

## **EXHIBIT 6**

# Google!

Search the web using Google!

10 results



Google Search

I'm feeling lucky

*Index contains ~25 million pages (soon to be much bigger)*

## About Google!

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Beginning with our acquisition of Keyhole (the basis of Google Earth) in October 2004, it has been our goal to provide high-quality information for geographic needs. By offering both Google Earth and Google Maps, we aim to provide a comprehensive world model encompassing all geographic information including imagery, topography, road, buildings, and annotations. Today we stitch together images from satellites, airplanes, cars, and user uploads, as well as collect important data, such as roads, from numerous different sources including governments, companies, and directly from users. After the launch of Google Map Maker in Pakistan, users mapped 25,000 kilometers of uncharted road in just two months.

We always believed that we could have an advertising system that would add value not only to our bottom line but also to the quality of our search result pages. Rather than relying on distracting flashy ads, we developed relevant, clearly marked text-based ads above and to the right of our search results. After a number of early experiments, the first self-service system known as AdWords launched in 2000 starting with 350 advertisers. While these ads yielded small amounts of money compared to banner ads at the time, as the dot-com bubble burst, this system became our life preserver. As we syndicated it to EarthLink and then AOL, it became an important source of revenue for other companies as well.

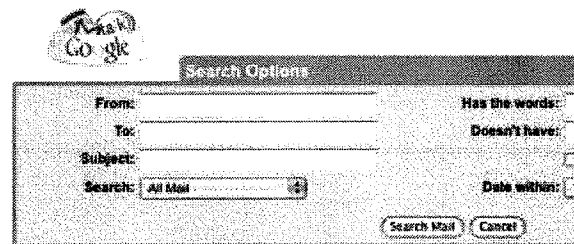
While digitizing all the world's books is an ambitious project, digitizing the world is even more challenging.

Today, AdWords has grown beyond just being a feature of Google. It is a vast ecosystem that provides valuable traffic and leads to hundreds of thousands of businesses; indeed in many ways it has helped democratize access to advertising, by creating an open marketplace where small business and startups can compete with well-established, well-funded companies. AdWords is also an important source of revenue for websites that create the content that we all search. Last year, AdSense (our publisher-facing program) generated more than \$5 billion of revenue for our many publishing partners.


Also in the last year we ventured further into other advertising formats with the acquisition of DoubleClick. This may seem at odds with the value we place on relevant text-based ads. However, we have found that richer ad formats have their place such as video ads within YouTube and dynamic ads on game websites. In fact, we also now serve video ads on television with our AdSense for TV product. Our goal is to match advertisers and publishers using the formats and mediums most appropriate to their goals and audience.

Despite the progress in our advertising systems and the growth of our base of advertisers, I believe there are significant improvements still to be made. While our ad system has powerful features, it is also complex, and can confuse many small and local advertisers whose products and services could be very useful to our users.

Today, some Googlers have more than 25 gigabytes of email going back nearly 10 years that they can search through in seconds.



Furthermore, the presentation formats of our advertisements are not the optimal way to peruse through large numbers of products. In the next decade, I hope we can more effectively incorporate commercial offerings from the tens of millions of businesses worldwide and present them to consumers when and where they are most useful.

 Within a couple of years of our founding, a number of colleagues and I were starting to hit the limitations of our traditional email clients. Our mailboxes were too big for them to handle speedily and reliably. It was challenging or impossible to have email available and synchronized when switching between different computers and platforms. Furthermore, email access required VPN (virtual private networks) so everyone was always VPN'ing, thereby creating extra security risks. Searching mail was slow, awkward, and cumbersome.

By the end of 2001 we had a prototype of Gmail that was used internally. Like several existing services at the time, it was web-based. But unlike those services it was designed for power users with high volumes of email. While our initial focus was on internal usage, it soon became clear we had something of value for the whole world. When Gmail was launched externally, in 2004, other top webmail sites offered two- or four-megabyte mailboxes, less than the size of a single attachment I might find in a message today. Gmail offered one gigabyte at launch, included full-text search, and a host of other features not previously found in webmail. Since then Gmail has continued to push the envelope of email systems,

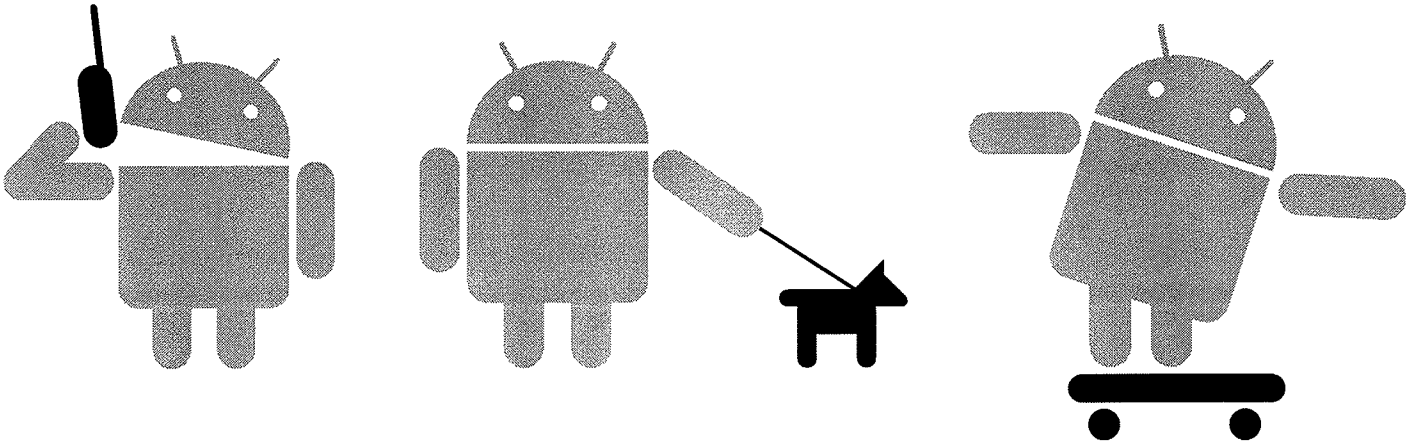
including functionality such as instant messaging, videoconferencing, and offline access (launched in Gmail Labs this past January). Today some Googlers have more than 25 gigabytes of email going back nearly 10 years that they can search through in seconds. By the time you read this, you should be able to receive emails written in French and read them in English.

The benefits of web-based services, also known as cloud computing, are clear. There is no installation. All data is stored safely in a data center (no worries if your hard drive crashes). It can be accessed anytime, anywhere there is a working web browser and Internet connection (and sometimes even if there is not one — see below).

Perhaps even more importantly, new forms of communication and collaboration become possible. I am writing this letter using Google Docs. There are several other people helping me edit it simultaneously. Moments ago I stepped away and worked on it on a laptop. Without having to hit save or manage any synchronization all the changes appeared in seconds on the desktop that I am back to using now. In fact, today I have worked on this document using three different operating systems and two different web browsers, all without any special software or complex logistics.

In addition to Gmail and Google Docs, the Google Apps suite of products now includes Spreadsheets, Calendar, Sites, and more. It is also now available to companies, universities, and other organizations. In fact, more than 1 million organizations use Google Apps today, including





Genentech, the Washington D.C. city government, the University of Arizona, and Gothenburg University in Sweden.

Because tens of millions of consumers already use our products, it is easy for organizations — from businesses to non-profits — to adopt them. Very little training is required and the passionate Google users already in these organizations are usually excited to help those who need a hand. In many ways, Google Apps are even more powerful in a business or group than they are for individuals because Apps can change the way businesses operate and the speed at which they move. For example, with Google Apps Web Forms we innovated by addressing the key problem of distributed data collection, making it incredibly simple to collect survey data from within the enterprise — a critical feature for collecting internal feedback we use extensively when “dogfooding” all of our products.

There are a number of things we could improve about these web services. For example, since they have arisen from different groups and acquisitions, there is less uniformity across them than there should be. For example, they can have different sharing models and chat capabilities. We are working to shift all of our applications to a common infrastructure. I believe we will achieve this soon, creating greater uniformity and capability across all of them.

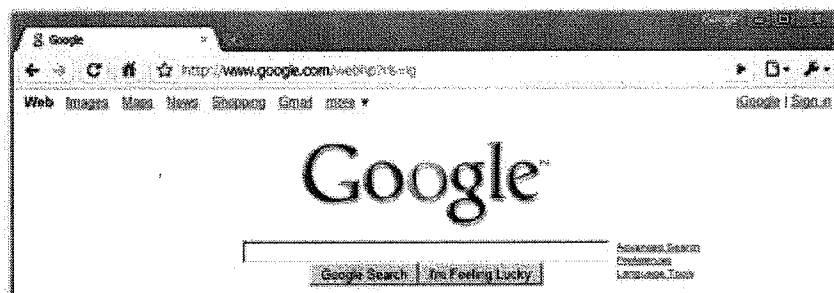
We have found the web-based service model to have significant advantages. But it also comes with its own set

of challenges, primarily related to web browsers, which can be slow, unreliable, and unable to function offline. Rather than accept these shortcomings, we have sought to remedy them in a number of ways. We have contributed code and generated revenue for several existing web browsers like Mozilla Firefox, enabling them to invest more in their software. We have also developed extensions such as Google Gears, which allows a browser to function offline.

In the past couple of years, however, we decided that we wanted to make some substantial architectural changes to how web browsers work. For example, we felt that different tabs should be segregated into separate sandboxes so that one poorly functioning website does not take down the whole browser. We also felt that for us to continue to build great web services we needed much faster JavaScript performance than current browsers offered.

