The economics of Google: business model and strategy

How Google is emerging as a powerful potential monopoly

Abstract

The aim of this paper is to analyse the business models that have given Google a competitive edge in internet search. Although the online advertising model generates the core income of the firm, other models are tested to build up customer loyalty by offering enhanced utility. Google's strategy consists in being omnipresent both on the internet and on the user's hard disk and screen. Google's success is based on the interaction of five components: performance, innovation, a novel business model, an immense memory, and the formation of a vast community of testers and users. The secret wealth of Google lies with the user information collected, and the firm's fragility resides in the possible loss of user confidence were the bulk if user knowledge to be unscrupulously exploited.

1. INTRODUCTION

The success of Google over the past six years raises the question of what might be the most efficient type of Internet Business Model or combination of models. The aim of this paper is to endeavor to pinpoint the factors that explain how Google managed to gain a dominant position on the Internet search market. These factors are both related to the business model chosen by the Californian firm and the strategies adopted to capture and conserve the Google user community.

The firm was founded in 1998 (August) and went public in August 2004. Nine months later, its capitalization (\$76B) made it the highest valued dotcom, well ahead of ebay and yahoo. About 80% of Internet search passed through Google (Comscore Media Metrix Oct.

2004). In 2006, Google enjoyed 44% of all US web search against Yahoo's 28.8%. In 2007, the market value of Google was \$150B, dividend per share was \$3.68 compared with 2.29 in 2006. Google's earnings were \$1B, up 68% on the previous year, for \$3.63B in revenue with 23% of Internet advertising market share in the USA in the fourth quarter of 2007.

We shall try to put forward an explicative model accounting for the interactions between the public, the business world, and society at large.

We shall first define and categorize what is currently meant by business model. Then we shall show which model/models have been adopted by Google. We shall next review the strategies employed by the search engine to remain present on the end-user's interface. We shall also present the five key factors that in our opinion explain why Google has become the most used search engine. Finally we shall comment on some of the criticisms that arise from the dominant position that Google might acquire and the excessive power a monopoly of information search and access would provide.

2. DEFINITION OF A BUSINESS MODEL

A business model can be defined as the way an enterprise generates revenue and profit. It implies among other things its strategy, the way it defines its offer and positions itself on the market, how it acquires and retains its customers. On the Internet, a problem arises insofar as users expect to obtain many basic services such as search engine queries free of charge. Under such circumstances, sustainable development and profit making rely heavily on innovative ways of attracting advertisers.

The models can be referred to as:

- 1. the online advertising model
- 2. the auction broker model
- 3. the search agent buying model
- 4. the buy/sell fulfilment model

¹ http://searchenginewatch.com/showPage.html?page=2156431 July figures, 2006, include every type of portal or key word search . Google: 43.7%, Yahoo: 28.8%, MSN: 12.9%, AOL: 5.9%, ASK 5.4%, Others: 3.4%.

² http://seekingalpha.com/article/32969-google-s-billion-dollar-quarter-a-closer-look

THE ONLINE ADVERTISING MODEL

In a context where users expect free services, one of the most common models consists in selling advertising links or space in the form of bars or pop ups to finance the development of websites. However the advertising market expenditure on the Internet is relatively small compared to television or press budgets. Thus competition is very fierce to attract announcers. Nevertheless the trend seems to be on spending more online according to Forrester Research. Total US online advertising and marketing reached \$14.7 billion in 2005, a 23% percent increase over 2004, and it should almost double by 2010. In 2007, it reached \$25.5B with an annual growth rate of 23%. Importantly, search engine marketing in the US grew by 33% in 2005, and by 2010 spending on it will hit \$11.6 billion annually. Moreover, traditional advertisers are moving towards online activities.³

THE AUCTION BROKER MODEL

Other ways of generating revenues on the Internet have been through on line auctions, the model characteristic of ebay. The firm allows sellers to display and propose their product or article on the website and charges the seller a listing fee, while taking a commission fee from the sale.

THE SEARCH AGENT BUYING MODEL

The use of search agents to find products and compare prices, allowing the broker to earn a commission, has also been experimented by Internet firms such as mysimon. For a general search engine, integrating a shopping agent site could afford an opportunity to generate revenues through affiliation and commission.

