporate/tech.html>

How many Web pages are indexed?

Content on the Web continues to blossom in myriad ways and at an astonishing rate. It is growing not just in size, and number of Web pages, but with the advent of video, images, news and real-time updates, many Web pages have become much richer and more complex. To keep up with the rapid evolution of the Web, meeting rising user expectations, and coping with new Internet technology that is developing at a dizzying speed, is a challenge of some magnitude for Google.

The first Google index back in 1998 already covered 26 million pages, and by the year 2000 the Google index reached the one billion mark. Eleven years later, Google says it doesn't know just how many unique pages the Web really contains and that, strictly speaking, the number of pages in cyberspace is infinite. However, back in 2008 it did say that its indexing system that processes links on the Web to find new content hit a milestone of 1 trillion, that is 1,000,000,000,000 unique URLs on the Web!

Google's limitations

Search has now become part of the way we think and act, and it has all happened very fast. Web search engines, and especially Google, can sometimes generate excellent results and, quite apart from its widespread use by the general public, are now well recognized as significant research tools across all academic disciplines. Google can do simple or more advanced searches quickly, and can come up with remarkably good results. One downside of this is that some students, for example, impressed by Google's capabilities and sophisticated

search offerings, tend to think that the extent of their research need not go beyond clicking on to Google.

Nowadays most researchers, academics or the general public, will include the Web as part of a research strategy, but much will depend on the nature of the research. There are occasions when Google can do the job best, but while Google's search results can be a very helpful gateway and starting point for tracking down information, one must always be aware of its limitations. Google doesn't know it all, and anyone searching for information must always apply careful critical judgment in the choice and evaluation of links to information and Internet resources which Google, or other Web search engines, are able to provide.

The second important point to remember is that although Google is clever, as are some other sophisticated search engines, none of them will interpret your question. Google set out its core principles and its corporate philosophy many years ago in its "Ten things we know to be true" <http://www.google.com/corporate/tenthings.html>. It is a kind of credo, which Google says still holds true today. However, interpreting Google search results as "answers" could be fallacious and merely amount to a quick-fix solution. The fact is that Google will simply find the words or terms you are looking for on Web pages. The links it finds and the search results it generates are not the same as answers, much less authoritative and reliable answers, although it might eventually *lead* to answers and reliable and authoritative sources. But Google does not, and cannot be expected to, either interpret search or enhance the information it tracks down.

There are of course dozens of search engines other than Google, but in practice you would rarely use more than one, and the first choice will always be Google. However, from time to time it is worth trying some other search tools, some clever and innovative, although not really a match for Google at the end of the day. A number of them are described in Module III, → **Alternatives to Google: some other search tools worth a try**. You can test them with search queries, and compare their results with Google. If you want to run a comparison between what Google finds and what other search engines find, you can also use comparison tools, which include, for example, Yometa <http://yometa.com>. Alternatively, run a search on a multi-search engine such as Turbo Scout <http://www.turboscout.com/>, which will give you comparative search results from several leading search engines. (These and other search tools are described in Module III.)

Can search engines tell who you are?

At this time it is still difficult for Google, or indeed any other search engine, to pinpoint precisely your identity as a user. Nonetheless, many users of search engines are rightly concerned about issues of privacy (and *see also* → **Google's privacy policy** above). There are basically three levels of identification.

1. At the lowest level search engines could conceivably use the geographic location of your IP address (a unique number which identifies a computer and its location on the Internet) to target you with local advertisements for example. Search engines are able to identify your Internet service provider and where that server is located. However, search engines are unable to identify your household directly unless you are using a fixed IP address, and most private individuals are unlikely to have a fixed IP address.

2. At an intermediate level, identification (as earlier mentioned above) could be through cookies, a small text file and tracking device that many websites send to your computer to log your visit, to help them find out what you are doing while you are visiting the site, track and record your particular interests (e.g. for books, DVDs or other purchases in Amazon), and to recognize you when you revisit. This does not divulge personal information and the websites don't actually know that it is "you, but recognize information about your computer, and your Internet service provider. If you wish you can disable cookies in your browser preferences, but they are necessary for e-commerce and many other Web-based activities.

3. At the highest level they could use voluntary log-ins, for example when you have a Google account and log in to the various Google services, or you have an account with a supplier that

contains personal information or a profile, and to deliver advertisements, offers, and/or search results that aim to target your particular interests.

A word of caution: the nuisance of Web spam

Search engine optimization (SEO) is a perfectly legitimate practice used by webmasters to improve a website's visibility, making it search engine-friendly, and thus boosting its position in search engine results. However, the rather less ethical SEO practice, that of search engine web *spamming*, has unfortunately increased dramatically in recent years. Web spammers constantly find new tricks and techniques to influence page ranking, and to circumvent search engines' ranking algorithms and their efforts to protect the quality and integrity of their search services.

Web spamming – not to be confused with email spamming – is defined as the practice of manipulating Web pages for commercial ends, and introducing artificial text and links into Web pages in order to rank some Web pages higher than they would without manipulation. The activities of these unscrupulous spin doctors are not only a serious problem for Google and other search engines, but also a problem for users because they may not be alert to this. Google is well aware of the various deceptive tactics to try to trick its indexing and ranking system and is taking an aggressive attitude toward spam and the various dubious practices that are associated with it. (See also Google's views on search engine optimization, which are part of its → **Google Webmaster Central** pages, see Module II).

Web spamming inevitably raises questions of information reliability, and the trustworthiness, or otherwise, of search results. Spammers can have plenty of motivation to influence Web search results, and this can be a serious nuisance.

Most of all perhaps, it can be enormously time-wasting, in as far as Web spam may lead you up the garden path by making you click on to links that sound very promising and relevant but which turn out to be a complete waste of time. When you enter a query into the Google search box, some of the "results" you see may in fact turn out to be the result of putting the search terms into the search fields of databases (e.g. directories) on Web pages, because Google finds pages of relevant searchable databases, into which the search terms go. That's about as much as Google does, and can do, and it is only when you follow the link that you then see the result of the search in that database – which may or may not find anything pertinent, or contain anything relevant. Therefore most of these search results are of no use whatsoever because Google is not finding the result of the search on the database it retrieves, it is simply finding a database that says it *contains* data related to the search terms entered.

For example, let's say you are looking for independent appraisals or *reviews* of a Web resource and you enter the keywords, e.g. "scamdex reviews": the top results will not lead you to reviews but to a website called Trustpilot displaying the words "scamdex 0 reviews", but asks you to submit a review or a rating; result no. 2 Encomer.com tells you it, too, has 0 reviews, and invites you to write one instead! All extremely irritating and a waste of time.

The situation seems to be getting worse, and it appears there is not much that Google can do about it, and sorting or eliminating the wheat from the chaff in some of its search results. Most recently the main culprits are so-called "content farms" or "scrapper sites", rubbish content written around currently popular or profitable keyword phrases (heavily search engine-optimized for those phrases or keywords) designed to drive you to these sites even though they can't offer genuine information, nor do they link to authority websites. (The precise definition of the term "content farm" is still a bit vague, but for a good description see the Wiki entry at http://en.wikipedia.org/wiki/Content_farm.)

Google has recently declared war on content farms by launching an extension to its → **Google Chrome** web browser, allowing users to set up a "personal blacklist" of sites that should no longer appear in their search results (and see the Google blogspot news item at <http://googleblog.blogspot.com/2011/02/new-chrome-extension-block-sites-from.html>.) If installed, the extension then sends blocked site information to Google and Google says they

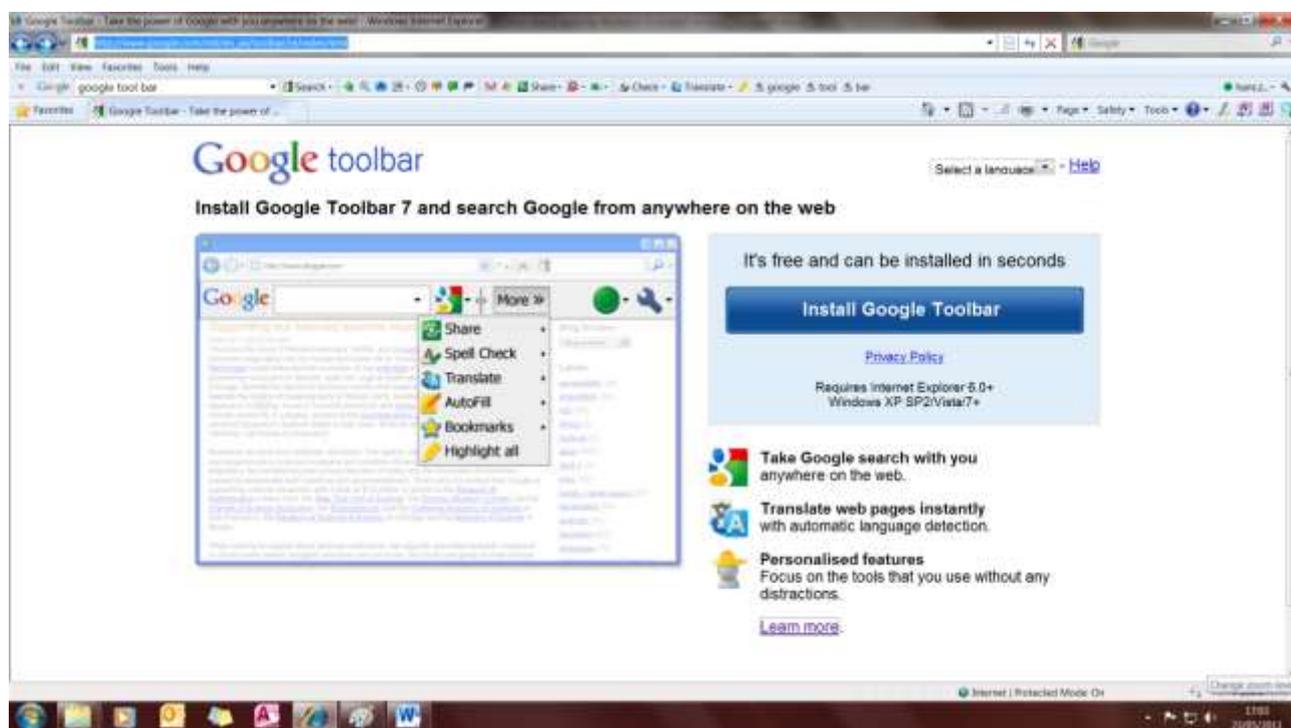
will study the resulting feedback and explore using it as a potential ranking signal for its search results. When you block a site with the extension, you won't see results from that domain again in your Google search results. You can always revoke a blocked site at the bottom of the search results, so it's easy to undo blocks. However, this only works if you use Google Chrome as your browser.

