

Google Inc.  
Form 10-K  
March 30, 2005  
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**UNITED STATES**  
**SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

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**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, 2004

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)

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**1600 Amphitheatre Parkway**

**Mountain View, CA 94043**

**(Address of principal executive offices)**

**(650) 623-4000**

**(Registrant's telephone number, including area code)**

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

**None**

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

**Class A Common Stock, \$0.001 par value**

**Class B Common Stock, \$0.001 par value**

**(Title of class)**

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 an accelerated filer (as defined in Rule 12b-2 of the Act.) Yes  No

At December 31, 2004, the last business day of the Registrant's most recently completed fiscal quarter, there were 95,542,010 shares of Registrant's Class A common stock and 178,980,030 shares of Registrant's Class B common stock outstanding, and the aggregate market value of such shares held by non-affiliates of the Registrant (based upon the closing sale price of such shares on The Nasdaq National Market on December 31, 2004) was approximately \$27,286,463,824. Shares of Registrant's Class A common stock and Class B common stock held by each executive officer and director and by each entity or person that, to the Registrant's knowledge, owned 5% or more of Registrant's outstanding common stock as of December 31, 2004 have been excluded in that such persons may be deemed to be affiliates of the Registrant. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

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At March 28, 2005, there were 114,754,458 shares of Registrant's Class A common stock outstanding and 162,594,769 shares of Registrant's Class B common stock outstanding.

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### **DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the registrant's Proxy Statement for the 2005 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.

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**For the Fiscal Year Ended December 31, 2004**

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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 destination and our brand one of the most recognized in the world. We maintain the world's largest online index of web sites and other content, and we make this information freely available 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 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 our Google Network use our Google AdSense program to deliver relevant ads that generate revenue and enhance the user experience.

**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 have made to our users:

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 will not accept payment for inclusion or ranking in them.

We will do our best to provide the most relevant and useful advertising. If any element on a result page is influenced by payment to us, we will make it clear to our users. Advertisements should not be an annoying interruption.

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 Users, Advertisers and Web Sites**

*Our Users*

We serve our users by developing products that enable people to more quickly and easily find, create and organize information. We place a premium on products that matter to many people and have the potential to improve their lives, especially in areas in which our expertise enables us to excel.

Search is one such area. People use search frequently and the results are often of great importance to them. For example, people search for information on medical conditions, purchase decisions, technical questions, long-lost friends and other topics about which they care a great deal. Delivering quality search results requires significant computing power, advanced software and complex processes areas in which we have expertise and a high level of focus.

Communication is another such area. People increasingly rely on the Internet to communicate with each other. Gmail, our new email service (available in a limited test), offers a gigabyte of free storage for each user, along with email search capabilities and relevant advertising. Delivering an improved user experience in Gmail has similar computing and software requirements as our search service.

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Some of the key benefits we offer to users include:

*Relevant and Useful Information.* Our 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 six years ago, our web index contained approximately 30 million documents. We now index more than 8 billion web pages, or more than 250 times as much information. We are also constantly developing new functionality. We've made recent enhancements to our local search offering, which now includes Google Maps and we've also enhanced Google Desktop Search, which now supports additional file formats and browser and email clients. In addition, we also provide convenient links to specialized information, such as weather and movie 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 money for search result ranking or inclusion. We do accept fees for advertising, but it does not influence how we generate our search results. The advertising is clearly marked and separated. This is similar to a newspaper, where the articles are independent of the advertising. Some of our competitors charge web sites for inclusion in their indices or for more frequent updating of pages. Inclusion and frequent updating in our index are open to all sites free of charge. We apply these principles to each of our products and services. We believe it is important for users to have access to the best available information and research, not just the information that someone pays for them to see.