THE BUY/SELL FULFILMENT MODEL

A more traditional approach has been the sale of products, technology or software. The network has allowed software publishers to reduce costs substantially and enhance profits considerably by having the online buyer download the product directly from the firm's website. Secure transaction software has greatly improved payment facilities and extended consumer confidence. Firms such as Copernic have developed this model, sometimes

³ https://www.netimperative.com/2005/05/US_ad_spend_shift%20online

allowing users to download software for a limited period of time, say thirty days, before they are required to purchase the product.

OTHER MODELS

Other models can be combined with the ones described above but they may not generate the bulk of the revenues of a search engine. The distributor model allows a site to offer a catalogue, thus connecting a large number of manufacturers to wholesale or retail buyers. Thus, if a transaction is made, the site receives a commission. The setting up of a virtual marketplace (virtual shopping mall) would allow a portal to charge transaction fees, monthly listing and setup fees. Last but by no means least, the portal model offers a range of services (news, weather, stock market, hosting etc.) whereas the personalized portal model offers the user his own customized information interface (CNN, Yahoo, Google.)

We shall now turn to the way Google has adapter the above models in order to introduce new efficient ways of generating revenues while upholding the notion of free access to information which underscores the firm's mission statement, "to organize the world's information and make it universally accessible and useful."

3. GOOGLE'S BUSINESS MODEL: INNOVATIVE ADVERTISING

THE QUERY-BASED PAID PLACEMENT MODEL AND THE CONTENT-TARGETED ADVERTISING MODEL

Google has brought innovation to the online advertising model by introducing the query-based paid placement model and the content-targeted advertising model. The former sells favourable link positioning to companies willing to buy key query words. The most favourable position is awarded to the enterprise willing to pay the highest price for a term. This price is calculated by combining the maximum cost per click (CPC) and the click through rates (percentage of visitors viewing an ad and clicking on it) used to measure the relevance of the ads. We can observe that the auction model has been partially introduced into the advertising model since firms bid for the best position on the page. The highest bidder's link is placed at the top of the page to the left of the list of search results. Several bidders can

be found on the same page. Sponsored links can also appear at the top of the page above the list of research results. This position is very often the one the user clicks on first, without necessarily noticing that this particular link has been bought. Nevertheless, the colour of the link, blue on a beige background, differentiates it from the main search results while a sponsored link appears in the top left-hand corner. This program is referred to as adwords.

Adsense, on the other hand, adds a partnership model to adwords. This program allows members of the Google network to deliver targeted ads from adword advertisers either based on search results or on their own site content. Google then shares a part of the revenue with the affiliated site. The total amount paid for the influx of traffic in 2007 was \$1.13B in 2007, about one third of Google's revenue. A link to the search engine is also inserted into the pages of the affiliated site. Signing up to this service is accomplished in less than five minutes. We shall see later how adsense is an integral part of Google's overall strategy, being omnipresent for the end-user.

GOOGLE'S TURNOVER

In order to understand how Google generates the bulk of its revenue, we shall now take a look at its turnover for 2007 and 2006. The table below shows the variation in turnover, profits and ebidta between the two periods.

Table 1: Annual results 2007 and 2006 of Google

Google Inc.
Consolidated Statements of Income (in thousands, except per share amounts)

	Three Months Ended December 31,		Twelve Months Ended December 30,				
		2006	P4P	<u>2007</u>	 <u>2006</u> *	,	2007
		(unaud	litea,			(unaudited)
Revenues	\$	3,205,498	\$	4,826,679	\$ 10,604,917	\$	16,593,986
Costs and expenses:							
Cost of revenues (including stock-based compensation expense of \$10,874, \$6,255, \$17,629, \$22,335)		1,283,148		1,955,825	4,225,027		6,649,085
Research and development (including stock-based compensation expense of \$82,122, \$161,372, \$287,485, \$569,797)		386,806		630,783	1,228,589		2,119,985
Sales and marketing (including stock-based compensation expense of \$14,502, \$38,085, \$59,389, \$131,638)		255,206		422,291	849,518		1,461,266

General and administrative (including stock-based compensation expense of \$26,929, \$39,588, \$93,597, \$144,876)	219,744	377,046	751,787	1,279,250
Total costs and expenses	2,144,904	3,385,945	7,054,921	11,509,586
Income from operations	1,060,594	1,440,734	3,549,996	5,084,400
Interest income and other, net	124,139	167,294	461,044	589,580
Income before income taxes	1,184,733	1,608,028	4,011,040	5,673,980
Provision for income taxes	154,017	401,579	933,594	1,470,260
Net income per share basic	\$3.36	\$3.86	\$10.21	\$13.53

Source: Google, January 21 2008⁴.