To address these issues we have created a new browser, called Google Chrome. It has a multiprocess model and a very fast JavaScript engine we call V8. There are many other notable features, so I invite you to try it out for yourself. Chrome is not yet available on Mac and Linux so many of us, myself included, are not able to use it on a regular basis. If all goes well, this should be addressed later this year. Of course, this is just the start, and Chrome will continue to evolve. Furthermore, other web

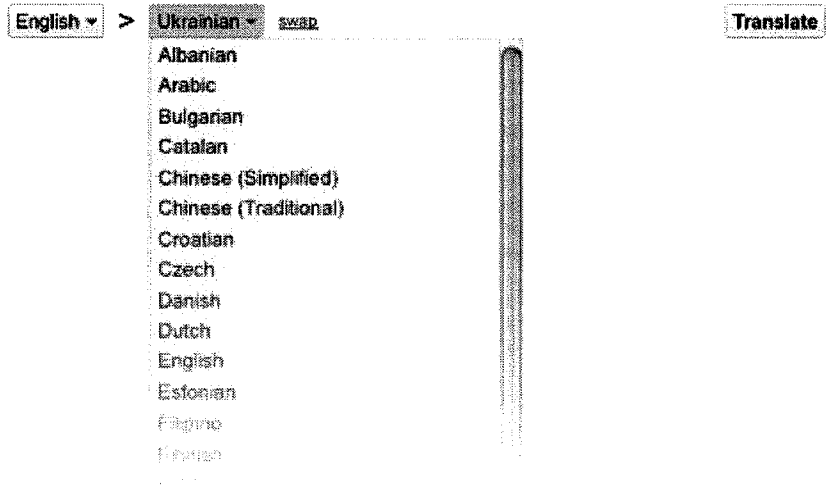
browsers have been spurred on by Chrome in areas such as



Google Translate supports automatic machine translation between 1,640 language pairs. This is made possible by large computer clusters and vast repositories of monolingual and multilingual texts: [google.com/intl/en/help/faq\\_translation.html](http://google.com/intl/en/help/faq_translation.html).

Enter text or a webpage URL.

This technology also allows us to support translated search where the query gets translated to another language and the results get translated back.



JavaScript performance, making everyone better off.

We first created mobile search for Google back in 2000 and then we started to create progressively more tailored and complex mobile offerings. Today, the phone I carry in my pocket is more powerful than the desktop computer I used in 1998. It is possible that this year, more Internet-capable smartphones will ship than desktop PCs. In fact, your most "personal" computer, the one that you carry with you in your pocket, is the smartphone. Today, almost a third of all Google searches in Japan are coming from mobile devices — a leading indicator of where the rest of the world will soon be.

However, mobile software development has been challenging. There are different mobile platforms, customized differently to each device and carrier combination. Furthermore, deploying mobile applications can require separate business arrangements with individual carriers and manufacturers. While the rise of app stores from Apple, Nokia, RIM, Microsoft, and others as well as the adoption of HTML 5 on mobile platforms have helped, it is still very difficult to provide a service to the largest group of network-connected people in the world.

We acquired the startup Android in 2005 and set about the ambitious goal of creating a new mobile operating system that would allow open interoperation across carriers and manufacturers. Last year, after a lot of hard work, we released Android to the world. As it is open source, anyone is free to use it and modify it. We look

To date, more than 1,000 apps have been uploaded to the Android Market.

forward to seeing how this open platform will spur greater innovation. Furthermore, Android allows for easy creation of applications which can be deployed on any Android device. To date, more than 1,000 apps have been uploaded to the Android Market including Shop Savvy (which reads bar codes and then compares prices), our own Latitude, and Guitar Hero World Tour.

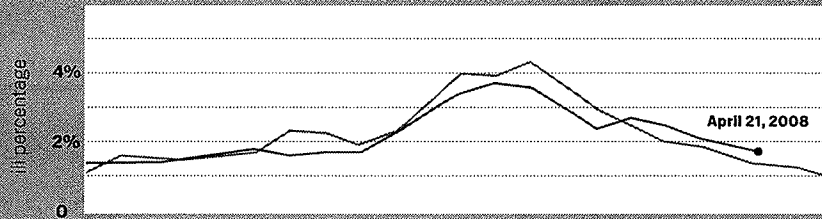
The past decade has seen tremendous changes in computing power amplified by the continued growth of Google's data centers. It has enabled the growth and processing of increasingly large data sets such as the web, the world's books, and video. This in turn has allowed problems once considered to be in the fantasy realm of artificial intelligence to come closer to reality.

While the earliest Google Voice Search ran as a crude demo in 2001, today our own speech recognition technology powers GOOG-411, the voice search feature of the Google Mobile App, and Google Voice. It, too, takes advantage of large training sets and significant computing capability. Last year, PicasaWeb, our photo hosting site, released face recognition, bringing a technology that is on the cutting edge of computer science to a consumer web service.

Just a few months ago we released Google Flu Trends, a service that uses our logs data (without revealing personally identifiable information) to predict flu incidence weeks ahead of estimates by the Centers for Disease Control (CDC). It is amazing how an existing data set typically

## 2007-2008 U.S. Flu Activity - Mid-Atlantic Region

- Google Flu Trends
- CDC Data



While the world is increasingly going online, there is also a grave risk to the future of the Internet — multiple governments (in Europe, the Americas, and Asia) are exercising or contemplating enacting various forms of censorship. We are aggressive about the legal means we use to defend freedom of expression and we always tell our users when information or websites have been removed from our web search results for such reasons.

Last December, as part of our commitment to free expression and guarding our users' privacy, Google was one of three companies to sign on to the Global Network Initiative — an effort by companies, human rights groups, socially responsible investors, and others to come together to protect and advance those rights. While Google has always promoted these rights, the Initiative enables us to join together with the other groups to lobby on behalf of these causes.

As a company, ultimately we have limited options other than withdrawing from a country altogether and providing no information or communications tools at all to its people. Since open access to information is critical for human rights, including freedom of expression, I believe those nations that value those rights should make them a critical part of their foreign policy and trade negotiations agenda.

used for improving search quality can be brought to bear on a seemingly unrelated issue and can help to save lives. I believe this sort of approach can do even more — going beyond monitoring to inferring potential causes and cures of disease. This is just one example of how large data sets such as search logs coupled with powerful data mining can improve the world while safeguarding privacy.

Given the tremendous pace of technology, it is impossible to predict far into the future. However, I think the past decade tells us some things to expect in the next. Computers will be 100 times faster still and storage will be 100 times cheaper. Many of the problems that we call artificial intelligence today will become accepted as standard computational capabilities, including image processing, speech recognition, and natural language processing. New and amazing computational capabilities will be born that we cannot even imagine today.

While about half the people in the world are online today via computers and mobile phones, the Internet will reach billions more in the coming decade. I expect that by using simple yet powerful models of computing such as web services, everyone will be more productive. These tools enable individuals, small groups, and small businesses to accomplish tasks that only large corporations could achieve before, whether it is making and releasing a movie, marketing a product, or reporting on a war.

When I was a child, researching anything involved a long trip to the local library and a good deal of luck that one of the books there would be about the subject of interest. I could not have imagined that today anyone would be able to research any topic in seconds.

The dark clouds currently looming over the world economy are a hardship for us all, but by the time today's children grow up, this recession will be a footnote in history. Yet the technologies that we create between now and then will define their way of life.

**Sergey Brin**  
Co-Founder; President, Technology

**Larry Page**  
Co-Founder; President, Products

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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

**FORM 10-K**

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(Mark One)

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**  
For the fiscal year ended December 31, 2008

OR

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**  
Commission file number: 000-50726

**Google Inc.**

(Exact name of registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

**77-0493581**  
(I.R.S. Employer  
Identification Number)

**1600 Amphitheatre Parkway  
Mountain View, CA 94043**  
(Address of principal executive offices)

**(650) 253-0000**  
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

<u>Title of Each Class</u>	<u>Name of Exchange on Which Registered</u>
<b>Class A Common Stock, \$0.001 par value</b>	<b>The Nasdaq Stock Market LLC (Nasdaq Global Select Market)</b>

Securities registered pursuant to Section 12(g) of the Act:

Title of Each Class  
**Class B Common Stock, \$0.001 par value**  
**Options to purchase Class A Common Stock**

Indicate by check mark if the Registrant is a well-known seasoned issuer as defined in Rule 405 of the Securities Act. Yes  No

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes  No

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of the Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer  Accelerated filer  Non-accelerated filer  Smaller reporting company

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes  No

At June 30, 2008, the aggregate market value of shares held by non-affiliates of the Registrant (based upon the closing sale price of such shares on The Nasdaq Global Select Market on June 30, 2008) was \$116,684,274,176.

At January 31, 2009, there were 240,289,354 shares of the Registrant's Class A common stock outstanding and 75,004,353 shares of the Registrant's Class B common stock outstanding.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the Registrant's Proxy Statement for the 2009 Annual Meeting of Stockholders are incorporated herein by reference in Part III of this Annual Report on Form 10-K to the extent stated herein. Such proxy statement will be filed with the Securities and Exchange Commission within 120 days of the Registrant's fiscal year ended December 31, 2008.

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**Form 10-K**  
**For the Fiscal Year Ended December 31, 2008**  
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## PART I

### ITEM 1. BUSINESS

#### Overview

Google is a global technology leader focused on improving the ways people connect with information. Our innovations in web search and advertising have made our web site a top internet property and our brand one of the most recognized in the world. We maintain a large index of web sites and other online content, which we make freely available via our search engine to anyone with an internet connection. Our automated search technology helps people obtain nearly instant access to relevant information from our vast online index.