*Global Access.* We strive to provide Google to everyone in the world. Users from around the world visit our destination sites at Google.com and our 112 other international domains, such as Google.de, Google.fr, Google.co.uk, Google.co.jp and Google.ca. The Google interface is available in more than 100 languages. Through Google News, we offer an automated collection of frequently updated news stories tailored to 22 international audiences. We also offer automatic translation of content between various languages. We provide localized versions of Google in many developing countries. Although we do not currently recover our costs in these countries, we believe providing our products and services is an important social good and a valuable long-term business investment.

*Ease of Use.* We have always believed that the most useful and powerful search technology hides its complexity from users and provides them with 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 have also created many features that enhance the user experience. Our products present these features when we believe they will be most useful, rather than promoting them unnecessarily. For example, Google WebSearch offers maps when a search appears to be for a geographic location.

*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. Among our search services, we offer Froogle, a search engine for finding products for sale online. We also present advertisements that are relevant to the information people seek. To ensure we display only the most relevant commercial information, our technology automatically rewards ads that users prefer and removes ads that users do not find helpful.

### ***Our Advertisers***

As more people spend additional time and money online, advertisers are increasingly turning to the Internet to market their products and services to consumers. For these advertisers, we offer Google AdWords, an auction-based advertising program that enables them to deliver relevant ads targeted to search results or web content. Our AdWords program provides advertisers with a cost-effective way to deliver ads to customers across Google sites and through the Google Network. The advertisers using AdWords range from small businesses targeting local customers to many of the world's largest global enterprises.





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The AdWords program offers advertisers the following benefits:

*Effective Return on Investment.* Many advertising dollars are spent delivering messages in an untargeted fashion and payment for these advertisements is not tied to performance. With Google AdWords, businesses can achieve greater cost-effectiveness with their marketing budgets for two reasons. 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 (though they are subject to a minimum price per click). Because we offer a simple ad format, advertisers can avoid incurring significant design, copywriting or other production costs associated with creating ads. As a result, even small advertisers find AdWords cost-effective for connecting with potential customers. In addition, advertisers can easily create many different ads, increasing the likelihood that an ad is exactly suited to a user's search. Users can find advertisements for exactly what they are seeking, and advertisers can find users who want exactly what they are offering. When the interests of users and advertisers align, both are well served.

*Access to the Google Network.* We serve AdWords ads to the thousands of third-party web sites that make up the Google Network. As a result, advertisers that use our AdWords program can target users on our sites 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 users.

*Precise 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 on an ad. Our online tracking tools and reports give advertisers timely updates on how well their campaigns are performing and enable them to make changes or refinements quickly. Advertisers can also target their campaigns by city, country, regional area or language.

*Global Support.* We provide customer service to our advertiser base through our global support organization as well as through field sales offices in 14 countries. AdWords is available on a self-service basis with email support. Advertisers with more extensive needs and budgets can request strategic support services, which include an account team of experienced professionals to help them set up, manage and optimize their campaigns.

## ***Web Sites***

Google indexes a huge amount of information in order to provide relevant results to our users. Our users do searches and are directed to relevant web sites. Google provides a significant amount of traffic to web sites with which we have no business relationship. Many web sites are able to generate revenue from that traffic, but others have difficulty doing so. We are enthusiastic about helping sites make money and thereby facilitating 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. To address this opportunity, we created Google AdSense. Our Google AdSense program enables the web sites—large and small—that make up the Google Network to deliver AdWords ads that are relevant to the search results or content on their pages. We share most of the revenue generated from ads shown by a member of the Google Network with that member—creating an additional revenue stream for them. Web sites can also license our Google WebSearch product to offer the Google search experience to their users. The key benefits we offer to web sites in the Google Network include:

*Access to Advertisers.* Many small web site companies 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. We believe that Google AdSense enables Google Network members to generate revenue from their sites more effectively and

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efficiently. Google AdSense promotes effective revenue generation by providing Google Network members immediate access to Google's base of advertisers and their broad collection of ads. As soon as a web site joins the Google Network, our

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technology automatically begins delivering ads for posting on the member's web site. The automated nature of our advertising programs promotes efficient revenue generation. Our online registration systems enable web sites to easily join the Google Network and our ad serving technology allows automated delivery of ads for posting on the member's site. 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.* In their quest for revenue, many Internet companies have cluttered their web sites 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 for users by enabling web sites to display AdWords ads in a fashion that we believe people find useful rather than disruptive.