Table 2: Google's revenue sources for 2006 and 2007

The following table presents our revenues, by revenue source, for the periods presented (in thousands, unaudited):

		Three Months Ended Twelve Months End December 31, December 31,		
	<u>2006</u>	2007	<u>2006</u>	2007
Advertising revenues:				
Google web sites	\$1,977,042	\$3,121,539	\$6,332,797	\$10,624,705
Google Network web sites	1,197,867	1,635,836	4,159,831	5,787,938
Total advertising revenues	3,174,909	4,757,375	10,492,628	16,412,643
Licensing and other revenues	30,589	69,304	112,289	181,343
Revenues	\$ 3,205,498	\$ 4,826,679	\$ 10,604,917	\$ 16,593,986
0 0 1 T	31 3000			

Source: Google, January 21 2008

The following table presents our revenues, by revenue source, as a percentage of total revenues for the periods presented (unaudited):

Three Mon Decemi		Twelve Mo Decem	nths Ended ber 31,
2006	2007	<u>2006</u>	2007

Advertising revenues:

⁴ http://investor.google.com/releases/2007Q4.html consulted 260208

Google web sites Google Network web sites	62% 37%	65% 34%	60% 39%	64% 35%
Total advertising revenues	99%	99%	99%	99%
Licensing and other revenues	1%	1%	1%	1%
Revenues	100%	100%	100%	100%

Source: Google, January 21 2008

We can notice that the income generated by the core adwords program has increased by 3% whereas the adsense revenue has decreased by 4%. Net profits are up 25%.

If Google receives the bulk of its revenue from advertising⁵, around 99%, other models are being tested. We shall now review them.

OTHER GOOGLE MODELS

Google has created a range of services which illustrate some of the second level business models described above.

The distributor model is one of the latest to be added to the Google panoply. Catalogs allows the user to browse online mail order catalogs. The interface presents a directory with fourteen items ranging from *apparel and accessories* to *toys and hobbies*. A key word search is also available. The virtual shopping mall model together with the search shopping agent model is implemented by Froogle. This interface allows users to compare the prices of products and it can be customized. Revenue is generated by adsense. The customer receives sponsored links while browsing the products on display. On the right hand side of the page, it is possible to sort products by price, low to high, high to low, or set a price range. A link to Froogle is present on the Google Home Page, so easily accessible.

Google local allows users to search for commercial information inside a geographic region of the USA. This service has been extended to mobile telephony. The customer receives a maximum of three SMSs for a query. This market appears to be developing very quickly.

⁵ Google web sites: 51%, Google Network websites, 48%, Licensing and other revenues 1%. Geographically: USA 65, International 35%... Source: Google Annual Report 2004.

The portal and customized portal models are being developed by Google as an aggregator. Information services such as Google news, allowing users to access a completely automated virtual news information database that is refreshed every five hours. Google print offering a limited glimpse of the content of publications, and email services (gmail).

The niche portal model can be found with respect to academic users, Google University and Google Scholar. A customized interface is one of the latest aspects of this range of services. New items such as Google movie supply users with information about current films, reviews and the theatres where the movie is being shown.

Google answers implements the auction model. A user who cannot find information on a specific subject can propose his query and offer a fee for the service. Specialists in the domain concerned can then bid for the contract. Google manages the transaction and receives a commission, 5% of the fee.

Free software can be downloaded to enhance Internet search and the internal organization of the hard disk. Some examples are Toolbar, Desktop Search, Taskbar, Picasa Photo Organizer and Gmail Notifier. Free services such as Google Alert and Google News Alert add the functions of a push agent.

Google has developed an on-line office suite, SketchUp, an application for 3D modeling, a note pad for taking down notes while the user is surfing. The aim of the office suite is obviously to challenge the hegemony of Microsoft.