We generate revenue primarily by delivering relevant, cost-effective online advertising. Businesses use our AdWords program to promote their products and services with targeted advertising. In addition, the thousands of third-party web sites that comprise the Google Network use our AdSense program to deliver relevant ads that generate revenue and enhance the user experience.

We were incorporated in California in September 1998 and reincorporated in Delaware in August 2003. Our headquarters are located at 1600 Amphitheatre Parkway, Mountain View, California 94043, and our telephone number is (650) 253-0000.

#### Our Mission

Our mission is to organize the world's information and make it universally accessible and useful. We believe that the most effective, and ultimately the most profitable, way to accomplish our mission is to put the needs of our users first. We have found that offering a high-quality user experience leads to increased traffic and strong word-of-mouth promotion. Our dedication to putting users first is reflected in three key commitments:

- We will do our best to provide the most relevant and useful search results possible, independent of financial incentives. Our search results will be objective and we do not accept payment for search result ranking or inclusion.
- We will do our best to provide the most relevant and useful advertising. Advertisements should not be an annoying interruption. If any element on a search result page is influenced by payment to us, we will make it clear to our users.
- We will never stop working to improve our user experience, our search technology and other important areas of information organization.

We believe that our user focus is the foundation of our success to date. We also believe that this focus is critical for the creation of long-term value. We do not intend to compromise our user focus for short-term economic gain.

#### How We Provide Value to Our Users

We serve our users by developing products that quickly and easily find, create, organize and share information. We place a premium on products that matter to many people and have the potential to improve their lives.

Some of the key benefits we offer include:

*Comprehensiveness and Relevance.* Our search technologies sort through a vast and growing amount of information to deliver relevant and useful search results in response to user queries. This is an area of continual development for us. When we started the company in 1998, our web index contained approximately 30 million documents. We now index billions of web pages and strive to provide the most comprehensive search experience

possible. Our team continually improves our relevance algorithms to objectively determine the best answers to our users' queries and to place these answers at the top of our search results. We are also constantly developing new functionality and enhancing our offerings to allow our users to more quickly and easily find information.

*Objectivity.* We believe it is very important that the results users get from Google are produced with only their interests in mind. We do not accept payment for search result ranking or inclusion. We do accept fees for advertising, but the advertising is clearly marked and separated and does not influence how we generate our search results. This is similar to a newspaper, where the articles are independent of the advertising. Inclusion and frequent updating in our index are open to all sites free of charge. We believe it is important for users to have access to the best available information, not just the information that someone pays for them to see.

*Global Access.* We strive to provide our services to everyone in the world and the Google interface is available in 120 languages. Through Google News, we offer an automated collection of frequently updated news stories in 24 languages in 61 editions. We also offer automatic translation of content between various languages and provide localized versions of Google in many developing countries.

*Ease of Use.* We have always believed that the most useful and powerful search technology hides its complexity from users and gives them a simple, intuitive way to get the information they want. We have devoted significant efforts to create a streamlined and easy-to-use interface based on a clean search box set prominently on a page free of commercial clutter. We introduce new navigational or informational features when we believe they will be most useful to our users, and only after extensive usability testing and experimentation.

*Pertinent, Useful Commercial Information.* The search for information often involves an interest in commercial information—researching a purchase, comparing products and services or actively shopping. We help people find commercial information through our search services and advertising products. We also present advertisements that are relevant to the information people seek. Our technology automatically rewards ads that users prefer and removes ads that they do not find helpful.

*Multiple Access Platforms.* The mobile phone is the primary way that many people around the world access the internet. We have continued to invest in improving mobile search and have introduced applications that allow users to access search, email, maps, directions and satellite imagery through their mobile devices.

*Improving the Web.* We want to make the web experience as good as possible for users around the world. This includes providing platforms for developers to build, deploy and run increasingly rich applications. For users, we are investing in areas to improve their experience in using web-based applications, including making browsers more stable and powerful.

## **Products and Services for our Users**

Our product development philosophy involves rapid and continuous innovation, with frequent releases of early-stage products that we then iterate and improve. We often make products available early in their development stages by posting them on Google Labs, at test locations online or directly on Google.com. If our users find a product useful, we promote it to “beta” status for additional testing. Once we are satisfied that a product is of high quality and utility, we remove the beta label and make it a core Google product. Our main products and services are described below.

## **Google.com—Search and Personalization**

We are focused on building products and services on our web sites that benefit our users and let them find relevant information quickly and easily. These products and services include:

*Google Web Search.* In addition to providing easy access to billions of web pages, we have integrated special features into Google Web Search to help people find exactly what they are looking for on the web. The Google.com search experience also includes items like:

- **Advanced Search Functionality**—enables users to construct more complex queries, for example by using Boolean logic or restricting results to languages, countries or web sites.
- **Web Page Translation**—supports 41 languages and automatically translates between any two of these languages, with a total of 1,640 language translation pairs.
- **Integrated Tools**—such as a spell checker, a calculator, a dictionary and currency and measurement converters.
- **Search by Number**—lets users do quick searches by entering shipping tracking numbers, vehicle identification numbers, product codes, telephone area codes, patent numbers, airplane registration numbers and electronic equipment identification government numbers.
- **Cached Links**—provides snapshots of web pages taken when the pages were indexed, letting users view web pages that are no longer available.
- **Movie, Music and Weather Information**—enables users to quickly and easily find movie reviews and show times, information about artists, songs and albums and weather conditions and forecasts.
- **News, Finance, Maps, Image, Video, Book, Blogs, and Groups Information**—Users are often best served by different types of results. When relevant, we also search display results from other Google products including Google News, Google Finance, Google Maps, Google Image Search, Google Video, Google Book Search, Google Blog Search, and Google Groups.

*Google Image Search.* Google Image Search is our searchable index of images found across the web. To extend the usefulness of Google Image Search, we offer advanced features, such as searching by image size, format and coloration and restricting searches to specific web sites or domains.

*Google Book Search.* Google Book Search lets users search the full text of a library-sized collection of books to discover books of interest and to learn where to buy or borrow them. Through this program, publishers can host their content and show their publications at the top of our search results. We also work closely with participating libraries to digitize all or part of their collections to create a full-text searchable online card catalog. Google Book Search links bring users to pages containing bibliographic information and several sentences of the search term in context, sample book pages, or full text, depending on author and publisher permissions and book copyright status. In October 2008, we reached a settlement agreement with the Authors Guild and the Association of American Publishers over lawsuits in the U.S. over Google Book Search. If approved by the court, millions more in-copyright books will be accessible to our users. Many books will be available for purchase even if they are out of print, expanding the market for authors and publishers to earn money from their works.

*Google Scholar.* Google Scholar provides a simple way to do a broad search for relevant scholarly literature including peer-reviewed papers, theses, books, abstracts, and articles. Content in Google Scholar is taken from academic publishers, professional societies, preprint repositories, universities, and other scholarly organizations.

*Google Finance.* Google Finance provides a simple user interface to navigate complex financial information in an intuitive manner, including linking together different data sources, such as correlating stock price movements to news events.

*Google News.* Google News gathers information from thousands of news sources worldwide and presents news stories in a searchable format within minutes of their publication on the web. The leading stories are presented as headlines on the user-customizable Google News home page. These headlines are selected for display entirely by a computer algorithm, without regard to political viewpoint or ideology.

*Google Video.* Google Video lets users upload, find, view and share video content worldwide.

*Google Blog Search.* Google Blog Search enables users to search the blogging universe more effectively and find out users' opinions on a wide variety of subjects. The Google Blog Search index includes every blog that publishes a site feed.

*iGoogle and Personalized Search.* iGoogle connects users to the information that is most useful and important to them in an easy-to-use and customizable format. Users add gadgets and themes created by Google and developers to create a powerful and personalized homepage and arrange the content the way they want. iGoogle includes Personalized Search, which gives our users better search results based on what they have searched for in the past, making it easier to quickly find the information that is more relevant to them. Users can also view and manage their history of past searches and the results they have clicked on, and create bookmarks with labels and notes.

*Google Product Search.* Google Product Search helps users find and compare products from online stores across the web and directs users to where they can buy these products. Users can search for product information that is submitted electronically by sellers or automatically identified by Google software.

*Google Custom Search.* Google Custom Search allows communities of users familiar with particular topics to build customized search engines. These customized search engines allow the communities to help improve the quality of search results by labeling and annotating relevant web pages or by creating specialized, subscribed links for users to get more detailed information about a particular topic.

*Google Base.* Google Base lets content owners submit content that they want to share on Google web sites. Content owners can describe and assign attributes to the information they submit and Google uses this descriptive content to better target search results to what users are looking for.

*Google Webmaster Tools.* Google Webmaster Tools provides information to webmasters to help them enhance their understanding of how their web sites interact with the Google search engine. Content owners can submit sitemaps and geotargeting information through Google Webmaster Tools to improve search quality.

### ***Applications***

Information created by a single user becomes much more valuable when shared and combined with information from other people or places. Therefore our strategy for products we develop in this space is simple: develop tools for our users to create, share and communicate any information generated by the user, thus making the information more useful and manageable. Examples of products we have developed with this strategy in mind include:

*Google Docs.* Google Docs allows our users to create, view and edit documents, spreadsheets, and presentations from anywhere using a browser. These documents are useful to our users as they are accessible anywhere internet access is available, manageable as they are stored within our servers and automatically backed up, and shareable in that they allow real time editing with co-workers and friends over the internet.

*Google Calendar.* Google Calendar is a free online shareable calendar service that allows our users to keep track of the important events, appointments and special occasions in their lives and share this information with anyone they choose. In addition, web sites and groups with an online presence can use Google Calendar to create public calendars, which are automatically indexed and searchable on Google.