## **Products and Services**

Our product development philosophy is centered on rapid and continuous innovation, with frequent releases of early stage products that we seek to improve with every iteration. 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. Our beta testing periods often last a year or more. 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 current principal products and services are described below.

### ***Google.com***

We are focused on building products and services that benefit our users and enable them to find relevant information quickly and easily. We offer, free of charge, all of the following services at Google.com and many of them at our international sites.

*Google WebSearch.* In addition to providing easy access to more than 8 billion web pages, we have integrated special features into Google WebSearch to help people find exactly what they are looking for on the web. The Google.com search experience also includes:

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.

Spell Checker suggests alternate search terms when a search appears to contain misspellings or typing errors.

Web Page Translation automatically translates web pages published in French, German, Italian, Portuguese and Spanish into English, or vice versa.

Stock Quotes provides links to stock and mutual fund information.

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Street Maps provides links to street maps and directions.

Calculator solves math problems involving basic arithmetic, complicated math or physical constants and converts between units of measure.

Definitions provides definitions for words or phrases based on content we have indexed.

PhoneBook provides U.S. street addresses and phone numbers for U.S. businesses and residences.

Search by Number enables people to conduct quick searches by entering FedEx, UPS and USPS package tracking numbers, vehicle ID numbers, product codes, telephone area codes, patent numbers, FAA airplane registration numbers and FCC equipment ID numbers.

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Travel Information enables people to check the status of U.S. airline flights and see delays and weather conditions at U.S. airports.

Cached Links provides snapshots of web pages taken when the pages were indexed, enabling web users to view web pages that are no longer available.

Movie Information enables people to quickly and easily find movie reviews and showtimes for U.S. theatres.

Weather provides weather conditions and a four-day forecast for U.S. locations

News and Product Information when relevant, we also display results from Google News and Froogle.

*Google Image Search.* Google Image Search is our searchable index of more than 1.1 billion 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 News.* Google News gathers information from nearly 10,000 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 Google News home page. These headlines are selected for display entirely by a computer algorithm, without regard to political viewpoint or ideology. Google News uses an automated process to pull together related headlines, which enables people to see many different viewpoints on the same story. Because topics are updated continuously throughout the day, people generally see new stories each time they check Google News. We currently provide our Google News service tailored to 22 international audiences.

*Google Toolbar.* The Google Toolbar makes our search technology constantly and easily available as people browse the web. The Google Toolbar is available as a free, fast download and can improve people's web experience through several innovative features, including:

Pop-up Blocker blocks pop-up advertising while people use the web.

PageRank Indicator displays Google's ranking of any page on the web.

AutoFill completes web forms with information saved securely on a user's own computer.

Highlight highlights search terms where they appear on a web page, with each term marked in a different color.

Word Find finds search terms wherever they appear on a web page.

AutoLink turns street addresses into links to online maps.

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WordTranslator translates English words into other languages.

SpellCheck checks spelling when typing in web forms.

*Froogle.* Froogle enables people to easily find products for sale online. By focusing entirely on product search, Froogle applies the power of our search technology to a very specific task – locating stores that sell the items users seek and pointing them directly to the web sites where they can shop. Froogle users can sort results by price, specify a desired price range and view product photos. Froogle accepts data feeds directly from merchants to ensure that product information is up-to-date and accurate. Most online merchants are also automatically included in Froogle’s index of shopping sites. Because we do not charge merchants for inclusion in Froogle, our users can browse product categories or conduct product searches with confidence that the results we provide are relevant and unbiased. As with many of our products, Froogle displays relevant advertising separately from search results.