Diverse innovative services such as Google SMS, Keyhole (3D images of towns, 29% to download), Google Video for television program search, have been developed to provide added value and maintain customers. Google also sells search software to businesses and caters for small businesses with the Google Mini Search appliance. An api language is offered free to developers wishing to improve their use of the search engine.

Table 3 gives a synopsis of the diversity of Google's business models although the most important, revenue-wise, are advertising related.

Table 3: taxonomy of business models used by Google⁶

Type of model	Used by Google			
Affiliate model (financial incentives to affiliated sites	Adsense			
Auction broker	Google answers, adwords			
Brokerage (bringing buyers and sellers together)	Adwords, Google answers,			
Buy/sell fulfillment	Search engine technology for firms: price ranging from \$4999 to \$525000 Office suite online			
Catalog merchant	Google catalogs			
Content-targeted advertising	Relevant ads delivered to page visited, Adsense			
Contextual advertising/behavioral marketing	Adsense/ zeitgheist			
Infomediary model (information to buyers and consumers)	Froogle			
Lease model (terms of use agreement)	Toolbar, Desktop Search, Picasa Photo Organizer			
Niche portal (well-defined user demographic)	Scholar, University, movie, print, blog			
Portal	News, gmail, document publishing online			
Query-based paid placement (sponsored links, key word advertising)	Adwords			
Revenue Sharing (click and purchase)	With Amazon, Catalogs, Froogle			
Search shopping agent	Froogle			
Transaction broker	Google Answers			
Virtual market place	Froogle, Catalogs			

⁶ The taxonomy used was compiled by Michael Rappa, North Carolina State University. Business Models on the web, http://digitalenterprise.org/models/models.html 2006.

Table 4 provides a comparison between the services offered by Google and Yahoo.

Table 4: Portal model: comparison Google - Yahoo

Services	Google	Yahoo
email	+	+
Website hosting	0	+
Ircann address sale	+	+
Desktop Search	+	+
Toolbar	+	+
Print	+	0
Blogger	+	0
Geographic search	+	0
Video and TV search	+	0
Alert	+	0
News Alert	+	+
Messaging	+	+
Customized Page	+	+
Photo Search	+	0
SMS	+	0
Hosting communities	+	+
Mobile phone interface	+	0

Looking at the different services offered, most of the revenues come from Google's core business, which is search technology and related services. The firm does diversify

in that 70% of the effort goes to the core activity, 20% to Gmail and adjacent activities, the remaining 10% to innovation⁷. However it must be pointed out that the main function of the other business models is to attract users by giving them added value free of charge, with enhanced utility, and keeping them using Google. Thus Google should become the number one web site planetwide.

4. GOOGLE'STRATEGY

After reviewing the business models adopted by Google, it is now time to study the strategy that is behind and has motivated the implementing of the models described above. A search engine is essentially an infomediary or an information broker allowing users to find the sites and documents they want while directing them to commercial sites, thus generation either commission fees or advertising revenue. The greater the number of users who pass through Google, the greater the value of the site, and the greater the potential for generating income and profit.

The basic strategy of Google is to encourage users to exploit the resources of Google as much as possible. This implies providing an ever-increasing range of free value added services, and being present at every moment on the user's screen.

As the search engine can study the type of information looked for and the problems the user is confronted with, the firm's engineers can respond relatively quickly to the demand for more sophisticated filtering and more precise interface. Google Advance Scholar's interface, to name but one, allows the academic user to specify the name of an author, the title of an article, key words included in the body of the document, the name of the review and a range of dates. As we have seen above, the niche portal model caters for the specific needs of user groups, such as movie-goers. The search interface can be customized so that the user can visualize information concerning the weather, the stock market, BBC news, New York Times, and Google News.

⁷ Source: Google Annual Report 2004.

If quick adaptation to users' needs is one aspect of the technological response, another important one is the presence of the Google interface on the screen. Externally the Google search icon can be present on the affiliated Google sites (adsense). Inside the user's hard disk, the internal indexing program, Desktop Search, brings together in one common interface the resources of the Web and the personal information stocked by the user. If he or she sends a query to Google, the results of both the Web search and the internal search are displayed on the Google page.

The toolbar remains present on the navigator interface, either Mozilla Firefox or Explorer. Furthermore the taskbar is inserted into any software application open. Thus, if the user downloads the package of five applications, the Google interface is present at all levels of interaction. Furthermore, Internet Explorer can be replaced by Google's own interface.