*Gmail.* Gmail is Google's free webmail service that comes with built-in Google search technology to allow searching of emails and over seven gigabytes of storage, allowing users to keep their important messages, files and pictures. We serve small text ads that are relevant to the messages in Gmail.

*Google Groups.* Google Groups is a free service that helps groups of people connect to information and people that have interest in them. Users can discuss topics by posting messages to a group, where other people can then read and respond. Google Groups now contains more than one billion messages from Usenet internet discussion groups dating back to 1981. The discussions in these groups provide a comprehensive look at evolving viewpoints, debate and advice on many subjects.

*Google Reader.* Google Reader is a free service that lets users subscribe to feeds and receive updates from multiple web sites in a single interface. Google Reader also allows users to share content with others, and functions with many types of media and reading-styles.

*orkut.* orkut enables users to search and connect to other users through networks of trusted friends. Users can create a profile, personal mailboxes, post photos and join or manage online communities.

*Blogger.* Blogger is a web-based publishing tool that lets people publish to the web instantly using weblogs, or "blogs." Blogs are web pages usually made up of short, informal and frequently updated posts that are arranged chronologically.

*Google Sites.* Google Sites allows users to easily create, update and publish content online without technical expertise, with control over who can see and update the site. Google Sites supports a variety of information such as videos, calendars, presentations, spreadsheets, discussions and texts.

*YouTube.* YouTube is an online community that lets users worldwide upload, share, watch, rate, and comment on videos, from user generated, niche professional, to premium videos. YouTube is also a video platform providing general purpose video resources to the web community. YouTube videos are embedded in blogs, social networks and web applications, and YouTube programming interfaces are utilized by many registered developers to create third-party products and services. In addition, YouTube offers a range of video and interactive formats for advertisers to reach their intended audience.

## **Client**

*Google Toolbar.* Google Toolbar is a free application that adds a Google search box to web browsers (Internet Explorer and Firefox) and improves user web experience through features such as a pop-up blocker that blocks pop-up advertising, an autofill feature that completes web forms with information saved on a user's computer, and customizable buttons that let users search their favorite web sites and stay updated on their favorite feeds.

*Google Chrome.* Google Chrome is an open-source browser that combines a minimal design with technologies to make the web faster, safer, and easier to navigate.

*Google Pack.* Google Pack is a free collection of safe, useful software programs from Google and other companies that improve the user experience online and on the desktop. It includes programs that help users browse the web faster, remove spyware and viruses.

*Picasa.* Picasa is a free service that allows users to view, manage and share their photos. Picasa enables users to import, organize and edit their photos, and upload them to Picasa Web Albums where the photos can be shared with others on the internet.

*Google Desktop.* Google Desktop lets people perform a full-text search on the contents of their own computer, including email, files, instant messenger chats and web browser history. Users can view web pages they have visited even when they are not online. Google Desktop also includes a customizable Sidebar that includes modules for weather, stock tickers and news.

### **Google GEO—Maps, Earth and Local**

*Google Earth.* Google Earth lets users see and explore the world and beyond from their desktop. Users can fly virtually to a specific location and learn about that area through detailed satellite and aerial images, 3D topography, street maps and millions of data points describing the location of businesses, schools, parks and other points of interest around the globe. Google Earth includes Sky, an astronomical imagery library with images of over 100 million stars and 200 million galaxies, and Ocean, with a detailed bathymetric map of the earth's ocean floors.

*Google Maps.* Google Maps helps people navigate map information. Users can look up addresses, search for businesses, and get point-to-point driving directions—all plotted on an interactive street map or on satellite imagery. Google Maps includes StreetView, 360-degree street-level imagery available in several regions around the world, and Google Transit, which provides up-to-date information on local transit options in many cities. Google Maps provides a comprehensive search experience by combining yellow-pages listings with ratings and reviews and other business information. In addition, Google Maps lets users create their own maps and allows developers to put their content on top of our base map data. We display relevant targeted ads for searches done through Google Maps.

*Google Sketchup and Sketchup Pro.* Google Sketchup is a free tool that enables users to model buildings in 3D, and can be used as a tool for populating Google Earth with architectural content. The Pro version of this tool is sold to professional designers and includes additional features.

### **Google Mobile and Android**

*Google Mobile.* Google Mobile lets people search and view both the "mobile web," consisting of pages created specifically for wireless devices, and the entire Google index. Users can also access online information using Google SMS by typing a query to the Google shortcode and checking their email using Gmail Mobile. Google Mobile is available through many wireless and mobile phone services worldwide.

*Google Maps for Mobile.* Google Maps for Mobile is a free Java client application that lets users view maps and satellite imagery, find local businesses and get driving directions on mobile devices. Google Maps for Mobile offers many of the same functions as Google Maps, including draggable maps combined with satellite imagery. In addition, the My Location feature allows users to view their approximate location on the map.

*Blogger for Mobile.* With Blogger for mobile devices, users can take pictures with their camera phones and then post their pictures and text comments to their blog using MMS or email.

*Google Gmail, News and Personalized Home for Mobile.* Several of our services, such as Gmail, News and Personalized Home are also available as mobile applications.

*GOOG-411.* GOOG-411 is a free, speech-enabled application allowing users to call 1-800-GOOG-411 to search for businesses by name or category.

*Android.* Android is a free, open-source mobile software platform which allows developers to create applications for mobile devices and for handset manufacturers to install. Android is being developed with the Open Handset Alliance, a group of more than 45 technology and mobile companies, with the goal of providing consumers a less expensive, richer and more powerful mobile experience.

*Search by Voice.* Search by Voice lets users do a Google web search just by saying what they are looking for. Search results are formatted to fit phone screens. Search by Voice is currently available for the iPhone and Android phones.

### **Google Checkout**

Google Checkout is a service for our users, advertisers and participating merchants that is intended to make online shopping faster, more convenient and more secure by providing a single login for buying online and helping users find convenient and secure places to shop when they search.

For merchants, Google Checkout is integrated with AdWords to help advertisers attract more leads, convert more leads to sales and process sales. We believe that Google Checkout's streamlined checkout process lowers shopping cart abandonment and barriers to purchase, which increases conversion of clicks to sales for participating merchants. We charge merchants who use Google Checkout 2% of the transaction amount plus \$0.20 per transaction to the extent these transactions exceed 10 times the amount they spend on AdWords advertising.

### **Google Labs**

Google Labs is our test bed for our engineers and adventurous Google users. On Google Labs, we post product prototypes and solicit feedback on how the technology could be used or improved. Current Google Labs examples include: *Picasa for Mac*, a software that allows Mac users to organize, edit, create, and share photos, *In Quotes*, a feature that allows users to find quotes from stories linked to Google News, and *Google Audio Indexing*, a new technology that allow users to find spoken words inside videos and jump to the right portion of the video where these words are spoken.

### **The Technology Behind Search and Our User Products and Services**

Our web search technology uses a combination of techniques to determine the importance of a web page independent of a particular search query and to determine the relevance of that page to a particular search query.

*Ranking Technology.* One element of our technology for ranking web pages is called PageRank. While we developed much of our ranking technology after Google was formed, PageRank was developed at Stanford University with the involvement of our founders and was therefore published as research. PageRank is a query-independent technique for determining the importance of web pages by looking at the link structure of the web. PageRank treats a link from web page A to web page B as a "vote" by page A in favor of page B. The PageRank of a page is the sum of the pages that link to it. The PageRank of a web page also depends on the importance (or PageRank) of the other web pages casting the votes. Votes cast by important web pages with high PageRank weigh more heavily and are more influential in deciding the PageRank of pages on the web.

*Text-Matching Techniques.* Our technology employs text-matching techniques that compare search queries with the content of web pages to help determine relevance. Our text-based scoring techniques do far more than count the number of times a search term appears on a web page. For example, our technology determines the proximity of individual search terms to each other on a given web page, and prioritizes results that have the search terms near each other. Many other aspects of a page's content are factored into the equation, as is the content of pages that link to the page in question. By combining query independent measures such as PageRank with our text-matching techniques, we are able to deliver search results that are relevant to what people are trying to find.

*Infrastructure.* We provide our products and services using our homegrown software and hardware infrastructure, which provides substantial computing resources at low cost. We currently use a combination of off-the-shelf and custom software running on clusters of commodity computers. Our considerable investment in developing this infrastructure has produced several benefits. This infrastructure simplifies the storage and processing of large amounts of data, eases the deployment and operation of large-scale global products and services, and automates much of the administration of large-scale clusters of computers. Although most of this infrastructure is not directly visible to our users, we believe it is important for providing a high-quality user experience. It enables significant improvements in the relevance of our search and advertising results by allowing us to apply superior search and retrieval algorithms that are computationally intensive. We believe the infrastructure also shortens our product development cycle and lets us pursue innovation more cost effectively.



## How We Provide Value to Our Advertisers and Content Owners

### **Google AdWords**

For advertisers seeking to market their products and services to consumers and business users over the internet, we offer Google AdWords, an auction-based advertising program that lets advertisers deliver relevant ads targeted to search queries or web content across Google sites and through the web sites of our Google Network, which is the network of online and offline third parties that use our advertising programs to deliver relevant ads with their search results and content. The Google Network is also increasingly encompassing different forms of online and offline media as well, including content providers who use our advertising programs to deliver ads in online video, television and radio broadcasts. AdWords is accessible to advertisers in 41 different interface languages.