Google's Web Search

How to search with Google and the Google Toolbar

You can search with Google

- ❖ from the Google home page at <http://www.google.co.uk/> or <http://www.google.com/>.
- ❖ By making the Google search page your browser's home default page. To do so click the link 'Make Google my homepage' immediately below the search box.
- ❖ If you use Windows, via the Google Toolbar in Microsoft Internet Explorer http://www.google.com/intl/en_uk/toolbar/ie/index.html (The latest version is the Google Toolbar 7.1) This will require Internet Explorer version 6.0+, Windows XP SP2/Vista/7+
- ❖ For the Firefox browser you can download it at <http://www.google.com/tools/firefox/toolbar/FT5/intl/en-GB/index.html>. It requires Firefox 2+.



The page where you download and install the Google Toolbar

Unfortunately there is still no Google Toolbar for Macs using the Safari browser, but Macintosh OS X via the Google Toolbar is now compatible with Firefox 2+, the free cross-platform Web browser developed by the Mozilla Foundation, and as mentioned above.

It is convenient to have the Google search box built into the toolbar of your browser, which allows you to quickly search the Web without having to head for Google's home page first. The Google Toolbar updates itself automatically, and so you never need to install a newer version as long as you use the Toolbar.

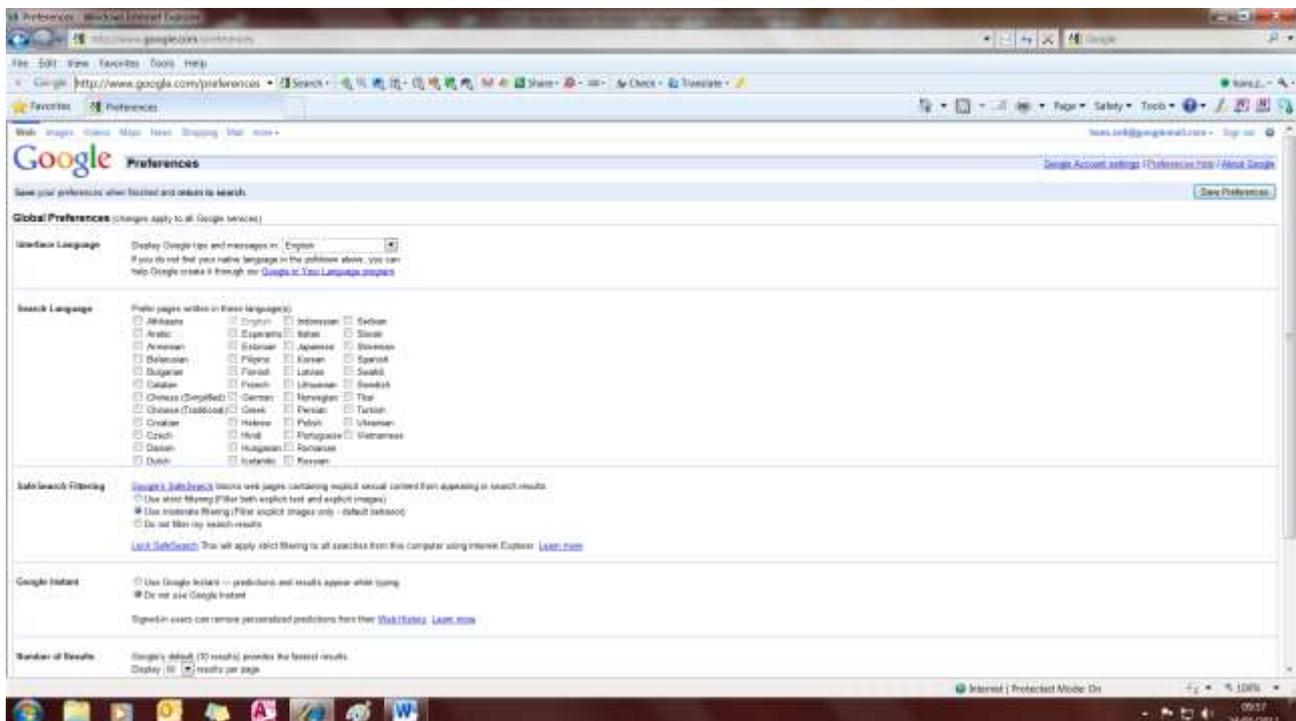
For more details about the → **Google Toolbar**, and its principal features, consult the entry for the Google Toolbar in Module II.

You can also learn more about the Google Toolbar, and how to get started, at <http://www.google.com/support/toolbar/>.

The advanced functionality in the toolbar is optional, and by going to the Google Toolbar menu, selecting 'Options', and then selecting 'Privacy' you can disable it by turning off the features that send information to Google. With these features disabled no information about the page you are viewing will be sent to Google unless you explicitly request more information about that page (such as with the 'Cached Snapshot', 'Backward Links' or 'Similar Pages' features). For other features, such as custom buttons and tools selection, see → **Google Toolbar** in Module II.

Setting your preferences

- ❖ On the Google Preferences page <http://www.google.com/preferences> you can customize your searching preferences, which can be adjusted at any time later on. All it takes is a click of the 'Save Preferences' button each time you make changes – but you will need to remember that these are global preferences, applying across most of Google's services such as → **Google Groups**, → **Google News**, etc. (Note: setting or re-setting preferences will work only if cookies are enabled in the preferences in your browser.)



The Google preferences page at <http://www.google.com/preferences>

- ❖ **Interface language:** this relates to the language in which Google displays its search page, display tips, and buttons. The default is English, but you can select your preferred language for the Google interface. You can also select them at http://www.google.com/language_tools?hl=en, and from this page you can also select local Google domains in many parts of the world.
- ❖ Google currently offers over 100 interface languages – including, tongue-in-cheek, “languages” such Bork Bork Bork! (ze language of ze Sweedish chef who puts ze cheeken in de oven in de Muppet show); Elmer Fudd (the cartoon character in Looney Tunes, who tells you to be vevy vevy quiet because he is hunting a wabbit); or Klingon (the language of the aliens in Star Trek). Pig Latin (the language for adults who want to be daft, or the language choice of children who don't want their parents to know what they're talking about) seems to have been removed from the list, but is still accessible at <http://www.google.com/webhp?hl=xx-piglatin>. These interface “languages” are just a bit of fun of course.

- ❖ **Search language:** not to be confused with → **Interface language** above, restricts the languages that should be considered for searches (the default is 'any language'). Google currently (June 2011) supports over 50 languages.
- ❖ **SafeSearch filtering:** blocks pages with explicit sexual content. The default is 'Use moderate filtering' which blocks explicit images but not explicit language. Other choices are strict filtering or no filtering.
- ❖ **Google Instant** click on your preferences here, i.e. whether or not you want Google to provide query suggestions in the search box, with predictions and results appearing as you type. If you have a Google account and are signed in, you can remove personalized suggestions from your → **Google Web History** (see Module II).
- ❖ **Number of results:** Google displays 10 results per page in default mode, and for more results you click on the results page 1, 2, 3, etc., at the foot of the page. However, if you expect a fairly large number of results this can be a bit tedious, and to increase the number of results for rapid scrolling click on Advanced Search, where you can increase them up to 100. While Google's default of 10 results per page provides the fastest results, if you prefer a larger number as default – and it won't take much longer to load, even if you are using a relatively slow Internet connection – you can set this in the Google Preferences at <http://www.google.com/preferences>; or you can do so temporarily for a series of searches for which you want to see a larger number of results per page, and then later revert to the default setting.

A setting of at least 50 results is recommended, as important and relevant results may well be found beyond the first 10 results. An additional problem with just viewing 10 results could be that search engine spammers, and others pursuing shady practices, may have muscled their way into the top 10 results due to aggressive search engine optimization, or manipulation, thus relegating important and relevant results to lower positions (see also → **A word of caution: the nuisance of Web spam** on page 17).

- ❖ **Results window:** enabling this feature in Google Preferences will open the search results in a new window when clicked on. This can be useful, especially when conducting prolonged research, as it prevents you from losing your place, and it will always leave the Google window open to return to the search results. However, please note that this option is unavailable when using Google Instant query suggestions (see above).
- ❖ **Blocked sites:** if you don't like a site that appears in your search results, you can block all the pages from within that site. Then you won't see any of those pages when next searching on Google. If you change your mind, you can unblock the site later. You can block up to 500 sites, but you will need to have a Google account and be signed in to do so.

Language tools

You can translate foreign language pages into English using Google's 'Translate this page' tool next to the search results. On Google's Language Tools page at http://www.google.com/language_tools?hl=en you can also translate entire pages, or parts of text, written in French, German, Italian, Portuguese or Spanish, etc. into English, or vice versa.

Bear in mind, though, that this is translation by machine and you can't rely on it for accuracy. At best, it may be a passable translation; at worst, it may be only vaguely comprehensible, but may just about give you the gist of what appears on a foreign language page (and see also → **Google Translate** in Module II.)