It must be pointed out that the Google interface is extremely simple and user-friendly. Advanced Search allows the user to filter his queries while linguistic preferences afford the choice of language and elementary translating tools. Google enjoys more than 70% of key word search in France and in the United States. In 2006, Google began to take a keen interest in potentially acquiring television companies, thus anticipating the migration of television from the TV set, through the Internet, to the computer screen. Google technology would then allow the firm to customize TV advertisements, rendering them more efficient.

In order to enhance its technology, Google has acquired many .coms among the most important are upstartle (an online word processor) youtube (for video) in 2006, doubleclick (for advertising), trendalizer in 2007. all in all 48 since 2001. It would seem that most aspects of web activity can be managed by Google owned technology.

We shall now turn to the reasons explaining Google's success, combining social, economic, and technological components, interacting to produce social and economic wealth.

5. GOOGLE'S SUCCESS: FIVE FACTORS

Five factors interacting can, in our opinion, account for the immense success of Google, after only six years in business, not only among the users but also on the stock market: performance, innovation, a business model based on advertising offering free information services in exchange for user data, an immense memory of more that eight billion pages,

indexed and conserved in repositories, thus centralizing the dispersed resources of the Internet, and finally the creation of a community of both users and testers. The interaction between technology, the economy, and society furnishes some insight into the workings of a vast network where action and reaction have been speeded up to a point where the user has the impression that results appear in real time.

PERFORMANCE

Google's performance is noteworthy. Results are furnished in a fraction of a second, and the algorithms used to find and filter the information, PageRank especially, have proved their worth. It is sometimes quicker to consult Google than to look for bookmarks already on the computer.

The interface is easy to use, not cluttered with bells and whistles. The technique called progressive disclosure, reveals only functionalities when the user needs them.

INNOVATION

Permanent innovation has allowed the firm to stay ahead of competitors such as Yahoo and MSN Search. This has especially been in the field of user interface and desktop search. Innovation concerning the basic business model (adwords and sponsored links) has been copied by the rivals. Furthermore Google invested 866 million dollars in research in 2006.

BUSINESS MODEL

Google's innovative business model is based on exchange of services for user information.

Looking deeper into the Google business model, we can observe that the user is given free information services, however data pertaining to his choices and preferences are stocked and analyzed in order first to improve the performance of search results and secondly to collect useful marketing information concerning the trends and interests on a weekly or monthly basis. Google *zeitgeist* allows users to consult the most frequently visited sites or themes. This aspect of Google technology should have important marketing potential. This aspect of Google could be a main concern for users afraid of Internet intrusiveness. In our opinion, here resides the secret wealth of Google, dare the firm exploit it to the full.

MFMORY

Google collects, using spiders to follow links, and stores billions of web pages. Retrieval is enhanced by PageRank, user site choice data and analysis, semantic analysis. Projects to scan and conserve all sorts of books and articles have begun. The firm is inviting people to send in

their home movies for indexing. Web blogs are stocked and made available. Links related to documents are also made available.

COMMUNITY

A community of Googlers, users and testers has appeared. Notwithstanding the millions of users who consult Google daily, communities have formed around specific projects under the umbrella of Google Labs, where people are invited to test new services, comment on them, or take part in newsgroup discussions about them, or blog comments on Googlesystem blogspot.

Two aspects deserve our attention, the confidence that people have in Google as opposed to the distrust of other software companies. Nevertheless, as we shall see in our next section, criticism arises concerning problems of intrusiveness and confidentiality.

User accustomedness is a fundamental point. The more often people use Google, the easier it becomes for them, and the more difficult it will be to change from the system they are accustomed to a competitor's product. Nevertheless, if users grew to distrust Google, they might migrate to other search engines.

Looking closely at the interaction between these factors, we propose the following model.

The performance due to innovation (technological component) engenders the frequent use and adopting of the search engine by a large number of users.