Advertisers in our AdWords program create text-based or display ads, bid on the keywords that will trigger the display of their ads and set daily spending budgets. AdWords features an automated online signup process that lets advertisers quickly implement ad campaigns on Google properties and the web sites of our Google Network members. Ads are ranked for display in AdWords based on a combination of the maximum cost-per-click pricing set by the advertiser and click-through rates and other factors used to determine the relevance of the ads. This favors the ads that are most relevant to users, improving the experience both for the person looking for information and for the advertiser who is generating relevant ads. The AdWords program offers advertisers the following additional benefits:

*Return on Investment.* Many advertising dollars are spent delivering messages in an untargeted fashion, and payment for these advertisements is not tied to performance. AdWords shows ads only to people seeking information related to what the advertisers are selling, and advertisers choose how much they pay when a user clicks on their ad. Because we offer a simple ad format, advertisers can also avoid incurring significant costs associated with creating ads. As a result, even small advertisers find AdWords cost-effective for connecting with potential customers. In addition, advertisers can create many different ads, increasing the likelihood that an ad is suited to a user's search. Users can find advertisements for what they are seeking, and advertisers can find users who want what they are offering.

*Branding.* We also offer Site Targeting, a service that lets advertisers target specific web sites with text, image and Flash ads, so that they can more effectively reach specific sets of customers. In addition to targeting sites by content, advertisers can choose placements on sites based on user demographic attributes. To protect user privacy, we use only third-party opt-in panel data to map the demographics of sites in our networks. Site Targeting is an auction-based system where bidding is based on a maximum cost per impression, and Site-Targeted ads compete with keyword-targeted ads in the same auction.

*Access to the Google Search and Content Network.* We serve AdWords ads on Google properties, our syndicated search partners' web sites, and the thousands of third-party web sites that make up the Google Network. As a result, we can offer extensive search and content inventory on which advertisers can advertise. Apart from keyword-based ads targeted to search queries and Site Targeting, we also offer advertisers an effective contextual advertising option—Content Targeting—that displays their ads on relevant content pages across our network of partner sites and products. As a result, AdWords advertisers can target users on Google properties and on search and content sites across the web. This gives advertisers increased exposure to people who are likely to be interested in their offerings. The Google Network significantly enhances our ability to attract interested advertisers.

*Campaign Control.* Google AdWords gives advertisers hands-on control over most elements of their ad campaigns. Advertisers can specify the relevant search or content topics for each of their ads. Advertisers can also manage expenditures by setting a maximum daily budget and determining how much they are willing to pay whenever a user clicks or views an ad. Other features that make it easy to set up and manage ad campaigns include:

- *Campaign management.* Advertisers can target multiple ads to a given keyword and easily track individual ad performance to see which ads are the most effective.

- *Conversion tracking.* Conversion tracking is a free tool integrated into AdWords reports that measures the conversions of an advertiser's campaigns, enabling a better understanding of the overall return on investment generated for the advertiser by the AdWords program.
- *Traffic estimator.* This tool estimates the number of searches and potential costs related to advertising on a particular keyword or set of keywords.
- *Quality-based bidding.* Advertisers' keywords are assigned dynamic minimum bids based on their Quality Score—the higher the Quality Score, the lower the minimum bid. This rewards advertisers with relevant keywords and ads.
- *Budgeted delivery.* Advertisers can set daily budgets for their campaigns and control the timing for delivery of their ads.
- *AdWords Discounter.* This feature gives advertisers the freedom to increase their maximum cost-per-click because it automatically adjusts pricing so that they never pay more than one cent over the next highest bid.

We offer larger advertisers additional services that help maximize returns on their internet marketing investments and improve their ability to run large, dynamic campaigns. These include dedicated client service representatives as well as:

- *Creative maximization.* Our AdWords specialists help advertisers select relevant keywords and create more effective ads.
- *Vertical market experts.* Specialists with experience in particular industries offer guidance on how to target potential customers.
- *Bulk posting.* We help businesses launch and manage large ad campaigns with hundreds or even thousands of targeted keywords.
- *The AdWords API and Commercial Developer Program.* For large advertisers as well as third parties, Google's free AdWords API service lets developers engineer computer programs that interact directly with the AdWords system. With such applications, advertisers and third parties can more efficiently and creatively manage their large AdWords accounts and campaigns. The AdWords Commercial Developer Program also enables our third-party developer ecosystem to continue designing and delivering innovative business applications based on the AdWords platform and distribution channel.

*Global Support.* We provide customer service to our advertiser base through our global support organization as well as through over 60 offices in over 20 countries. AdWords is available on a self-service basis with email and real-time chat support. At certain spending levels and through certain signup channels, phone support is also available. Advertisers with more extensive needs and advertising budgets can request strategic support services, which include an account team, to help them set up and manage their campaigns. Depending on geography, we accept bank and wire transfers, direct debit, and local debit cards carrying the Visa and MasterCard logos. We also accept payment through international credit cards. For selected advertisers, we offer several options for credit terms and monthly invoicing. We accept payments in over 40 currencies.

### **Google AdSense**

We are enthusiastic about helping content owners monetize their content, which facilitates the creation of better content to search. If there is better content on the web, people are likely to do more searches, and we expect that will be good for our business and for users. Our Google AdSense program enables web sites that are part of the Google Network to deliver AdWords ads that are relevant to the search results or content on their pages. It also allows offline media companies, such as television and radio stations, to deliver ads and audio ads to the content they provide. We share most of the revenue generated from ads shown by a Google Network member with that member. The key benefits we offer to Google Network members include:

- *Access to Advertisers.* Many small web site companies and content producers do not have the time or resources to develop effective programs for generating revenue from online advertising. Even larger sites,

with dedicated sales teams, may find it difficult to generate revenue from pages with specialized content. Google AdSense promotes effective revenue generation by providing Google Network members access to Google's base of advertisers and their broad collection of ads. Our technology automatically starts delivering ads on a web site as soon as the member joins the Google Network. Because the ads are related to what the web site's visitors are looking for on the site, AdSense provides the Google Network member with a way to both monetize and enhance their web sites. The Google Network member determines the placement of the ads on its web site, and controls and directs the nature of ad content.

- *Improved User Satisfaction.* Many web sites are cluttered with intrusive or untargeted advertising that may distract or confuse users and may undermine users' ability to find the information they want. Some web sites have adopted practices we consider to be abusive, including pop-up ads or ads that take over web pages. We believe these tactics can cause dissatisfaction with internet advertising and reduce use of the internet overall. Our AdSense program extends our commitment to improving the overall web experience by enabling web sites to display AdWords ads in a fashion that we believe people find useful rather than disruptive.
- *Better Storage, Management, Access and Visibility.* We have developed new storage, management and access technologies to allow content owners and producers to distribute and, if they wish, monetize more types of online and offline content. We believe that only a small fraction of the world's information and content is easily and effectively stored and searchable, and that bringing non-traditional, online or offline content into Google's index will encourage the preservation and continued creation of this content. Google Scholar, Google Book Search, and Google Video enable more print and video content to be made easily accessible (and monetizable) online, while Google Base allows owners and creators to put online even non-traditional forms of structured information.
- *Syndicated Search.* We provide our search technology to partners of all sizes, allowing Google search service to be offered through these partners' properties. For commercial partners, we provide an extensive range of customization options.

Our Google AdSense program includes:

*Google AdSense for Search.* For internet companies that want to target search audiences, we offer Google AdSense for search. To use AdSense for search, most of our AdSense for search partners add Google search functionality to their web pages in the form of customizable Google search boxes. We offer this service free to these partners. When visitors to these web sites search either the web site or the internet using these customizable search boxes, we display relevant ads (generally text ads) on the search results pages, targeted to match user search queries. These web sites can then generate additional revenue when visitors click on or view these ads. Because we also offer to license our web search technology along with Google AdSense for search, companies without their own search service can offer Google Web Search to improve the usefulness of their web sites for their users while increasing their revenue. We generally charge a fee related to these license agreements. We also offer a more customizable premium offering to web sites with significant traffic.

*Google AdSense for Content.* Google AdSense for content lets web sites generate revenue from advertising by serving relevant AdWords ads targeted to web content. Web sites can use our automated sign-up process to quickly display AdWords ads on their sites. Under this program, we use automated technology to analyze the meaning of the content on the web site and serve relevant ads based on the meaning of such content. For example, a web page on an automotive blog that contains an entry about vintage cars might display ads for vintage car parts or vintage car shows. These ads are displayed in spaces that our AdSense for content partners have set aside on their web sites for our AdWords content. AdSense for content allows a variety of ad types to be shown, including text ads, image ads, video ads, link units (which are sets of clickable links to topic pages related to page content) and themed units (which are regular text ad units with graphic treatments that change seasonally and by geography). We share the majority of the revenues generated from these ads with the Google Network members that display the ads. Important AdSense for content features include:

- *Competitive ad filters.* Web sites can block competitive ads, or other ads they want to keep off their site, simply by telling us which URLs to block.

- *Reports.* Publishers can view customizable reports about their AdSense performance.
- *Sensitive content filters.* At times, certain ads may be inappropriate for some pages. For example, Google automatically filters out ads that would be inappropriate on a news page about a catastrophic event.
- *Choose default ads.* In the unlikely event that Google is unable to serve targeted ads on a page, we offer web sites the option of displaying a default ad of their choice.

*Google AdSense for Domains and Feeds.* Google AdSense for domains allows owners of undeveloped domains that receive traffic from users typing generic terms into browsers or search to generate revenue from relevant advertising. AdSense for feeds is a free program that allows publishers to monetize their feeds—user-subscribable content streams containing structured data such as stock and financial information, web blog posts, and weather reports—through text ads targeted to the content of the feed. Like AdSense for search or content, Google shares the majority of the advertising revenue from AdSense for domains and AdSense for feeds with the domain owner or feed publisher.