Google and foreign language characters

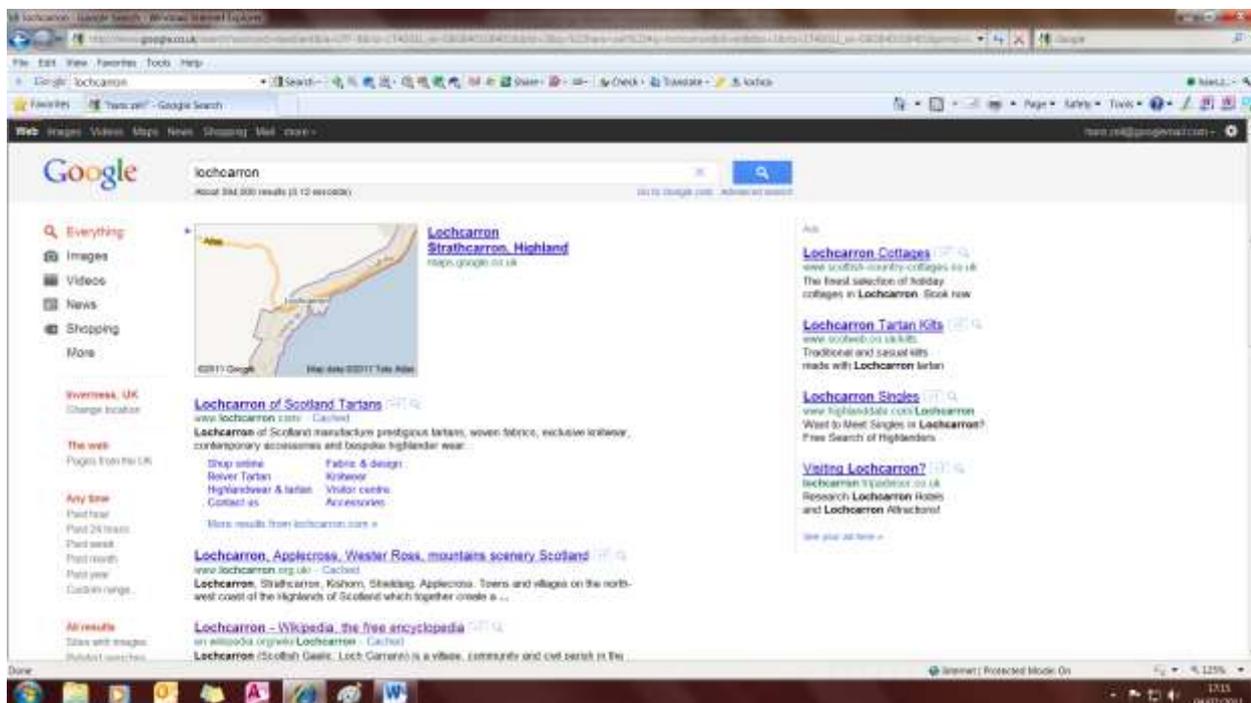
Assuming you are using an English keyboard, and using Windows, searches in Google for terms containing special language characters such as German umlauts or French accents (diacritics) can be a bit cumbersome. In Google, and until recently at least, a term with an accent does not necessarily match a term without one, or vice versa, and Google will return different results depending on whether the diacritical marks were used, although the top ten or twenty results might well be very similar.

So, if you are a Windows user – Macintosh users are rather better served here, as accents are typed easily from the keyboard – you will need to copy and paste characters with accents into the search form (or enter them via the ALT key) etc., to find *all* relevant results. However, for the most comprehensive search, it is best to search with and without the diacritics if you want more than an exact match, or add the OR search operator (see → **Using the OR operator** below).

Alternatively, if you are conducting a search consisting primarily of terms in, say, French and/or published in French-speaking countries, it may well be the best strategy, initially at least, to restrict your search to pages in French in Google Preferences (see → **Setting your preferences**). At the completion of this search exercise you will need to remember to set them back to 'any language' and press 'Save Preferences'.

The new Google search page

In May 2010 Google introduced a new look for its search page, principally the addition of a new left hand column that helps you narrow down your search results, together with the addition of a number of attractive new features. Google always seems to be torn between two search approaches, first the need for *simplicity*, and, second, to provide enough *guidance* to help users fine-tune their searches, finding more recent results or local results, or drawing attention to additional Google search features, in a manner that is not too complex or confusing.



The new Google search page launched in May 2010

In earlier versions of Google Web search the search features contained in the side-bar were hidden (until requested), but now the sidebar is permanent rather than hidden, with additional icons below the Google logo. It makes it simpler and easier to read compared with the old one,

and if you click the 'More search tools' in the left hand menu it will reveal short cuts to refine your search. Or if you click on to 'Books' under 'Options' after entering your search, you will find books on the subject, most of them with cover images, and links to these books can then also lead to reviews.

Try the new page for a search for "plockton" for example, which generates a total of over 650,000 results for 'Everything'; or, alternatively, a more specialized search, e.g. for "plockton high school" will come up with about 26,000 results. If you click on to 'More' in the sidebar it will reveal a handful of icons at the top to narrow your search to individual Google databases, such as → **Google News**, → **Google Images**, → **Google Maps**, blogs, videos, forums/discussions, and more. In the case of "plockton high school", for instance, it will lead you to several thousand images, and 17 videos.

Additional options include searches restricted to 'Latest', 'Past 24 hours', 'Past week', 'Past month', or 'Past year', and you can choose a preference for sites with images, for pages with more or less shopping sites; and if you click 'Related searches' it will let you view a range of popular searches related to Plockton, for example "Hamish Macbeth", the television series made by BBC Scotland, which had Plockton (disguised as the fictional Highland village of "Loch Dubh") as its setting.

Moreover, if you click on 'Timeline' – the results of which offer users historical data about their query that is provided by → **Google's News Archive** – you can discover an interesting range of pages containing the word "plockton" from books, newspapers and other archival material, from 1550 to 2011! You can of course also do likewise for other Highlands communities, such as "lochcarron", "shieldaig" or "ullapool".

'Translated foreign pages' will list translated search results from pages written in languages other than English; in this case in Spanish, German, French and Italian are those most represented, but you can pick other languages as well, for example translated Russian pages.

'Visited pages' will tell you which of the pages related to the search query you have visited over the last few months, and how many times. Finally, one additional search refinement, 'Pages from the UK', restricts search results to UK pages/ domains.

You can also tailor search results through personalized search, and through the use of stars. You will need to be signed in your Google account to see stars in search results. With stars you can click on the star marker on any search result or maps and the next time you perform a search that item will appear in a special list right at the top of your results when relevant. (See *also* → **Google Web History** in Module II.)

Yet another handy new feature, introduced by Google late in 2010, is 'Instant Previews, (see <http://www.google.com/landing/instantpreviews/> to activate this feature). This is designed to help you choose the right search result faster by displaying a visual preview of each result, showing the layout of that webpage as well as text call-outs that highlight where your search term appears on the page. To use Instant Previews, click on the magnifying glass next to any search result to see a preview of the page. Once you have activated Instant Previews, you can hover over any other result to see a preview.

Some general points to bear in mind

- ❖ Google presents your search results in order of relevance based on its Web crawling, indexing, and sophisticated page ranking techniques, which computes a score for each page, and which in turn is based on numerous factors and what Google calls metrics, i.e. a piece of information about a page. This includes, for example, where and how the search terms appear on a page and its prominence, the frequency with which your search terms appears on a page and factors such as word proximity, as well as more arcane metrics as they relate to information retrieval and analysis. To compute a score for a page Google says that it combines more than a hundred metrics in order to determine page rank.

- ❖ What Google considers to be the most relevant result will be shown as search result no. 1, and at the top of the page it shows how many results it has found. In default mode it gives you ten results per page. You can browse through the search results ten results at a time and then hit the 'Next' at the foot of the page, but it may be quicker to click on the Advanced Search menu and change the number of search results to a larger number which can then be scrolled more rapidly. (Or you can adjust it in the Preferences, see → **Setting your preferences: Number of results**).
- ❖ Number of results you can view: although Google can report tens of thousands or millions of hits for many search queries, the number of results it displays, and which you can actually view for any query, is usually a maximum of 800-900 as, in practice, few people will scroll through more than the first few pages of results.
- ❖ It should also be noted in this connection that the number of results for identical queries are very rarely exactly the same each time they are keyed into the Google search box, even on the same day. Sometimes there will be relatively insignificant temporary variations in the search results (as well as page rankings), but occasionally there can be startlingly different number of results over a matter of just a few days. This is due to Google's use of different data centres that it searches. Google has over 100,000 computers in data centres throughout the world. Normally the search request is processed by a server geographically closest to the origin of the request, but if a server is down, or overloaded, Google will redirect your query to another data centre. Thus, when a search query switches between data centres you will be seeing a different cache of the Web, and the results may vary considerably, although it is nothing to be unduly concerned about.
- ❖ Cache: each Google search results page offers links to the latest cached version as part of the search, and, additionally, it gives you an option to view the cached page showing only text, without images. The cached version is a snapshot, an exact replica of the page when it was last indexed by Google, and will give you the date it was most recently indexed (see also → **Additional commands and special syntaxes: cache**).
- ❖ Similar pages: if you click on to 'Similar' for any search result it will lead you to similar or related pages as those in the search results; or pages that contain similar material as that listed in the search query, for example the 'Similar' link for the Lochcarron Golf Club will lead you to other golf-related sites in the Highlands or Scotland as a whole. However, sometimes the 'Similar' results can be rather hit and miss.

Important points to remember – and the dos and the don'ts

- ❖ While this tutorial is about the finer points of Google search, there is nothing wrong with keeping it simple when doing a search that is not of a more complex nature. If you look, for example, for a particular place, a company, an institution, a hotel in a particular location, an airline, a product, etc. then often just entering that name could lead to the right result, although you might have to do a bit of scrolling.
- ❖ For more complex queries, much will depend on how you choose your search terms, which will determine which pages will appear in the result, and the order in which they appear. Imagine what result you want, and search for words that are likely to appear on the pages you want, not for a description of the page, or the website, unless you want to track down names of websites that contain precisely the same words as your search terms (see also → **Additional commands and special syntaxes: intitle**).
- ❖ Try to pick words that are unique to the topic you are investigating, and construct your query as precisely as possible. Try to visualize how answers to your search query might be expressed on Web pages.

For example, a good approach is to try to think of a few search terms that are specific or unique enough to avoid your being inundated with too many irrelevant results, but at the same time are broad enough not to miss anything that might be useful and relevant to the enquiry. Start off with as few search terms as possible, but if the results are not satisfactory then refine your query as necessary.