Free services and a bi-directional exchange of data (user to system, system to user) further improve the search results as feedback is constant between the system and the user (the social component). Moreover, the engineers and cognitive scientists can anticipate the increasing needs and understand and address the difficulties encountered. This leads back to overall search results improvement and the designing of new filtering interfaces. Furthermore, data mining technology allows for increased knowledge of interests, tastes and trends. As the number of users grows, the system becomes more and more attractive for advertisers willing to pay to be in touch with an ever-increasing population of users. The performance of advertising impact is augmented by <code>one-to-one</code> technology. The potential for generating profit enhances the attractiveness for investors. With the capital collected on the market or generated by the advertising revenues, money can be fed back to investment in innovation and search improvement. Thus the firm retains its competitive edge thanks to constant amelioration of its services and offerings. Figure 1 gives a synoptic view of this model.

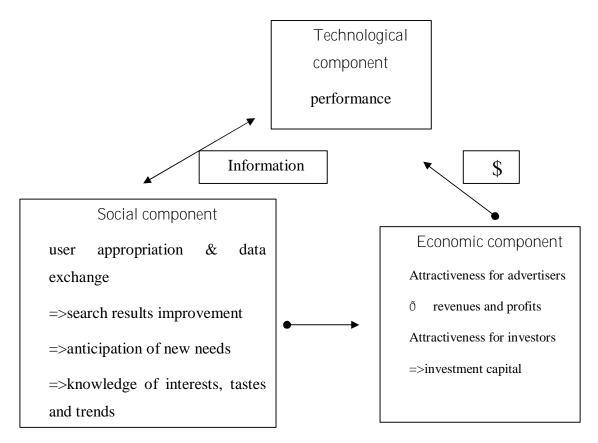


Figure 1: an economic, social, and technological interaction model

We may add that Google manages to retain the interest of the media and an abundant number of articles are regularly published about the firm's activities, especially relating to the Google Print Project. This media interest is partly due to the success of the company's stock on the Nasdaq. However, some problems arise which we shall now address.

6. CRITICISM

One may wonder if it is a good thing for society when one firm has a quasi monopoly in the field of Internet search, although, Microsoft, Amazon, and Yahoo are striving to bridge the gap. Although Google's successful business model is essentially based on advertising revenues, the firm is attempting to develop new sources of income by offering a simplified version of a product, and charging for up-market versions, for instance Google Earth. Nevertheless, the real and invisible wealth of Google lies in the masses of logs concerning

search requests and visited sites. This information if correctly correlated and analysed should furnish the firm with financially useful data and marketer fodder. However, there is always fear among users of the misuse of this value added information, should Google sell it to third parties, especially if user identification is possible. The firm has already been confronted by the demands of the American authorities to disclose user information. Google emphasizes in response to any attack by libertarians that its objective is to do no harm.

How could Google use the knowledge of Internet usage and trends that it collects? It could sell the information to marketers or financial firms. Indeed, interest in products, firms, and brands emerge from the Google zeitgheist data base, in real time. The impact of a TV show can be traced across the time zones of the USA. Carefully analyzed, this data has unprecedented commercial value. It should be noted that Google bought trendalyzer in 2007, a software application which allows one to visualize and animate statistics.

Gmail accounts also pose problems, as the content of mail is analyzed automatically in order to generate adword and sponsored links. The information, thus gathered and stored (Google copies text and keeps it in repositories indefinitely) could be dangerous were it to fall into the wrong hands. Moreover, Federal agencies have the right to subpoena log and text information.

What would happen if Google's reputation were tarnished? Here lies one of the weaknesses of the Google system.

The dangers of a Google monopoly of information access have been recently laid out in a book written by France's director of the National Library⁸. He claims that the Google algorithm favours popularity rather than objectivity, and would *de facto* give the Americans an advantage over other nations by placing articles and books reflecting the American standpoint especially on controversial issues. Thus, it appears necessary for Europe to build its own search technology. It remains to be seen how Europe could catch up with the US technological advance, given the amounts of money available to do this (250 million dollars compared to Google` treasure chest of 1.2 billion dollars for R&D).

⁸ **Jean-Noël Jeanneney, ,** *Quand Google défie l'Europe : Plaidoyer pour un sursaut,* Mille et Une Nuits, Paris, 2006.