*Google Groups.* The original Google Groups enabled easy participation in Internet discussion groups by providing users with tools to search, read and browse these groups and to post messages of their own. Google

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Groups contains more than 1 billion messages from Usenet Internet discussion groups dating back to 1981. The discussions in these groups cover a broad range of discourse and provide a comprehensive look at evolving viewpoints, debate and advice on many subjects. The new Google Groups adds in the ability to create your own groups for you and your friends and an improved user interface.

*Google Mobile.* Google Mobile offers people the ability to search and view both the mobile web, consisting of pages created specifically for wireless devices, and the entire Google index of more than 8 billion web pages. Google Mobile works on devices that support WAP, WAP 2.0, i-mode or j-sky mobile Internet protocols. In addition, users can access a variety of information using Google SMS by typing a query to the Google shortcode. Google Mobile is available through many wireless and mobile phone services worldwide.

*Google Local.* Google Local enables users to find relevant local businesses near a city, postal code, or specific address. This service combines Yellow Page listings with information found on web pages, and plots their locations on interactive maps.

*Google Print.* Google Print brings information online that had previously not been available to web searchers. Under this program, we enable a number of publishers to host their content and show their publications at the top of our search results. On Google Print pages, we provide links to book sellers that may offer the full versions of these publications for sale, and we show content-targeted ads that are served through the Google AdSense program.

*Google Desktop Search.* Google Desktop Search enables our users to perform a full text search on the contents of their own computer, including email, files, instant messenger chats and web browser history. Users can use this service to view web pages they have visited even when they are not online.

*Google Alerts.* Google Alerts are email updates of the latest relevant Google results (web, news, etc.) based on the user's choice of query or topic. Typical uses include monitoring a developing news story, keeping current on a competitor or industry, getting the latest on a celebrity or event, or keeping tabs on a favorite sports team.

*Google Labs.* Google Labs is our playground for our engineers and for 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:

Google Personalized Search provides customized search results based on an individual user's interests.

Froogle Wireless gives people the ability to search for product information from their mobile phones and other wireless devices.

Google Maps enables users to see maps, get directions, and find local businesses and services quickly and easily. Google Maps has several unique features, including draggable maps, integrated local search from Google Local, and keyboard shortcuts.

Google Scholar enables users to search specifically for scholarly literature, including peer-reviewed papers, theses, books, preprints, abstracts and technical reports from all broad areas of research. Google Scholar can be used to find articles from a wide variety of academic publishers, professional societies, preprint repositories and universities, as well as scholarly articles available across the

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web.

Google Suggest guesses what you're typing and offers suggestions in real time. This is similar to Google's "Did you mean?" feature that offers alternative spellings for your query after you search, except that it works in real time.

Google Video includes thousands of programs that play on our TVs every day. Google Video enables you to search a growing archive of televised content everything from sports to dinosaur documentaries to news shows.



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*Blogger.* Blogger is a leading web-based publishing tool that gives people the ability to publish to the web instantly using weblogs, or blogs. Blogs are web pages usually made up of short, informal, frequently updated posts that are arranged chronologically. Blogs can facilitate communications among small groups or to a worldwide audience in a way that is simpler and easier to follow than traditional email or discussion forums.

*Google Deskbar.* Google Deskbar enables people to search with Google from the taskbar of their computer without launching a web browser.

*Picasa.* Picasa is software that helps you find, edit and share all the pictures on your computer. It streamlines the digital photography experience, letting you easily transfer pictures from your camera, organize them, apply fixes or special effects, and share them in email. Picasa's hello service also lets you share pictures with others and chat about them in real-time, or post them to your blog. Picasa integrates with other Google services, including Gmail, Blogger, and Froogle.

*Keyhole.* Keyhole enables users to see and explore the world from their desktop. Keyhole users are able to fly 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 Web Directory.* Google Web Directory enables people to browse and search through web sites that have been organized into categories. Our directory combines Google's search technology with the categorization developed by the Open Directory Project and has content in 75 languages.