- ❖ While using search terms that are unique, i.e. that relate only to the specific topic of the search, may not be practical in many cases, narrowing the search to an exact phrase (or part of a phrase) that might appear in the pages or documents you're searching for could lead to more satisfactory results (see → **Using quotation marks/Phrase search** below).
- ❖ Experiment by using search terms with or without quotation marks, and refine your searches by using alternative search terms that are either more, or less, specific.
- ❖ Always bear in mind that Google may not be able to differentiate between words that have multiple meanings. Google is not a mind reader!
- ❖ Choose descriptive words, the more unique the better. Avoid search terms describing the *form* in which you want the information, or preceding it with words like "articles about", "company", "website" etc.
- ❖ Google lets you search for up to a maximum of 32 words; but the 32 words limit also includes the advanced search commands in any query (see → **Advanced Search and Google search operators** below). However for better results confine your search to a few precise terms.
- ❖ Bear in mind that Google's Boolean default is AND. This means that if you enter multiple search words without modifiers such as OR – what Google calls search operators (see → **Advanced Search and Google search operators** below) – it will search and display results for pages matching *all* the search terms appearing somewhere on a page.
- ❖ Google ignores certain common words that appear in virtually every Web page, such as "a", "about", "an", "are", "at", "by", "from", "I", "in", "of", "that", "the", "this", "to", "what", "when", "where", "who" or "will", etc., which it calls stop words. If you are looking for something specific that contains a stop word put the search terms in quotation marks (see → **Using quotation marks/Phrase search** below), which tells Google to treat them as one unit.
- ❖ Google is not case sensitive, i.e. it does not distinguish between CAPITAL and lower-case letters in search terms (except for the OR operator, see → **Using the OR operator** below): it assumes that all your search terms are lower case. However, if by force of habit you key in certain words in both upper and lower case (e.g. "Inverness" vs. "inverness") it won't affect the search results.
- ❖ Google ignores most punctuation in a search query except for apostrophes, and the double quotation marks used as Google search operators. However, punctuation in popular terms that have particular meanings, like C++ or C# (i.e. names of programming languages) are *not* ignored. Hyphenation is not important and it will find the words with or without hyphens.
- ❖ Google will search for some characters, e.g. the ampersand &, and will search for the Dollar \$ sign when it precedes a number, e.g. for prices for goods. It can also search for a range of numbers (with or without commas), and number searches can be combined with other search terms.
- ❖ Singular vs. plural form: Google will search for either the singular or plural form of search terms you enter. However, it is not always entirely consistent, and may in fact search for singular/plural variants without telling you. This is probably the result of its

stemming (word variations) technology, which means it will search not only for your search terms but also for words that are similar to some or all of them. Overall, it is probably better to use the singular form, but if in doubt use both, or conduct separate searches for each form.

Other factors to consider

- ❖ **Search term order and proximity:** this is a slightly nebulous area, but the search term order for multi-term queries can affect results. Google tends to give priority to, and retrieve the results of a search, by listing pages containing the search terms in the same order as they appear in your search query. It also considers the proximity of search terms *within a page*, and will favour results that have your search terms near to each other on the Web pages it finds. However, search term order and word proximity, on the whole, doesn't seem to make a significant difference, certainly not for the first 20-30 or so results.
- ❖ **Multiple results:** when you look at your search results you will notice that some results come with a link offering to 'Show more results from ...'. Google does this because many sites would produce thousands of occurrences of a search term, and so, instead of attempting to display them all, Google shows only the first few from each site. Click on to the link to see all the results from a particular site, and thereafter you can change it back to the default mode to 'Hide more results from...".
- ❖ **First 50 results:** be mindful that if the first three or four pages of 10 results, or the first page of 50 results, don't show very satisfactory results, the chances of turning up anything relevant and worthwhile on subsequent pages are probably not very good, and it is better that you refine your query using some of the special Google search operators (see → **Advanced Search and Google search operators**) discussed below.
- ❖ **Millions of results:** if Google reports millions of results – which it does very frequently – and if you can't find relevant information on the first 50-100 search results, refine your search with more focused search terms.
- ❖ **Wildcards:** Google supports a wildcard word – using an asterisk [*] sign – inserted into a phrase, or what are called "stemming algorithms" in information retrieval processes. The wildcard will act as substitutes for any whole word you don't know – for example, in a book title, quotations or poetry – but *not* as a stand-in for part of a word. You can also use two or more asterisks [**] to signify two or more missing words, but you must be careful to include enough words in the phrase or quotation to find unique results.

Examples:

"*why the chicken ***"
"*prime minister david **"

Result:

why the chicken crossed the road
prime minister david Cameron

It is worth experimenting with the wildcard, as you may be able achieve unexpected results when using the wildcard operator in combination with other search commands.

- ❖ **Accuracy of spelling:** there may be occasions when you are not sure of the correct spelling (especially of proper names), or when you make a mistake typing in the words. If Google can't find a precise match for the spelling you provided and thinks you have misspelled it, it may offer a suggestion for an alternative spelling, "Did you mean ...", which will appear at the top of the search results page. Bear in mind, though, that if the names are actually spelt incorrectly on Web pages, Google will of course show those results. Google can also get it wrong if enough people misspell the word on the Web!

“I’m feeling lucky” search

If you click this search method or button – which you will need to activate under Options if you are using the → **Google Toolbar** (see Module II) – it will lead you directly to the page of the first search result, i.e. the page that Google considers most relevant. It won’t actually show a search result, but it will take you straight to the relevant home page.

‘I’m feeling lucky’ is useful if you know the precise name of an organization, institution, library, theatre or venue, company, association, club, or musicians, websites of celebrities or sports personalities, etc.

Examples:

The search terms

aberdeen university

or, v.v.

university aberdeen

will lead you direct to the home page at <http://www.abdn.ac.uk/> if you click ‘I’m feeling lucky’, although it finds it just as easily in ordinary search mode, where it comes up as the first result of over 10 million hits, picking up other occurrences of “aberdeen”, or “university”.

Exactly the same happens, for example, if you click ‘I’m feeling lucky’ for a search for

eden court

amy macdonald

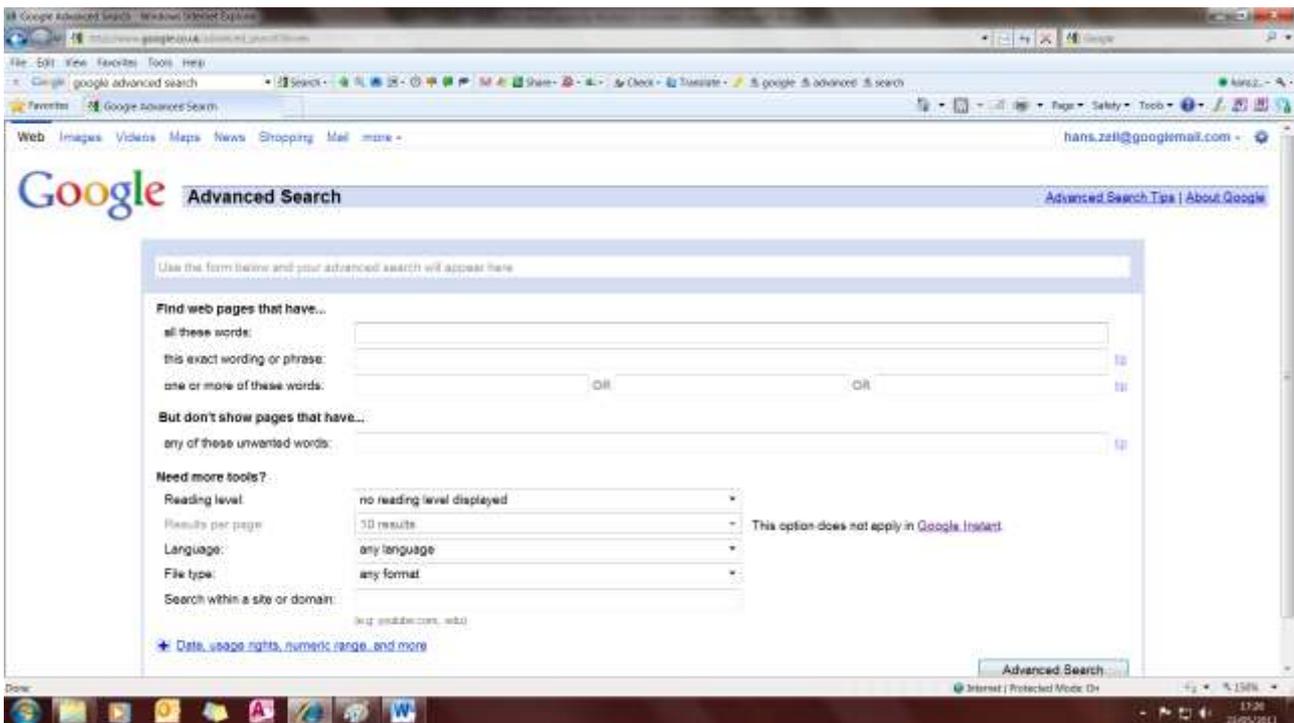
raigmore hospital

scotrail

So clicking on to the ‘I’m feeling lucky button’ can sometimes prove to be a useful shortcut.

Advanced search and Google search operators

Below I describe some of the many Google search operators and how they work. However, it is not really essential to learn them by heart. All you need to do is to go to Google's Advanced Search page at http://www.google.co.uk/advanced_search, or click on to the 'Advanced search' button on top of the first page of search results. This brings up a form with search refinement choices for most types of advanced searches. If you need more tools click on to 'Date, usage rights, numeric range, and more'. Thus even the novice Web searcher can perform quite complex searches without the need to acquire Boolean search skills. From the Advanced Search page you can also restrict results to specific languages, websites/domains, file type, and more (see → **Additional commands and special syntaxes** below). Moreover, you can mix advanced search operators and word filters for a single query, e.g. you can type in search terms in four advanced search fields, (i) with 'all these words', (ii) with the 'exact wording or phrase', (iii) with at least 'one or more of these words', but don't show pages that have 'any of these unwanted words'.