*Google Television Ads.* Google Television Ads is a product that allows advertisers to use their AdWords account to create television campaigns. Advertisers can use our online advertising platform to place and monitor the effectiveness of their television ads, enhancing relevance and accountability.

*Google AdSense for Audio and Audio Ads.* Google AdSense for Audio is an early-stage product for radio broadcasters that automatically schedules and places advertising into radio programs, with the objective of increasing revenue for broadcasters by making their ad inventory available to new advertisers and decreasing the costs associated with processing advertisements. Google Audio Ads makes radio advertising easier for small and large businesses by providing an online interface for creating and launching radio advertising campaigns.

### ***Display Advertising***

Display advertising is internet advertising that typically includes static or animated images as well as interactive audio or video media, such as the banner ads you see on the tops or sides of many popular web sites. Our goal is to make it easy for anyone to use display advertising. We want advertisers to realize a better return on their display advertising campaigns and publishers to maximize the value of the content on their web sites by providing tools, platforms and channels for ad management and delivery.

We completed our acquisition of DoubleClick in March 2008 and are in the process of integrating DoubleClick's online ad serving and management services into Google's advertising solutions. DoubleClick provides Google with a platform for delivering display advertising. DoubleClick also provides services related to the delivery of display advertising, including media planning, buying, implementation and measurement tools for advertisers and agencies and forecasting and reporting tools for publishers. Through these tools we also provide publishers with access to agencies and advertisers to help them sell their advertising inventory and ways to streamline the ad sales process.

We also offer advertising solutions on YouTube in a range of video, static or animated images, and interactive formats.

### **The Technology Behind Google's Advertising Programs**

Our AdWords and AdSense programs serve millions of relevant, targeted ads each day based on search terms people enter or content they view on the web. The key elements of our advertising technology include:

*Google AdWords Auction System.* The Google AdWords auction system lets advertisers automatically deliver relevant, targeted advertising. Every search query we process involves the automated execution of an auction, resulting in our advertising system often processing hundreds of millions of auctions per day. To determine whether an ad is relevant to a particular query, this system weighs an advertiser's willingness to pay for

prominence in the ad listings (the cost-per-click or cost-per-impression bid) and interest from users in the ad as measured by the click-through rate and other factors. Our Quality-based bidding system also assigns minimum bids to advertiser keywords based on the Quality scores of those keywords—the higher the Quality score, the lower the minimum bid. The Quality score is determined by an advertiser's keyword click-through rate, the relevance of the ad text, historical keyword performance, the quality of the ad's landing page and other relevancy factors. This prevents advertisers with irrelevant ads from "squatting" in top positions to gain exposure, and rewards more relevant, well-targeted ads that are clicked on frequently. Because we are paid only when users click on ads, the AdWords ranking system aligns our interests with those of our advertisers and our users. The more relevant and useful the ad, the better for our users, for our advertisers and for us.

The AdWords auction system also incorporates the AdWords Discounter, which automatically lowers the amount advertisers actually pay to the minimum needed to maintain their ad position. Consider a situation where there are three advertisers—Pat, Betty and Joe—each bidding on the same keyword for ads that will be displayed on Google.com. These advertisers have ads with equal click-through rates and bid \$1.00 per click, \$0.60 per click and \$0.50 per click, respectively. With our AdWords discounter, Pat would occupy the first ad position and pay only \$0.61 per click, Betty would occupy the second ad position and pay only \$0.51 per click, and Joe would occupy the third ad position and pay the minimum bid of \$0.01 per click. The AdWords discounter saves money for advertisers by minimizing the price they pay per click, while relieving them of the need to constantly monitor and adjust their cost-per-click. Advertisers can also experience greater discounts through the application of our smart pricing technology, which can reduce the price of clicks for ads served across the Google Network based on the expected value of the click to the advertiser.

*AdSense Contextual Advertising Technology.* Our AdSense technology employs techniques that consider factors such as keyword analysis, word frequency and the overall link structure of the web to analyze the content of individual web pages and to match ads to them almost instantaneously. With this ad targeting technology, we can automatically serve contextually relevant ads. To do this, Google Network members embed a small amount of custom HTML code on web pages that generates a request to Google's AdSense service whenever a user views the web page. Upon receiving a request, our software examines the content of web pages and performs a matching process that identifies advertisements that we believe are relevant to the content of the specific web page. The relevant ads are then returned to the web pages in response to the request. We employ similar techniques for matching advertisements to other forms of textual content, such as email messages and Google Groups postings. For example, our technology can serve ads offering tickets to fans of a specific sports team on a news story about that team.

Our display advertising programs provide advertisers and publishers services related to the delivery of branded display advertising. The key elements of our display advertising technology include:

*DoubleClick Advertiser Platform.* The DoubleClick Advertiser Platform provides tools for media planning, buying, selling, ad delivery, measurement, and optimization. The key technologies included in this platform are:

- *Google Ad Planner and MediaVisor.* This research and media planning tool allows agencies and advertisers to identify the web sites their target customers are likely to visit. MediaVisor improves media buying by replacing formerly manual tasks in the media buying process.
- *DART for Advertisers.* DART for advertisers is an ad management and serving solution that can manage, traffic, serve and report on an advertiser's online campaign.
- *DoubleClick Rich Media and Video.* This tool covers the process of creating, managing and reporting on rich media and video advertising.

*DoubleClick Publisher Platform.* The DoubleClick Publisher Platform provides tools that address key challenges throughout the publisher ad sales cycle and helps maximize the value of publisher content. The key technologies included in this platform are:

- *The DART Ad Serving Platform.* DART for Publishers is our hosted ad serving platform and DART Enterprise is our licensed software solution. Both provide tools to manage digital ad sales operations for publishers.
- *DART Sales Manager.* This proposal and finance management tool is designed for companies using the DART platform.
- *DART Adapt for Publishers.* This tool is DoubleClick's solution designed to increase campaign performance by managing publisher inventory.
- *DoubleClick Ad Exchange.* The ad exchange service connects advertisers, agencies and networks with online publishers to improve yield for sellers and campaign performance and ROI for buyers.

*YouTube.* YouTube offers video ads solutions to advertisers that provide advertisers with a way to promote their content to the YouTube community as well as to associate themselves with content being watched by their target audience. YouTube offers analytic tools to help advertisers understand their audience and derive general business intelligence. The key solutions provided by YouTube include:

- *Sponsored Videos.* Sponsored videos allows advertisers of any size to use a self-service tool to reach people who are interested in their content, products or services.
- *YouTube Video Ads.* These video ads enable advertisers to upload and promote their videos on the YouTube homepage, garnering reach, ratings and click-through rates to their own web sites and brand channels on YouTube.
- *Engagement Content Aggregation Programs.* These programs enable a sponsored thematic experience using partner videos, thus enabling partner monetization.
- *Display and Linear ads.* These ads including traditional branded display, linear ads, and video overlay ads, let advertisers monetize video playback and share money with the content owner.
- *Click to Buy.* Click to buy allows advertisers to create a marketplace for items driven from the video playback.

## **Google Enterprise**

Schools and businesses are increasingly moving towards web-based applications and away from licensed software. Since web-based applications require minimal up-front investment, businesses can pay as they use them and download updates.

Through Google Apps, we provide hosted applications for businesses, schools, and nonprofit organizations. In addition, we provide our search technology for use within enterprises through the Google Search Appliance and Google Mini. These search appliances are a software and hardware solution that companies can implement to extend Google's search performance to their internal or external information.

*Google Apps.* Google Apps provides hosted communication and collaboration tools for organizations such as businesses, schools, and groups. Google Apps includes communication features such as Gmail, Google Calendar, Google Video, Google Sites, and Google Talk and collaboration features such as Google Docs. It is available on an organization's own domain. Google Apps is available in Standard and Premier Editions, with the Premier Edition providing security and compliance features allowing administrators to implement rules for how messages are handled, as well as search for and recover deleted mail across their domain.

*Google Mini.* The Google Mini is targeted at small-and medium-sized businesses who want to let employees and customers search designated documents, intranets and web sites.

*Google Search Appliance.* The Google Search Appliance is similar to the Google Mini except that it can handle more documents and offers more advanced features. Some advanced features of the Google Search Appliance include integration with advanced corporate security protocols, integration with other enterprise applications, such as content management systems, portals and other systems, and real-time search of business applications. The Google Search Appliance is available in three models: the GB-1001, for mid-sized companies; the GB-5005, for dedicated, high-priority search services such as customer-facing web sites and company-wide intranet applications; and the GB-8008, for centralized deployments supporting global business units.

For companies, universities and government agencies, Google also offers the Google Toolbar for Enterprise and Google Desktop for Enterprise. Google Toolbar gives employees a search box in the browser and the ability to create custom search buttons. Google Desktop for Enterprise indexes the contents of a user's hard drive for easy search and retrieval of documents, email, IM chats and other items. Google Earth's Enterprise offerings let business users view, modify and export their data in a geographic context. Google Earth Pro, a downloadable application with pricing starting at \$400 per user, lets users overlay company-specific data and information in Google Earth. Google Earth Enterprise lets users integrate and host proprietary geographic data or satellite imagery with Google Earth content.