*Limited Availability Services.* Some of our product offerings are in their initial test phases and are currently available to limited audiences. Examples include Gmail, our free email service, and Orkut, an invitation-based online meeting place where people can socialize, make new acquaintances and find others who share their interests.

## ***Google AdWords***

Google AdWords is our global advertising program, which enables advertisers to present ads to people at the precise moment those people are looking for information related to what the advertiser has to offer. Advertisers use our automated tools, often with little or no assistance from us, to create text-based ads, bid on the keywords that will trigger the display of their ads and set daily spending budgets. AdWords features an automated, low-cost online signup process that enables advertisers to implement ad campaigns that can become live in 15 minutes or less. The total sign-up cost for becoming an AdWords advertiser is only \$5.00.

Ads are ranked for display in AdWords based on a combination of the maximum cost per click (CPC) 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 for the person looking for information and for the advertiser who is generating relevant ads. AdWords has many features that make it easy to set up and manage ad campaigns for maximum efficiency and effectiveness:

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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. The campaign management tools built into AdWords enable advertisers to quickly shift their budgets to ads that deliver the best results.

Keyword targeting. Businesses can deliver targeted ads based on specific search terms (keywords) entered by users or found in the content on a web page. We also offer tools that generate synonyms and useful phrases to use as keywords or ad text. Refining keywords and ad text can improve ad click-through rates and the likelihood of a user becoming a customer of the advertiser.

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Traffic estimator. This tool estimates the number of searches and potential costs related to advertising on a particular keyword or set of keywords. These estimates can help advertisers optimize their campaigns.

Budgeted delivery. Advertisers can set daily budgets for their campaigns and control the timing for delivery of their ads.

Performance reports. We provide continuous, timely reporting of the effectiveness of each ad campaign.

Multiple payment options. We accept credit and debit cards and, for selected advertisers, we offer several options for credit terms and monthly invoicing. We accept payments in 48 currencies.

AdWords Discounter. This feature gives advertisers the freedom to increase their maximum CPCs because it automatically adjusts pricing so that they never pay more than one cent over the next highest bid. The AdWords discounter is described in detail below under the heading Technology Advertising Technology Google AdWords Action System.

Conversion tracking. Conversion tracking is a free tool that is integrated into AdWords reports and 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.

For larger advertisers, we offer additional services that help to maximize returns on their Internet marketing investments and improve their ability to run large, dynamic campaigns. These include:

Creative maximization. Our AdWords specialists help advertisers select relevant keywords and create more effective ads. This can improve advertisers' ability to target customers and to increase the click-through rates and conversion rates for their ads.

Vertical market experts. Specialists with experience in particular industries offer guidance on how to most effectively target potential customers.

Bulk posting. We assist businesses in launching and managing large ad campaigns with hundreds or even thousands of targeted keywords.

Dedicated client service representatives. These staff members continuously look for ways to better structure their clients' campaigns and to address the challenges large advertisers face.

AdWords API. 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.

## ***Google AdSense***

Our Google AdSense program enables the web sites in our Google Network to serve targeted ads from our AdWords advertisers. Targeting can be based on search results or on web content. We share most of the revenue generated from ads shown by a member of the Google Network with

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that member. Most of the web sites that make up the Google Network sign up with us online, under agreements with no required term. We also engage in direct selling efforts to convince web sites with significant traffic to join the Google Network, under agreements that vary in duration. For our network members, we offer:

*Google AdSense for search.* For Internet companies who want to target search audiences, we offer Google AdSense for search. Web sites use AdSense for search to generate additional revenue by serving relevant AdWords ads targeted to search results. 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 WebSearch to improve the usefulness of their web sites for their users while increasing their revenue. We offer online signup for a hosted version of AdSense for search. We offer a more customizable premium offering to websites with significant traffic.