The Google Advanced Search page

Using quotation marks/Phrase search

Putting double quotation marks around a set of words can be one of the most effective ways to find very specific information, and can drastically reduce the total number of results. Enclosing your search term(s) within double quotation marks tells Google to treat your query as one unit (i.e. to consider the exact words in that exact order without any change) and for such searches it includes the stop words (see → **Important points to remember – and the dos and the don'ts** above), it would normally ignore in an ordinary search. Google calls this "exact phrase search", and you can also select this option in Google's Advanced Search menu.

Although Google already gives due attention to the exact order of the words (without the need for quotation marks), it is especially useful when some of the words, or the names, are relatively common, when you might be deluged with hundreds, thousands, or even hundreds of thousands of results without much relevance to your enquiry.

Examples:

lochcarron bistro (without quotation marks)

will generate some 14,000 results of which the first 50 or so results, but the majority relate to other Lochcarron sites, rather than just the Lochcarron Bistro.

Using the exact phrase approach

"lochcarron bistro" (with quotation marks)

will limit the search to around 1,500 results, virtually all specifically relating to the Lochcarron Bistro, or sites with reviews or listings of the Bistro, although there are some duplications of reviews on different domain TripAdvisor pages.

Using quotation marks is also extremely useful in tracking down titles of specific books, articles or documents – whether it is the books or the articles themselves, comment and criticism about them, or book reviews. It can be equally successful when searching for names of individuals.

For example;

"midges in scotland"

while a common phrase, will also lead you directly to George Hendry's popular *Midges in Scotland* with reviews and mentions of that book, or listings by online booksellers from whom you can purchase the book.

It works even better if you have very specific book titles such as

"the curious incident of the dog in the night-time"

which leads you to almost 4 million Web pages about that remarkable first novel by British writer Mark Haddon, including many reviews, blog pages, images of book covers of different editions, and more. If you are only interested to read recent or the latest reviews or discussions about the book, click on to 'Past 24 hours', 'Past week' 'Past month' etc. only and it will dramatically reduce the results.

You can also guess a phrase. For example

"the weather in the highlands"

will generate a very large number of results with that precise phrase, or part of that precise phrase, as shown in the three results below:

The weather in the Highlands and Islands of Scotland is famously unpredictable...

The weather in the Highlands can vary from moment to moment and...

...be prepared because **the weather in the Highlands** can change quickly...

However, for these particular search terms, searching for just

weather highlands scotland

would probably provide better results, with the top results all weather forecasts from the leading meteorological sites.

As mentioned above, quotation marks are also very useful in tracking down Internet references to individuals, and can frequently assist in finding their addresses, and/or email addresses, or details about their professional, academic or other activities, and information about their institutional or organizational affiliations.

The author of the popular book on midges mentioned in the above example

george hendry (without quotation marks)

will find pages containing both the term/first name "george" as well as the second term/surname "hendry", a massive 2.7 millions results using 'Everything' search mode, whereas

"george hendry" (in quotation marks)

only finds pages containing the exact phrase, and the search results are now reduced to 32,000 results, although that now of course also includes George Hendry's other than the biologist, as it is a fairly popular name in Scotland, and also in the US.

For more unusual names, for example, a search for the name of the author of this tutorial, it can work even better

hans zell

using 'Everything' search mode, generates 2.6 million results, but while many are relevant they also include search results relating to books published by Hans Zell Publishers, Hans M. Zell, Zell's other than Hans, not to mention Zell am See, Bad Zell (and many other places called "Zell" in Germany, Austria, Switzerland and even in the US), Zell-Forschung, Governor Zell Miller, Zell families all over the world, etc.

whereas

"hans zell"

reduces it dramatically to around 40,000, but still includes the Hans Zell *Publishers* references including cataloguing data in online library catalogues and databases, because Google interprets this as part of the exact phrase.

A search with an exclusion operator (a minus sign, see below)

"hans zell" -publishers

further reduces it to about 37,000, albeit still including references to Hans Zell *Publishing Consultants*, which is another aspect of our business (i.e. the exclusion operator eliminated "publisher" from the search results, but not "publishing"). And we haven't been able to get rid of Hans's living in places like Zell am See! However, we could add a second exclusion operator to eliminate "publishing"

"hans zell" -publishers -publishing

and we are then down to about 12,500, albeit still including some unwanted results.

Alternatively, including my middle initial (which I normally use as an author of books and articles), i.e.

"hans m zell"

generates some 48,000 results, all relevant (including books, articles, reviews of books, etc.), the first two results linking to some of our Web pages, and from which full address details could be tracked down.

Detect plagiarism using quotation marks

Using quotation marks can come in handy in detecting Internet plagiarism and cheating, which is in fact now a serious problem in schools, colleges and universities in many parts of the world. Plagiarism, also commonly known as a doing a "copy and paste job", is the practice of taking someone else's work or ideas and passing them off as one's own; or using someone else's ideas without giving due credit or acknowledgement.

Enter a few words from a specific phrase or sentence from a book, paper or article, or extracts from fiction or poetry, etc., put double quotation marks around them, and see whether other people have already used exactly the same phrase. It seems to work well both for a fairly long phrase (but generally not exceeding 32 words) or for *part* of a phrase, and Google will highlight the words in the phrase when it returns its search results.

For example, if I were to spot a Web page on (or other description of) Lochcarron containing this precise sentence

"Lochcarron is a small village community (population about 920) in the Northwest Highlands of Scotland. It lies in the heart of an area traditionally known as Wester Ross, one of the wildest and most beautiful regions of the British Isles, and an area exceptionally rich in its biodiversity"

I would know straight away if someone else had lifted that sentence from my one of my Web pages. However, Google does find this exact phrase as shown below, but only finds my own description, and so no plagiarism has taken place!

1. [Some Lochcarron & Wester Ross links, Hans Zell Publishing](http://www.hanszell.co.uk/lochcarron.shtml)

www.hanszell.co.uk/lochcarron.shtml - Cached

6 Jun 2011 – Some Lochcarron & Wester Ross links. **Lochcarron is a small village community (population about 920) in the Northwest Highlands of Scotland.** ...

Another example: if I had pretended to be a poet and claimed to have written a poem starting with these first six lines:

*She is out there somewhere,
creaking in the swell
of the green lough water,
oozing sugar
and black-market nicotine
into the river's vein.*

I would soon be exposed as a plagiarist, and Google would generate this result

1. [The Scottish Poetry Library](http://www.spl.org.uk/)

www.spl.org.uk/ - Cached

She is out there somewhere, creaking in the swell of the green lough water, oozing sugar and black-market nicotine into the river's vein. ...

An extract from a poem, "The Charming Nancy" by Miriam Gamble, which appeared on the Scottish Poetry Library website in June 2011.

If you are a teacher or a lecturer this is a very useful if you come across, for example, an eloquently written term paper or essay, but the quality of the writing is so high that you suspect some cheating has been going on—and the plagiarist can then be exposed, and named and shamed!

If you search Google for
"how to detect plagiarism"

it will offer you a large number Web sites and resources on this topic, some with useful tips and strategies how to recognize plagiarism and expose the copy-and-paste cheaters, although it entirely possible, of course, that in some cases suspected plagiarism may have been unintentional.

Using the "+" sign/Inclusion operator

Putting a plus sign in front of a search term (with no space between) instructs Google that this word or words must appear in the results, even though this might be a word(s) it would otherwise exclude (including "stop words", see → **Important points to remember – and the dos and the don'ts** above). This is what Google calls the Inclusion Operator. You can precede two, three or more words with the "+" sign (without space after the +) to instruct Google to find documents, Web pages, etc., with all these words exactly as you typed it, rather than all the documents with any one of them. However, this is not always very satisfactory, and you will probably get better results by using the double quotation marks/exact phrase option mentioned above, or even just searching in ordinary search mode.

It should be noted that, although similar, the inclusion operator is not precisely the same thing as enclosing the words or phrase in double quotation marks (see → **Using quotation marks**). The inclusion operator ensures that all the words in the search query appear in the results, but *not* necessarily in precisely the same order.

Overall, the inclusion operator is probably not particularly helpful nowadays, other than for forcing a search on common stop words (see → **Important points to remember – and the dos and the don'ts**), which Google would normally exclude in basic search mode. Putting the "+" sign in front of each term can also be used to instruct Google not to use word stemming,

and to search for only that exact term without any plural/singular variants (see also → **Other factors to consider: Wildcards** above).

Using the “-” sign/Exclusion operator

Using the minus sign, which Google calls the Exclusion Operator, on the other hand, can be useful as a way of eliminating lots of hits that you don’t want, especially for words that have multiple meanings and/or are used in a variety of different contexts. Putting a minus “-” sign immediately in front of each term that you don’t want (preceded by a space) instructs Google to exclude these words from searches and find pages that do *not* contain the term. It can be used for multiple words in a search query; and search queries can contain both inclusion and exclusion operators to fine-tune search results. It is also useful if you are searching for people, using the exclusion operator to exclude the first names of people you do *not* want to appear in search results.

Examples:

virus -computer

would find pages with the word virus but not the word computer

orwell -george

would find people, place names, businesses, etc. with the word Orwell, but not references to George Orwell the writer.

tartan weavers scotland -lochcarron

would find links to appropriate Web pages but excluding from it the results for the Lochcarron Weavers.

So it is a useful method to eliminate pages containing specific words or names from your search results.

Using the “~” sign

The tilde character – which Google calls the Synonym Character or, more colloquially, as “the fuzzy operator”, and which is interpreted to mean “approximately” – tells Google to search not only for the search term typed in but also for synonyms and related words. It works similarly to the OR operator (see → **Using the OR Operator** below). Place the “~” sign at the beginning of a search term, with no space between them (but it only works for English-language terms.)

It can be useful to find alternatives, or words associated with the search terms, or if you want a starting point for a fairly broad search on a topic.

Examples:

~data scotland health

will generate results that include the word “Scotland” for a very wide range of health information and statistics on public health topics, health-related indicators, health survey reports, health databases and informatics, analysis and statistics about health inequalities, and so on.