## **Sales and Support**

We have put significant effort into developing our sales and support infrastructure. We have over 65 offices in over 30 countries, the large majority of which includes sales people. We deploy specialized sales teams across vertical markets. We bring businesses into our advertising network through both online and direct sales channels. We work to use technology and automation wherever possible to improve the experience for our advertisers and to grow our business cost-effectively. The vast majority of our advertisers use our automated online AdWords program to establish accounts, create ads, target users and launch and manage their advertising campaigns. Our direct advertising sales team focuses on attracting and supporting companies around the world with the largest advertising budgets. Our AdSense program follows a similar model. Most of the web sites in the Google Network sign up for AdSense using an automated online process. Our direct sales force focuses on building AdSense relationships with leading internet companies. Our display program, which includes DoubleClick and YouTube, also follows a similar model. Most advertisers and publishers sign up using an automated online process. Our direct sales force focuses on attracting and supporting advertisers and publishers around the world. Our global support organization concentrates on helping our advertisers and Google Network members get the most out of their relationship with us.

## **Marketing**

We have always believed that building a trusted, highly-recognized brand begins with providing high-quality products and services that make a notable difference in people's lives. Our user base has grown primarily by word-of-mouth. Our early marketing efforts focused on feeding this word-of-mouth momentum and used public relations efforts to accelerate it. Through these efforts and people's increased usage of Google worldwide, we have been able to build our brand with relatively low marketing costs as a percentage of our revenues. Today, we use the quality of our own products and services as our most effective marketing tool, and word-of-mouth momentum continues to drive consumer awareness and user loyalty worldwide. We also engage in targeted marketing efforts, such as those we deliver to our advertising clients, designed to inform potential advertisers, Google Network members and enterprises of the benefits they can achieve through Google as well as targeted consumer marketing in certain geographies. In addition, we sponsor industry conferences and have promoted the distribution of Google products to internet users in order to make our search services easier to access.

## Competition

We operate in a market that is characterized by rapid change and converging, as well as new and disruptive technologies, and we face formidable competition in every aspect of our business, particularly from companies that seek to connect people with information on the web and provide them with relevant advertising. Currently, we consider our primary competitors to be Microsoft Corporation and Yahoo! Inc.

We face competition from other web search providers, including start-ups as well as developed companies that are enhancing or developing search technologies. We compete with internet advertising companies, particularly in the areas of pay-for-performance and keyword-targeted internet advertising. Also, we may compete with companies that sell products and services online because these companies, like us, are trying to attract users to their web sites to search for information about products and services. We also provide a number of online products and services, including Gmail, YouTube, and Google Docs, that compete directly with new and established companies that offer communication, information, and entertainment services integrated into their products or media properties. We also compete with web sites that provide their own or user-generated content and provide advertising to their users.

We compete to attract and retain relationships with users, advertisers and Google Network members and other content providers in different ways:

- *Users.* We compete to attract and retain users of our search and communication products and services. Most of the products and services we offer to users are free, so we do not compete on price. Instead, we compete in this area on the basis of the relevance and usefulness of our search results and the features, availability and ease of use of our products and services.
- *Advertisers.* We compete to attract and retain advertisers. We compete in this area principally on the basis of the return on investment realized by advertisers using our AdWords and AdSense programs. We also compete based on the quality of customer service, features and ease of use of our products and services.
- *Google Network members and other content providers.* We compete to attract and retain content providers (Google Network members, as well as other content providers for whom we distribute or license content) primarily based on the size and quality of our advertiser base, our ability to help these partners generate revenues from advertising and the terms of the agreements.

## Intellectual Property

We rely on a combination of patent, trademark, copyright and trade secret laws in the U.S. and other jurisdictions as well as confidentiality procedures and contractual provisions to protect our proprietary technology and our brand. We also enter into confidentiality and invention assignment agreements with our employees and consultants and confidentiality agreements with other third parties, and we rigorously control access to proprietary technology.

Google, YouTube, DoubleClick, DART, AdSense, AdWords, Gmail, I'm Feeling Lucky, PageRank, Blogger, orkut, Picasa, SketchUp and Postini are registered trademarks in the U.S. Our unregistered trademarks include, Blog\*Spot, Jaiku, Android, Open Handset Alliance, OpenSocial, Panoramio, and Knol.

The first version of the PageRank technology was created while Larry and Sergey attended Stanford University, which owns a patent to PageRank. The PageRank patent expires in 2017. We hold a perpetual license to this patent. In October 2003, we extended our exclusivity period to this patent through 2011, at which point our license will become non-exclusive.

Circumstances outside our control could pose a threat to our intellectual property rights. For example, effective intellectual property protection may not be available in every country in which our products and services are distributed. Also, the efforts we have taken to protect our proprietary rights may not be sufficient or effective. Any significant impairment of our intellectual property rights could harm our business or our ability to compete.



Also, protecting our intellectual property rights is costly and time consuming. Any increase in the unauthorized use of our intellectual property could make it more expensive to do business and harm our operating results.

Companies in the internet, technology and media industries own large numbers of patents, copyrights and trademarks and frequently enter into litigation based on allegations of infringement or other violations of intellectual property rights. As we face increasing competition, the possibility of intellectual property claims against us grows. Our technologies may not be able to withstand any third-party claims or rights against their use.

## **Government Regulation**

We are subject to a number of foreign and domestic laws and regulations that affect companies conducting business on the internet. In addition, laws and regulations relating to user privacy, freedom of expression, content, advertising, information security and intellectual property rights are being debated and considered for adoption by many countries throughout the world. We face risks from some of the proposed legislation that could be passed in the future.

In the U.S., laws relating to the liability of providers of online services for activities of their users and other third parties are currently being tested by a number of claims, which include actions for libel, slander, invasion of privacy and other tort claims, unlawful activity, copyright and trademark infringement and other theories based on the nature and content of the materials searched, the ads posted or the content generated by users. Certain foreign jurisdictions are also testing the liability of providers of online services for activities of their users and other third parties. Any court ruling that imposes liability on providers of online services for activities of their users and other third parties could harm our business.

A range of other laws and new interpretations of existing laws could have an impact on our business. For example, the Digital Millennium Copyright Act has provisions that limit, but do not necessarily eliminate, our liability for listing, linking or hosting third-party content that includes materials that infringe copyrights. The Child Online Protection Act and the Children's Online Privacy Protection Act restrict the distribution of materials considered harmful to children and impose additional restrictions on the ability of online services to collect information from children under 13. In the area of data protection, many states have passed laws requiring notification to users when there is a security breach for personal data, such as California's Information Practices Act. The costs of compliance with these laws may increase in the future as a result of changes in interpretation. Furthermore, any failure on our part to comply with these laws may subject us to significant liabilities.

Similarly, the application of existing laws prohibiting, regulating or requiring licenses for certain businesses of our advertisers, including, for example, online gambling, distribution of pharmaceuticals, adult content, financial services, alcohol or firearms, can be unclear. Application of these laws in an unanticipated manner could expose us to substantial liability and restrict our ability to deliver services to our users.

We also face risks due to government failure to preserve the internet's basic neutrality as to the services and sites that users can access through their broadband service providers. Such a failure to enforce network neutrality could limit the internet's pace of innovation and the ability of large competitors, small businesses and entrepreneurs to develop and deliver new products, features and services, which could harm our business.

We are also subject to federal, state and foreign laws regarding privacy and protection of user data. We post on our web site our privacy policies and practices concerning the use and disclosure of user data. Any failure by us to comply with our posted privacy policies or privacy-related laws and regulations could result in proceedings against us by governmental authorities or others, which could potentially harm our business. In addition, the interpretation of data protection laws, and their application to the internet, in Europe and other foreign jurisdictions is unclear and in a state of flux. There is a risk that these laws may be interpreted and applied in conflicting ways from country to country and in a manner that is not consistent with our current data protection practices. Complying with these varying international requirements could cause us to incur additional costs and change our

business practices. Further, any failure by us to protect our users' privacy and data could result in a loss of user confidence in our services and ultimately in a loss of users, which could adversely affect our business.

In addition, because our services are accessible worldwide, certain foreign jurisdictions have claimed and others may claim that we are required to comply with their laws, even where we have no local entity, employees or infrastructure.

## **Culture and Employees**

We take great pride in our company culture and embrace it as one of our fundamental strengths. Our culture encourages the iteration of ideas to address complex technical challenges. In addition, we embrace individual thinking and creativity. As an example, we encourage our engineers to devote as much as 20% of their time to work on independent projects. Many of our significant new products have come from these independent projects, including Google News, AdSense for content and orkut.

We began as a technology company and have evolved into a software, technology, internet, advertising and media company all rolled into one. We take technology innovation very seriously. We compete aggressively for talent, and our people drive our innovation, technology development and operations. We strive to hire the best computer scientists and engineers to help us solve very significant challenges across systems design, artificial intelligence, machine learning, data mining, networking, software engineering, testing, distributed systems, cluster design and other areas. We work hard to provide an environment where these talented people can have fulfilling jobs and produce technological innovations that have a positive effect on the world through daily use by millions of people.

We have assembled what we believe is a highly talented group of employees. Despite our rapid growth, we constantly seek to maintain a small-company feel that promotes interaction and the exchange of ideas among employees. We try to minimize corporate hierarchy to facilitate meaningful communication among employees at all levels and across departments. We believe that considering multiple viewpoints is critical to developing effective solutions, and we attempt to build consensus in making decisions. While teamwork is one of our core values, we also significantly reward individual accomplishments that contribute to our overall success. As we grow, we expect to continue to provide compensation structures that are more similar to those offered by start-ups than established companies. We focus on very significant rewards for individuals and teams that build amazing things that provide significant value to us, our advertisers and our users.

At December 31, 2008, we had 20,222 employees, consisting of 7,254 in research and development, 8,002 in sales and marketing, 3,109 in general and administrative and 1,857 in operations. All of Google's employees are also equityholders, with significant collective employee ownership. As a result, many employees are highly motivated to make the company more successful.