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*Google AdSense for content.* Google AdSense for content enables web sites to generate revenue from advertising by serving relevant AdWords ads targeted to web content. Our automated technology analyzes the meaning of web content and serves relevant advertising, usually in a fraction of a second. There is no charge for web sites to participate in our AdSense for content program. Using our automated sign-up process, web sites can quickly display AdWords ads on their sites. We share the majority of the revenues generated from click-throughs on these ads with the Google Network members that display the ads. For advertisers, this enables them to extend their reach to other websites; for publishers, it gives them access to a large base of advertisers specifically targeted for their content; and for users, it offers ads related to the content of the page. For web sites with more than 20 million page views per month, we provide customization services. 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.

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. This ensures that advertising space is always being used as effectively as possible.

Image ads. Web sites can show graphical ads precisely targeted to the content of a web page. Running a combination of image and text ads expands the available ad inventory for a web site, and offers the potential for increased revenue.

## ***Google Search Appliance***

We provide our search technology for use within enterprises through the Google Search Appliance. The search appliance is a complete software and hardware solution that companies can easily implement to extend Google's search performance to their internal or external information. It leverages our search technology to identify the most relevant pages on intranet and public web sites, making it easy for people to find the information they need. The search appliance offers several useful features, including automated spell-checking, cached pages, dynamic snippets, indented results and automatic conversion of Microsoft Office and PDF files to HTML. 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. List prices for our search appliance models start at \$32,000 for the GB-1001, \$230,000 for the GB-5005 and \$525,000 for the GB-8008. The Google Mini is targeted at small and medium sized businesses to provide search on public web sites and intranets. It is sold online through the Google Store for \$4995.

## **Technology**

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 employ technology whenever possible to increase the efficiency of our business and to improve the experience we offer our users.

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We provide our web search and targeted advertising technology using a large network of commodity computers running custom software developed in-house. Some elements of our technology include:

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### ***Web Search Technology***

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. We do not explain how we do ranking in great detail because some people try to manipulate our search results for their own gain, rather than in an attempt to provide high-quality information to users.

*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. Most of our current ranking technology is protected as trade-secret. 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 PageRank 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.

### ***Advertising Technology***

Our advertising program serves 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.* We use the Google AdWords auction system to enable advertisers to 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 CPC) and interest from users in the ad as measured by the click-through rate and other factors. If an ad does not attract user clicks, it moves to a less prominent position on the page, even if the advertiser offers to pay a high amount. This prevents advertisers with irrelevant ads from squatting in top positions to gain exposure. Conversely, more relevant, well-targeted ads that are clicked on frequently move up in ranking, with no need for advertisers to increase their bids. Because we are paid only when users click on ads, the AdWords ranking system aligns our interests equally 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 our 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 \$0.05 per click (or the equivalent in countries outside the U.S.). The AdWords discounter saves money for advertisers by minimizing the price

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they pay per click, while relieving them of the need to constantly monitor and adjust their CPCs. Advertisers can experience greater discounts through the application of our smart pricing technology introduced in April 2004.



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This technology 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, font size 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.

### ***Large-Scale Systems Technology***

Our business relies on our 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 key benefits. It 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 allows us to pursue innovation more cost effectively.

We constantly evaluate new hardware alternatives and software techniques to help further reduce our computational costs. This allows us to improve our existing products and services and to more easily develop, deploy and operate new global products and services.

### **Sales and Support**

We have put significant effort into developing our sales and support infrastructure. We maintain 25 sales offices in 14 countries, and we deploy specialized sales teams across 13 vertical markets. We bring businesses into our advertising network through both online and direct sales channels. In all cases, we 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 sizeable 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 global support organization concentrates on helping our advertisers and Google Network members get the most out of their relationships 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, which can work very well for products that inspire a high level of user loyalty because users

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are likely to share their positive experiences with their friends and families. 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 do not promote products before they are successful for our users, preferring to test them until they achieve broad acceptance. 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. In addition, we sponsor industry conferences and have promoted the distribution of the Google Toolbar to Internet users in order to make our search services easier to access.