7. CONCLUSION

As Google tends towards monopolistic advantage with revenues that could reach 6 billion dollars world-wide around 2010, it appears that the firm's strategy and business models have paid off. The company has the means to lavishly invest in innovative services while being capable of acquiring new processes through the acquisition of other enterprises. Although the services of Google are apparently free of charge, the bill is passed on to the enduser/consumer through the advertising budgets of the companies which buy the adwords to attract site visitors and potential buyers. Furthermore, Google is challenging Microsoft's monopoly by offering a free Office package. There have also been rumors that an operating system is being developed to take a share of the market away from Windows. Until recently, all other attempts have failed, notably those of Linux. Google appears to have become a portal while maintaining a simple, user-friendly interface. Nevertheless, Google is still challenged by others, Yahoo and MSN, although the type of Internet search is not exactly the same for each portal. For the moment, the market remains an oligopoly. Yahoo may be bought by Microsoft to reinforce its search engine capacity and challenge the hegemony of Google.

The problems related to copyright have limited the scope of the Google Print project, as publishers are hostile to allowing surfers to download or consult publications on line. This fear is understandably the consequence of what happened in the music industry with Napster. Inside the framework of globalization, Google is present worldwide however the firm has had to compromise with its fundamental values of free access to information for everyone, notably in China.

Google's fragility lies perhaps in its desire to diversify into every internet-related sector and the dangers it would face were it to lose the confidence of its epistemic community, followed by a large number of Google users, especially if it were tempted to sell confidential user data.

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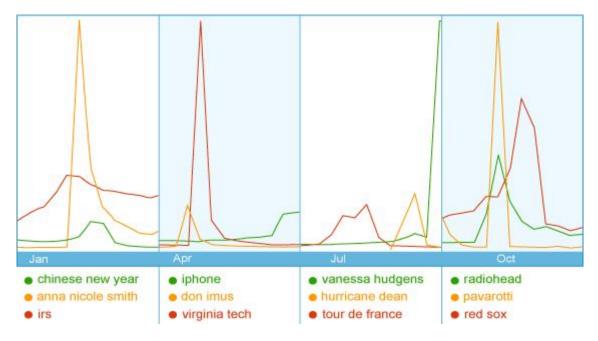
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Annexes

2007 Year-End Zeitgeist

We're bidding adieu to 2007 with a look back at the breaking news, the big events and the must-have gadgets that captivated us this year (give or take a few weeks; we compile this list by early December). To get a glimpse of what's been on our collective consciousness, we mined billions of search queries to discover what sorts of things rose to the top. We encourage you to check out our findings to see if you, too, reflect the *zeitgeist* — the spirit of the times.

FAST GAINERS BY QUARTER (U.S.)



FASTEST RISING (GLOBAL)

- 1. iphone
- 2. badoo
- 3. facebook
- 4. dailymotion
- 5. webkinz
- 6. youtube
- 7. ebuddy
- 8. second life
- 9. hi5
- 10. club penguin

FASTEST RISING (U.S.)

- 1. iphone
- 2. webkinz
- 3. tmz
- 4. transformers
- 5. youtube
- 6. club penguin
- 7. myspace
- 8. heroes
- 9. facebook
- 10. anna nicole smith

FASTEST FALLING (GLOBAL)

- 1. world cup*
- 2. mozart
- 3. fifa
- 4. rebelde*
- 5. kazaa
- 6. xanga
- 7. webdetente
- 8. sudoku
- 9. shakira
- 10. mp3

METHODOLOGY

In compiling the 2007 Year-End Zeitgeist, we studied the aggregation of billions of search queries people conducted on Google. We should note that no individual searcher's information was made available to us. Except where noted, all of these search terms are most popular for Google.com in the U.S.

Source: http://www.google.com/intl/en/press/zeitgeist2007/

Consulted 26 02 08

France - Top Gaining Queries: January 2008

1. les 2 alpes

6. tectonic

11. sean penn

^{*}featured in our 2006 fastest-rising list

(French Alpes ski station)

- 2. ADECCO (temp job agency)
- 3. <u>danse classique</u> (ballet dancing)
- $\begin{array}{cc} 4. & \underline{UGC} \\ & \text{(movies distributor)} \end{array}$
- 5. <u>roule galette</u> (old fairy tale)

(dance wave)

- 7. <u>alger</u> (Algeria capital)
- 8. <u>mandataire</u> (sender)
- 9. joker
- 10. <u>alsace</u> (Estern region)
- 12. <u>swarovski</u> (crystal traditional maker)
- 13. marvel
- 14. <u>entreprise</u> (enterprise)
- 15. <u>campanile</u> (restaurants-hotels chain)

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