~publishing scotland

brings up results containing the words book, books, book industry, publish, publishing, publications, publishers, magazines, plus the word “Scotland”.

~higher education scotland

will include results containing the words college, colleges, university, universities, and other higher education institutions, plus the word “Scotland”.

The synonym character operator can also work quite well in searching for concepts or abbreviations.

Similarly, you can use it together with the word "glossary" to find glossaries as well as dictionaries, terminologies, encyclopaedias, or gazetteers for that word. Type in the word or term and then add "~glossary".

Examples:

computers~glossary

internet~glossary

scotland~glossary

jazz~glossary

Using the OR operator

Google also supports the "OR" operator (Important: you must type OR in capital letters for this operator function to work) for synonyms or equivalent terms, which will retrieve pages that include either keyword of two search terms. This can be helpful if there might be different variants of the word or spelling differences for finding both the singular or plural form of a word. However, in practice, you may find there shouldn't really be much need to use the OR operator.

Examples:

eskimo social customs OR inuit

will return results that have either or both words in the search query; similarly

ethnic conflict côte d'ivoire OR ivory coast

will do likewise, finding both the current official country name, and the old English variant for that country.

And the same goes for variant spellings of towns in Europe for example

rome OR roma

accommodation munich OR muenchen (or münchen)

Fill in the blank/Google Suggest

This is not really a search operator as such, but simply a way to take advantage of Google's ability "to fill in the blank", based on phrases that others have already written and published on the Web. To do so, enter an incomplete phrase into the search box in double quotation marks.

Examples:

"the weather in scotland is"

"robert burns was born on"

although you could of course also simply search

weather scotland

robert burns birth date

Something similar is → **Google Suggest** (see Module II). Google Suggest offers searches similar to the one you're typing. Start to type in a search query and Google will begin to guess what you are looking for, offering you – in a drop down menu – various alternative search keywords. Once you first use it you will see that the suggestions flash up very quickly and it updates with every single key press. To use Google Suggest you will need to be signed in to your Google Account (if you have one) and have → **Google Web History** (see Module II) enabled.

Additional commands and special syntaxes

In addition to the commands set out in the preceding section, Google offers many other advanced operators or special syntaxes for refining or narrowing your searches. Most of these can be formulated by using Google's Advanced Search form.

You can use multiple syntaxes in a single search query if you are trying to track down something very specific, but mixing syntaxes too liberally can result in unsatisfactory search results. Start off with using just one syntax command, and then build on this by adding syntaxes to keywords that are already part of your initial search terms or results.

Below are descriptions of some of these commands.

Site restrictions

The command "site:", followed by the domain permits you to narrow your search to either a particular website (or host) or a domain, which can be a country domain such as .uk for the UK, .ca for Canada, .se for Sweden, .ke for Kenya, .za for South Africa, .zw for Zimbabwe, etc.; or a top-level domain .com (commercial, originally mainly US, but now also used elsewhere), .co (commercial in other countries), .edu (educational, for the US), .ac (academic, UK), .net (network), .org (usually non-profit making organizations and NGOs, etc.), .gov (government), .mil (military), or .info (information services). (See also → **inurl:** below.) The domains .com, .info, .net, and .org are open to any individual or organization. There is also the domain .name, reserved for individuals.

Enter the term(s) you're looking for, followed by the word "site:" with a colon, followed by the domain name (no space between). On the Google Advanced Search pages you can also use this to exclude results from sites or domains.

This can be a useful filter to eliminate unwanted hits from all the .com, or .co sites if the words in your search query are likely to feature on commercial sites.

It can also be useful to search websites that don't have their own search facilities.

Examples:

history highlands scotland site:uk
will restrict this search to UK websites only; while

history highlands scotland site:ac.uk
will restrict it to academic sites in the United Kingdom, i.e. mostly universities and other institutions of higher learning.

history highlands scotland site:nls.uk

or

history highlands Scotland site:nas.gov.uk

will limit it further to resources either at the National Library of Scotland (NLS), or the National Archives of Scotland (NAS). However, as the word "Scotland" or "Highlands" will obviously appear very extensively throughout both these websites, a search such as this example would be too broad and would generate far too many results. On the other hand it could be usefully employed to find region or town-specific resources at the National Archives of Scotland, always provided of course that these pages are accessible and have been indexed by Google. You can also conduct such searches in Google's Advanced Search pages.

Language restrictions

Google lets you use its language selector to limit results to pages written in a specific language, at this time in over 50 languages, and these are listed on Preferences page (see → **Setting preferences**). It can be useful if, for example, you are conducting research on a

specific topic as it relates to a particular country and enables you to search for documents or websites from both a specific country and in a specific language.

For example, you could conduct a search for websites (i) in French only, and (ii) appearing on French domains only, containing stories, articles, biographies, filmographies, news items, obituaries, etc. relating to the recently deceased French film director and cinematographer Eric Rohmer. For this type of search it will be easiest to go to Google's Advanced Search, and enter the search term

eric rohmer

and then select 'Return pages written in French' from the languages menu and, additionally, enter the site:fr domain for France in the appropriate Advanced Search operator field.

File format

If you select the file format selector in Advanced Search you can restrict your search results to particular file types or formats, such as .pdf (Adobe Portable Document Format), .ps (Adobe PostScript), .xls or .xlsx (Microsoft Excel), .ppt (Microsoft PowerPoint), .swf Shockwave Flash, and more, although one minor limitation is the fact that Google won't let you specify the size of the file. When searching for images only it is better to conduct your search with → **Google Image Search** (see Module II).

Alternatively you can precede the search term(s) with the word "filetype:" followed by its abbreviated form as shown above. A search for pdf files, for example, could produce more "weighty" or significant reports and documents than regular Web pages.

Example:

filetype:pdf midges scotland

Date restrictions

This permits you to filter search results to Web pages that have been updated within the 'Past hour', or past 24 hours, past 2 days, past week, past month, and past year; or you can indicate a custom range of dates 'From/To'. You indicate this on the panel on the left, having clicked on 'More' search options.

This can be useful for, say, recent news reports (see also → **Google News** in Module II), or anything else for which currency is vital, although you will need to be mindful of the fact that any date-range searches will not relate to the date that the content was created or updated, but the date when the Google robots last indexed the page. For highly topical news stories it would probably be better to use a real-time search engine, some of which are described in Module IV.

Occurrences/Special syntax operators

These are additional commands and filters, also called special syntaxes, which can be useful to hone your search or narrow your search results. They specify where your search terms must appear on the page. You can mix the syntaxes and/or combine them with search terms with or without quotation marks, or other Advanced Search operators. Note that in all of them there is no space after the colon.

A number of them are of limited use, but here are some that could be helpful:

intitle:(followed by search term/s) lets you specify that one or all of your search terms should appear on Web pages or Internet documents whose HTML title tags – the text that appears on the top bar of your browser window when viewing a page – contains the search term, or all the search terms. If the search query consists of more than one or two words it is best to enclose the words in double quotation marks to avoid unwanted hits.

Examples:

intitle:scottish studies

when one of the top Google search results will be the site of the School of Scottish Studies at the University of Edinburgh at <http://www.pearl.arts.ed.ac.uk/>.

When you visit that particular page click on to the 'View' button in your browser and then select 'View source', and this is what you will see on the first three lines:

```
!-- Copyright 1996 The School of Scottish Studies -->
<HTML>
<HEAD>
<TITLE>
School of Scottish Studies
</TITLE>
</HEAD>
```

Another example might be an intitle search for timetables relating to train services in the Highlands and Islands area, for which a search for

intitle:timetable trains highlands

will find pages with the word "timetable" in the website <title> tag, plus the words "trains" (or "train") and "Highlands" anywhere in the page. However, the results might not be entirely satisfactory as you also get results for the Welsh Highlands Railway, and in order to eliminate those results you would need to refine your search to

intitle:timetable trains highlands -welsh

The above should not be confused with the text or descriptive keywords in the URL (see → **inurl:** below).

allintitle: is a variant of the above which instructs Google that all terms must appear in the title of the page (in any order).

Example:

allintitle:bird watching scotland

intext:(followed by search term/s) will search only actual body text, i.e. it will find pages that contain the specified term in part of the page, but it will ignore links, URLs/titles of Web pages. It operates in a similar way to → **intitle:** above; if the search query consists of more than one or two words it is generally a good idea to enclose the words in double quotation marks to avoid unwanted results.

inanchor: the anchor text is the text on a page that is linked to another Web page or a different place on the same page, and if this command is used it will restrict the results to pages containing the query terms you specify in the anchor or links to the page.

Example:

inanchor:holiday accommodation scotland pet friendly

The variation **allinanchor:** would indicate that all query terms must appear in links to the page. However, in day-to-day practice neither of these special operators are likely to be used much.

inurl:(followed by the URL/Web address; there is no need to type in the http:// part)

This command lets you specify that some or all your search terms must appear within the address (the URL) of a Web page address, i.e. its descriptive keyword(s). Sometimes this can be useful, for example to find sites of upcoming major international conferences, elections, sporting events, or festivals and major social events; or if you want to revisit a website for which you can only remember part of its Web address.

Example:

inurl:highland games 2011 (or substitute the year with 2012, etc.)

will find all the websites or pages devoted to the Highland Games in 2011 (or subsequent years), in all parts of the Highlands and Islands, in Scotland generally, as well as Highland Games held in other parts of the world.

A variant is **allinurl:** which means all your query words must appear in the URL of the website.

link:(followed by the URL/Web address, there is no need to type in the http:// part)

This search will tell you who links to a page or Web site, a handy feature – especially for Webmasters, NGOs, tourist organizations who want to know how many other sites link to their Web pages. However, it is not possible to limit the search by using additional syntax commands. Also be aware that the results may well be incomplete, and they can vary from day to day.

Examples:

link:www.celticfringe.org.uk

finds sites linking to the Celtic Fringe tourist organization, although the results are very incomplete, and Google states that its “link:” results are only an approximation and should not be interpreted as an exact count pointing to a particular page.