## **Seasonality**

Both seasonal fluctuations in internet usage and traditional retail seasonality have affected, and are likely to continue to affect, our business. Internet usage generally slows during the summer months, and commercial queries typically increase significantly in the fourth quarter of each year. These seasonal trends have caused and will likely continue to cause, fluctuations in our quarterly results, including fluctuations in sequential revenue growth rates.

## **Available Information**

Our web site is located at [www.google.com](http://www.google.com), and our investor relations web site is located at <http://investor.google.com>. The following filings are available through our investor relations web site after we file them with the Securities and Exchange Commission (SEC): Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, and our Proxy Statements for our annual stockholder's meetings (for the last two years). We also

provide a link to the section of the SEC's website at [www.sec.gov](http://www.sec.gov) that has all of our public filings. Our Quarterly Reports, Annual Reports, and Proxy Statements for the last two years are also available for download free of charge on our investor relations web site. Further, a copy of this Annual Report on Form 10-K is located at the SEC's Public Reference Room at 100 F Street, NE, Washington, D.C. 20549. Information on the operation of the Public Reference Room can be obtained by calling the SEC at 1-800-SEC-0330. The SEC maintains an internet site that contains reports, proxy and information statements and other information regarding our filings at [www.sec.gov](http://www.sec.gov).

We webcast our earnings calls and certain events we participate in or host with members of the investment community on our investor relations web site. Additionally, we provide notifications of news or announcements regarding our financial performance, including SEC filings, investor events, press and earnings releases, and blogs as part of our investor relations web site. The contents of these web sites are not intended to be incorporated by reference into this report or in any other report or document we file and any reference to these web sites are intended to be inactive textual references only.

## **ITEM 1A. RISK FACTORS**

### **Risks Related to Our Business and Industry**

#### ***We face significant competition from Microsoft and Yahoo.***

We face formidable competition in every aspect of our business, and particularly from other companies that seek to connect people with information on the web and provide them with relevant advertising. Currently, we consider our primary competitors to be Microsoft Corporation and Yahoo! Inc. Microsoft has developed features that make web search a more integrated part of its Windows operating system and other desktop software products. We expect that Microsoft will increasingly use its financial and engineering resources to compete with us. Microsoft has more employees and cash resources than we do. Also, both Microsoft and Yahoo have longer operating histories and more established relationships with customers and end users. They can use their experience and resources against us in a variety of competitive ways, including by making acquisitions, investing more aggressively in research and development and competing more aggressively for advertisers and web sites. Microsoft and Yahoo also may have a greater ability to attract and retain users than we do because they operate internet portals with a broad range of content products and services. If Microsoft or Yahoo is successful in providing similar or better web search results or more relevant advertisements, or in leveraging their platforms or products to make their web search or advertising services easier to access, we could experience a significant decline in user traffic or the size of the Google Network. Any such decline could negatively affect our revenues.

#### ***We face competition across all geographic markets from other internet companies, including web search providers, internet access providers, internet advertising companies, destination web sites, and local information providers, and from traditional media companies.***

In addition to Microsoft and Yahoo, we face competition from other web search providers, including start-ups as well as developed companies that are enhancing or developing search technologies. We compete with internet advertising companies, particularly in the areas of pay-for-performance and keyword-targeted internet advertising. Also, we may compete with companies that sell products and services online because these companies, like us, are trying to attract users to their web sites to search for information about products and services. We also provide a number of online products and services, including Gmail, YouTube, and Google Docs, that compete directly with new and established companies that offer communication, information, and entertainment services integrated into their products or media properties.

We also compete with web sites that provide their own or user-generated content and provide advertising to their users. These destination web sites include those operated by internet access providers, such as cable and DSL service providers. Because our users need to access our services through internet access providers, they have direct relationships with these providers. If an access provider or a computer or computing device manufacturer offers online services that compete with ours, the user may find it more convenient to use the

services of the access provider or manufacturer. Also, because the access provider gathers information from the user in connection with the establishment of a billing relationship, the access provider may be more effective than we are in tailoring services and advertisements to the specific tastes of the user.

In certain markets outside the U.S., other web search, advertising services, and internet companies have greater brand recognition, more users, and more search traffic than we have. Even in countries where we have a significant user following, we may not be as successful in generating advertising revenue due to slower market development, our inability to provide attractive local advertising services or other factors. In order to compete, we need to better understand our international users and their preferences, improve our brand recognition, our selling efforts internationally, and build stronger relationships with advertisers. If we fail to do so, our global expansion efforts may be more costly and less profitable than we expect.

In addition to internet companies, internet advertising companies such as Google face competition from companies that offer traditional media advertising opportunities. Most large advertisers have fixed advertising budgets, a small portion of which is allocated to internet advertising. We expect that large advertisers will continue to focus most of their advertising efforts on traditional media. If we fail to convince these companies to spend a portion of their advertising budgets with us, or if our existing advertisers reduce the amount they spend on our programs, our operating results would be harmed.

***We expect our revenue growth rate to decline and anticipate downward pressure on our operating margin in the future.***

We believe our revenue growth rate will generally decline as a result of a number of factors including increasing competition, the inevitable decline in growth rates as our revenues increase to higher levels and the increasing maturity of the online advertising market. We believe our operating margin will experience downward pressure as a result of increasing competition and increased expenditures for many aspects of our business. Our operating margin will also experience downward pressure if a greater percentage of our revenues comes from ads placed on our Google Network members' web sites compared to revenues generated through ads placed on our own web sites or if we spend a proportionately larger amount to promote the distribution of certain products, including Google Toolbar. The margin on revenue we generate from our Google Network members is significantly less than the margin on revenue we generate from advertising on our web sites. Additionally, the margin we earn on revenue generated from our Google Network members could decrease in the future if we pay an even larger percentage of advertising fees to our Google Network members.

***Our operating results may fluctuate, which makes our results difficult to predict and could cause our results to fall short of expectations.***

Our operating results may fluctuate as a result of a number of factors, many outside of our control. As a result, comparing our operating results on a period-to-period basis may not be meaningful, and you should not rely on our past results as an indication of our future performance. Our quarterly, year-to-date, and annual expenses as a percentage of our revenues may differ significantly from our historical or projected rates. Our operating results in future quarters may fall below expectations. Any of these events could cause our stock price to fall. Each of the risk factors listed in this Item 1A and the following factors may affect our operating results:

- Our ability to continue to attract users to our web sites and satisfy existing users on our web sites.
- Our ability to monetize (or generate revenue from) traffic on our web sites and our Google Network members' web sites.
- Our ability to attract advertisers to our AdWords program.
- Our ability to attract web sites to our AdSense program.
- The mix in our revenues between those generated on our web sites and those generated through our Google Network.

- The amount and timing of operating costs and capital expenditures related to the maintenance and expansion of our businesses, operations, and infrastructure.
- Our focus on long-term goals over short-term results.
- The results of our investments in risky projects.
- Our ability to keep our web sites operational at a reasonable cost and without service interruptions.
- Our ability to achieve revenue goals for partners to whom we guarantee minimum payments or pay distribution fees.
- Our ability to generate revenue from services in which we have invested considerable time and resources, such as YouTube and Google Checkout.

Because our business is changing and evolving, our historical operating results may not be useful to you in predicting our future operating results. In addition, advertising spending has historically been cyclical in nature, reflecting overall economic conditions as well as budgeting and buying patterns. For example, in 1999, advertisers spent heavily on internet advertising. This was followed by a lengthy downturn in ad spending on the web. Also, user traffic tends to be seasonal. Our rapid growth has tended to mask the cyclical and seasonality of our business. As our growth rate has slowed, the cyclical and seasonality in our business has become more pronounced and caused our operating results to fluctuate.

***If we do not continue to innovate and provide products and services that are useful to users, we may not remain competitive, and our revenues and operating results could suffer.***

Our success depends on providing products and services that make using the internet a more useful and enjoyable experience for our users. Our competitors are constantly developing innovations in web search, online advertising and web based products and services. As a result, we must continue to invest significant resources in research and development in order to enhance our web search technology and our existing products and services and introduce new products and services that people can easily and effectively use. If we are unable to provide quality products and services, then our users may become dissatisfied and move to a competitor's products and services. In addition, these new products and services may present new and difficult technology challenges, and we may be subject to claims if users of these offerings experience service disruptions or failures or other quality issues. Our operating results would also suffer if our innovations are not responsive to the needs of our users, advertisers and Google Network members, are not appropriately timed with market opportunities or are not effectively brought to market. As search technology continues to develop, our competitors may be able to offer search results that are, or that are seen to be, substantially similar to or better than ours. This may force us to compete in different ways and expend significant resources in order to remain competitive.

***We generate our revenue almost entirely from advertising, and the reduction in spending by or loss of advertisers could seriously harm our business.***

We generated 99% of our revenues in 2007 and 97% of our revenues in 2008 from our advertisers. Our advertisers can generally terminate their contracts with us at any time. Advertisers will not continue to do business with us if their investment in advertising with us does not generate sales leads, and ultimately customers, or if we do not deliver their advertisements in an appropriate and effective manner. In addition, expenditures by advertisers tend to be cyclical, reflecting overall economic conditions and budgeting and buying patterns. If we are unable to remain competitive and provide value to our advertisers, they may stop placing ads with us, which would negatively harm our revenues and business.

***The effects of the recent global economic crisis may impact our business, operating results, or financial condition.***

The recent global economic crisis has caused disruptions and extreme volatility in global financial markets and increased rates of default and bankruptcy, and has impacted levels of consumer spending. These macroeconomic developments could negatively affect our business, operating results, or financial condition in a