## **Competition**

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 and Yahoo.

We also face competition from other web search providers, including companies that are not yet known to us. We compete with Internet advertising companies, particularly in the areas of pay-for-performance and keyword-targeted Internet advertising. 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. In addition to Internet companies, we face competition from companies that offer traditional media advertising opportunities.

We compete to attract and retain relationships with users, advertisers and web sites. The bases on which we compete differ among the groups.

**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 program. We also compete based on the quality of customer service, features and ease of use of AdWords.

**Web sites.** We compete to attract and retain web sites as members of our Google Network based on the size and quality of our advertiser base, our ability to help our Google Network members generate revenues from advertising on their web sites and the terms of agreements with our Google Network members.

We believe that we compete favorably on the factors described above. However, our industry is evolving rapidly and is becoming increasingly competitive. Larger, more established companies than us are increasingly focusing on search businesses that directly compete with us.

## **Intellectual Property**

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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, AdSense, AdWords, I m Feeling Lucky, PageRank and Keyhole are registered trademarks in the U.S. Our unregistered trademarks include Blogger, Orkut.com, Froogle, Gmail and Picasa.

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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 is 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 that affect companies conducting business on the Internet. In addition, because of the increasing popularity of the Internet and the growth of online services, laws 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.

In the U.S., laws relating to the liability of providers of online services for activities of their users are currently being tested by a number of claims, which include actions for defamation, libel, invasion of privacy and other data protection claims, tort, unlawful activity, copyright or trademark infringement, or other theories based on the nature and content of the materials searched and the ads posted or the content generated by users. Likewise, other federal laws could have an impact on our business. For example, the Digital Millennium Copyright Act has provisions that limit, but do not eliminate, our liability for listing or linking to third-party web sites that include materials that infringe copyrights or other rights, so long as we comply with the statutory requirements of this act. The Children's 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 minors. In addition, the Protection of Children from Sexual Predators Act of 1998 requires online service providers to report evidence of violations of federal child pornography laws under certain circumstances.

In addition, the application of existing laws regulating or requiring licenses for certain businesses of our advertisers, including, for example, 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. For example, some French courts have interpreted French trademark laws in ways that would, if upheld, limit the ability of competitors to advertise on generic keywords.

We also face risks from legislation that could be passed in the future. For example, there is a risk that state legislatures will attempt to regulate the automated scanning of email messages in ways that interfere with our Gmail free advertising-supported web mail service. Any such legislation could make it more difficult for us to operate or could prohibit the aspects of our Gmail service that uses computers to match advertisements to the content of a user's email message when email messages are viewed using the service. Also, depending on how the legislation is written, it could inhibit our ability to engage in rigorous spam filtering and provide other content-based services to our users, such as providing related news links. This could prevent us from implementing certain services in any affected states.



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We are also subject to international laws associated with data protection in Europe and elsewhere and the interpretation and application of data protection laws is still uncertain and in flux. In addition, because our services are accessible worldwide, foreign jurisdictions may claim that we are required to comply with their laws.

## **Culture and Employees**

We take great pride in our company culture and embrace it as one of our fundamental strengths. We remain steadfast in our commitment to constantly improve the technology we offer to our users and advertisers and to web sites in the Google Network. We have assembled what we believe is a highly talented group of employees. 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 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.

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, and we have developed software to help us in this effort. 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 will focus on very significant rewards for individuals and teams that build amazing things that provide significant value to us and our users.

At December 31, 2004, we had 3,021 employees, consisting of 1,003 in research and development, 1,463 in sales and marketing and 555 in general and administrative. All of Google's employees, except temporary employees and contractors, are also equityholders, with significant collective employee ownership. As a result, many employees are highly motivated to make the company more successful.

## **Executive Officers of the Registrant**

The names of our executive officers and their ages, titles, and biographies as of March 28, 2005 are set forth below:

### **Executive Officers:**

<b>Name</b>	<b>Age</b>
_____	_____&nbsp;