The “link:” command or search generally seems to work better well with top-level URLs, as in these examples

link:www.heraldscotland.com

or finding pages that link to particular pages of major newspapers, e.g.

link:www.guardian.co.uk/travel

To find pages that link to your site it is probably a better strategy to instruct Google to find Web pages that *contain* the URL, or, as Google interprets it, the *term*, and enclose the Web address in double quotation marks.

Examples:

"www.celticfringe.org.uk"

"www.lochcarronsailing.com"

"www.lochcarron.org.uk"

"www.hanszell.co.uk"

cache:[followed by the URL/Web address, there is no need to type in the http:// part]

This will search for a cached copy of the page indexed by Google, even though the original Web address may have changed, no longer exists, has migrated elsewhere, or the server is down. The cache, the snapshot of the page, will then show you the page as it was last indexed and as it appeared on a particular date and time.

Of course, retrieving cached versions of pages only works if Google in fact has a copy of them, and if it indexed the page in the first place. It is also possible that Google may have been asked to remove the cached page.

Examples:

cache:www.lochcarron.org.uk

cache:www.visitwester-ross.com

cache:www.hanszell.co.uk/lochcarron.shtml

Search within a number or date range

If you wish to search for a range of numbers within the text, or finding other things with a numbers range, Google will find numbers equal to, or within the range, and it also understands numbers it finds on pages that have commas or decimal points in them. To tell Google to do a number range search, insert two periods between “to” numbers, without adding spaces, and with the low number followed by the higher number.

Examples:

1900..1960 prime minister UK

dvd player £100..150

Or, similarly, but without the periods, you can search for a *specific* date:

Examples:

27 january 1940 birthdays

27 january 1940 historical events

Google's other search capabilities and functions

Definitions

There are a number of other search techniques that might well be described as Google's hidden tools. One of those is Google's Web definitions, and this works quite well not only for general questions, for example for IT or computer technical terms, or for phrases and acronyms.

Enter "define:" (with no spaces on either side of the colon) followed by the word or term(s). Material is drawn from various resources on the Web, including glossaries and dictionaries, scholarly articles, as well as entries from the Wikipedia. You can then click on to the results to obtain more detailed descriptions as it relates to the term.

Examples:

define:globalization

define:hedge funds

define:smartphone

define:cgi-bin

define:wifi

If you want dictionary definitions or Web pages *discussing* definitions of the topic – i.e. rather than a list of definitions as in "define:" – type "define" (without the colon) into the search box followed by the word(s).

Examples:

define globalization

define hedge funds

define smartphone

define cgi-bin

define wifi

Calculations and unit conversions

Google can act as a calculator for all sorts of functions, from standard mathematical functions and arithmetic to advanced functions, as well as conversions for all sorts of units of measurement.

<i>Operator</i>	<i>Meaning</i>	<i>Type into search box, e.g.</i>	<i>Result</i>
+	addition	1359 + 7853	= 9212
-	subtraction	921 - 433	= 488
*	multiplication	55 * 18	= 990
/	division/divided by	121 / 2	= 60.5
% of	percentage of	65% of 300	= 195
^	raise to a power of	2^5 (i.e. 2 to the 5th power)	= 32

Or it can do advanced math calculations such as trigonometric functions and square roots, as in this example

$$\text{sqrt} \quad \text{square root} \quad (5 * 9) + (\text{sqrt}(10)^3) \quad = 76.6227766$$

If you want more examples of Google calculator's capabilities, including more advanced math functions or physical constants, have a look at Nancy Blackman's useful Google Calculator "Cheat Sheet" at <http://www.googleguide.com/help/calculator.html>.

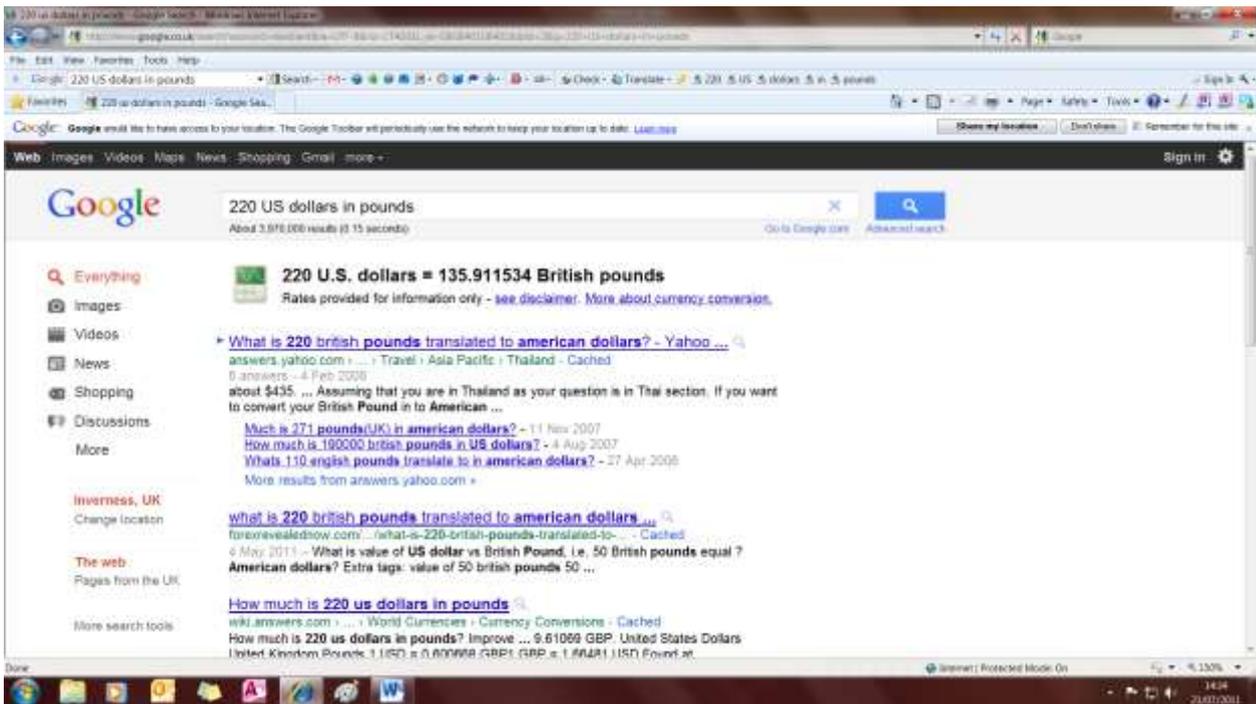
You can use Google to convert between many different units of measurement, weight/mass, height, distance, volume, and currencies, among others.

Use the "in" operator to specify what units you want used to express the answer, by adding the word "in" followed by the name of a unit.

<i>Type of unit</i>	<i>Unit conversion</i>	<i>Search example</i>	<i>Result</i>
Currency/Money	220 US Dollars	220 US Dollars in Pounds	220 U.S. dollars = 135.911534 British pounds
	150 Euro	150 Euro in Pounds	150 Euros = 130.22702 British pounds
<i>(Note: in the above two examples, using US \$ in GBP, US Dollars in British Pounds, or Euro in GBP would produce the same result, but will obviously vary from day to day depending on the exchange rate)</i>			
Weight/Mass	13 stones	13 stones in kg	13 stones = 82.5538113 kilograms
	3 tablespoons	3 tablespoons in oz	3 Imperial tablespoons = 1.87500 Imperial fluid ounces
Height	6 feet	6 feet in cm	6 feet = 182.88 centimetres
Distance	65 miles	65 miles in km	65 miles = 104.60736 kilometres
Volume	20 gallons	20 gallons in litres	20 Imperial gallons = 90.9218376 litres
Temperature	24 Celsius	24 Celsius in Fahrenheit	24 degrees Celsius = 75.2 degrees Fahrenheit
Area	8 acres	8 acres in sq km	8 acres = 0.0323748514 sq kilometres
Time	1 year	1 year in minutes	1 year = 525 948.766 minutes

You can similarly use Google calculator for energy, electricity, and power conversions, as well as for numbering hexadecimal, octal, and binary numbers. Prefix hexadecimal numbers with 0x, octal numbers with 0o, and binary numbers with 0b, e.g. $0x7f + 0b10010101 = 0x114$.

You can also force the calculator to try and evaluate an expression by putting an equals (=) sign after it, but this only works if the expression or calculation is mathematically resolvable, e.g. $127 + 59 - 36 = 150$.



An example of Google's unit conversion capabilities: Dollars in Pounds



An example of Google's unit conversion capabilities: Miles in kilometres

Air travel information, weather, current time, and maps

You can use Google for answers to quick everyday questions such as air travel information, finding location maps, current weather conditions, and current time in most towns or smaller communities worldwide.

Air travel information

You can check the flight status for arriving and departing UK flights by typing the name of the airline and the flight number into the search box.

Examples:

Flybe 7326

Easyjet 394

You can also access the current status of arrivals and departures information (and delays at specific airports), by typing in the name of the city or the three-letter airport code, followed by the word "airport", and the first result will usually lead directly to the relevant page.

Examples:

inv airport

or

inverness airport

ltn airport

or

london luton airport

man airport

or

manchester airport

Weather

Type in the word "weather" followed by the name of the city, or the post code

Examples:

weather inverness

weather iv54

Current time

Do you want to know what time it is right now in Melbourne, in San Francisco, or in any other city around the world? Type in the word "time" followed by the city, and it will give you the precise real time.

Examples:

time sydney

time san francisco

time cape town

Maps

If you are looking for a map of a town, type in the name or the UK postcode of a location and the word "map". Clicking the map will then take you to a larger version on → **Google Maps** (see Module II).

Examples:

inverness map

iv2 3px map

strathcarron map
iv54 map

Using complete post codes:

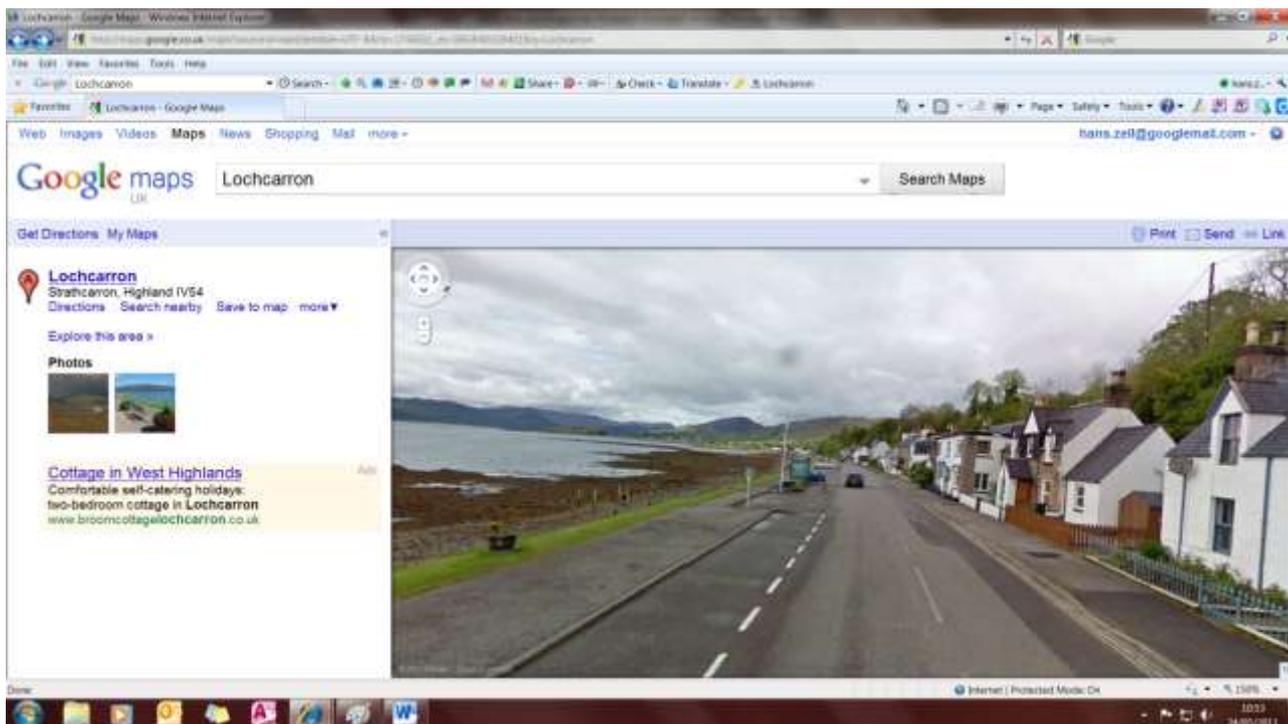
iv54 8yb

hx2 6sy

For this complete post code in Lochcarron or in Halifax, for example, Google will generate a map of the specific location, and, additionally, then also lets you click on to "Street View" where you will see a photograph of the front of the house/property and its precise location in a street view (where Street View is currently available, and see → **Google Street View** below and in Module II).

Google Street View

Google Street View is an innovative new technology that displays images/photographs taken from a fleet of specially adapted cars that have systematically visited towns and villages all over the world, each using nine directional cameras for 360° views, at a height of approximately 2.5 meters, together with GPS units for positioning, and laser scanners for measuring of up to 50 meters 180° in the front of the vehicle. As a result it now enables Google to offer imagery and panoramic views from various positions along many streets in the world. Launched in May 2007, it originally covered the USA only, but thereafter rapidly expanded to cover many more cities in all seven continents of the world, as well as rural areas, including the Highlands and Islands of Scotland. Areas that cannot be accessed by car are sometimes covered by "Google Trikes" and snowmobiles. Street View allows you to zoom, rotate and pan through street level photos, and using the keyboard or mouse to change the horizontal or vertical viewing direction and/or the zoom level that can be selected.



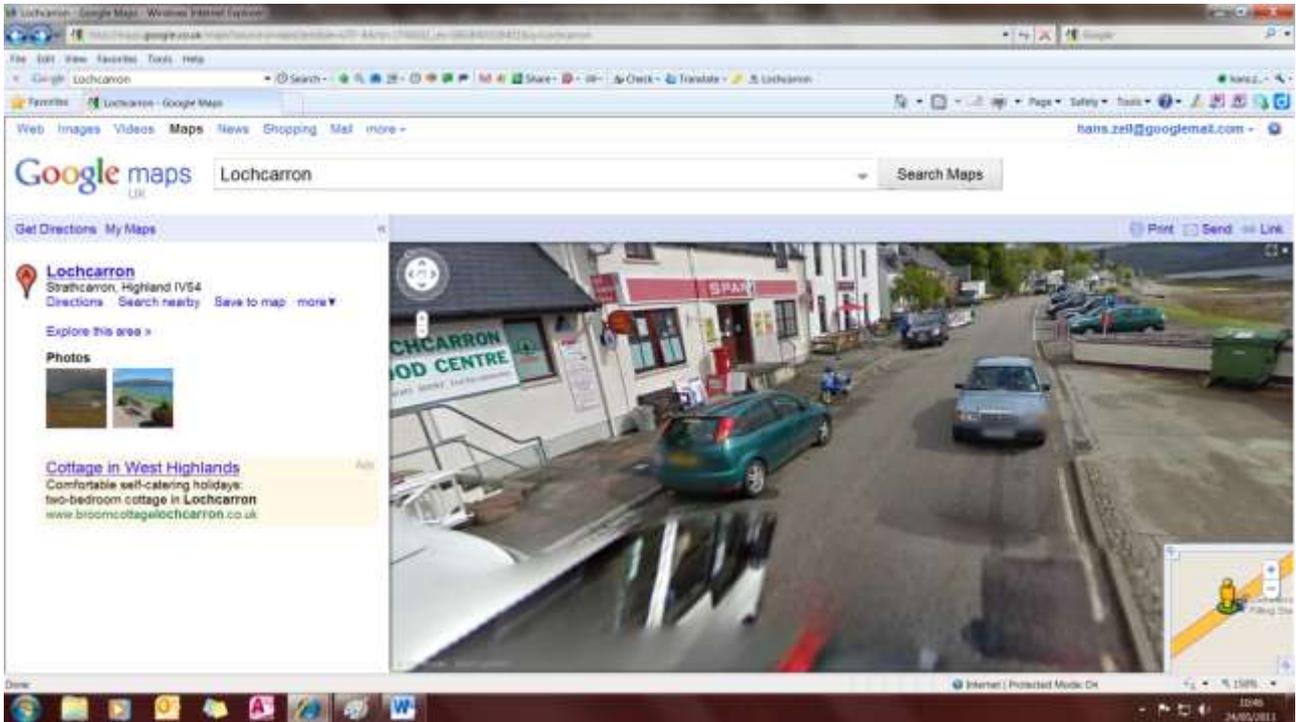
A Google Street View of Lochcarron village in Wester Ross

In the UK, Google Street View currently includes roads, major and minor, both rural and urban, covering an area of almost 300,000 miles, reportedly now offering 98% coverage. Some major UK tourist attractions are now also covered.

Since mid-2010 more imagery for most of Britain has also become available in → **Google Maps** (see Module II), providing street views whenever you seek directions to get from one place to another. If you click on to any point in the directions it will display street views from

the starting point through to the final destination, including most of the turnoff points or junctions on your journey.

To see the street view of your location (where available) do a search in Google Maps and then click on to the location marker to bring up a Street View link. Drag the little yellow man (or "Pegman" as Google calls him, see illustration below) to the map and then move it along with your cursor in the small panel on the right hand side; click on the top left corner to enlarge, or click in the bottom corner to remove from view to see different street views and angles along the road, or other locations and landmarks, and/or use the panning and zooming features in the top left-hand corner, as shown in the illustration below.



Another Google Street View of Lochcarron village

For more information about Google Streetview, and suggestions how to use it in the UK, see <http://maps.google.co.uk/intl/en/help/maps/streetview/>.

Recipe View

If you are into cookery and looking for recipes, a recent innovation from Google might be of interest. When you search for a recipe or an ingredient on Google, you would normally get lots of results, but not all of them will be for recipes. Now you can narrow your search results to show only recipes. Click on the 'Recipes' link in the left-hand panel on the search results page to narrow your search results to show only recipes, along with information like ratings, ingredients, and pictures. You can search for specific recipes or more general topics such as ingredients, or those by your favourite cookery book authors. You can also use the tools on the left-hand side of the page to filter recipe search results based on your ideal ingredients, cook time and calorie count. For more information see <http://www.google.com/landing/recipes/>.

A summary of Google search operators and other capabilities

- " "** Enclosing your search term(s) within double quotation marks tells Google to treat your query as one unit, and to only find pages containing the exact phrase, i.e. the exact words in that exact order without any change.
- +** Putting a plus sign in front of a search term instructs Google that this word or words must appear in the results, even though this might be a word(s) it would otherwise exclude.
- Putting a minus sign immediately in front of each term that you don't want as part of a search instructs Google to exclude these words from searches and find pages that do *not* contain the term.
- ~** The tilde character tells Google to search not only for the search term typed in, but also for synonyms and related words.
- OR** Adding OR to your search query will find synonyms or equivalent terms, and will retrieve pages that include *either* keyword of two search terms.
- site:** Use the "site:" command to search within a specific website or domain.
- filetype:** Use the file format selector in Advanced Search to restrict your search results to particular file formats.
- intitle:** Lets you specify that one or all of your search terms should appear in the title of a Web page (the text that appears on the top bar of your browser window when viewing a page).
- allintitle:**
- inurl:** This command lets you specify that your search terms must appear within the address (the URL) of a Web page, i.e. its html <title> tag.
- allinurl:**
- cache:** This will search for a cached copy of the page indexed by Google, even though the original Web address may have changed, no longer exists, has migrated elsewhere, or the server is down.
- define:** Will help you find definitions of particular words and terms, drawing from wide variety of resources on the Web.
- Use Google as a calculator:**
- +** addition
- subtraction
- *** multiplication
- /** division/divided by
- % of** percentage of
- ^** raise to a power of
- in** Use the "in" operator to specify what units you want used to express the answer, to convert between many different units of measurement, weight/mass, height, distance, volume, temperature, and currencies, among others.