Testimony of Eric Schmidt, Executive Chairman, Google Inc.
Before the Senate Committee on the Judiciary
Subcommittee on Antitrust, Competition Policy, and Consumer Rights

September 21, 2011

Chairman Kohl, Ranking Member Lee, and members of the Subcommittee.

Thank you for inviting me to testify before you today. I'm Eric Schmidt and I currently serve as the Executive Chairman of Google Inc. I am responsible for the external matters of Google including building partnerships and broader business relationships, government outreach, and technology thought leadership. I also advise Google's Chief Executive Officer, Larry Page, and senior Google leadership on business and policy issues.

From 2001 until earlier this year, I served as Google's Chief Executive Officer, overseeing the company's technical and business strategy alongside Google's founders Sergey Brin and Larry Page. Prior to joining Google, I was the Chairman of the Board and Chief Executive Officer of Novell and before then the Chief Technology Officer at Sun Microsystems.

As a technology veteran of some 30 years, I look forward to talking to you today about the dynamic environment in which Google competes and the new and innovative choices that we are bringing to consumers to help improve their access to information and ultimately help them live better lives.

At Google, we've always focused on putting consumers – our users – first. For example, we aim to provide relevant answers as quickly as possible, and our product innovation and engineering talent deliver results that we believe users like, in a world where the competition is only one click away.

We believe that this focus on serving consumers has not just helped Google succeed but has also led us to create products and services that help other businesses thrive. Just in 2010 Google Search and our advertising products helped generate $64 billion in economic activity for hundreds of thousands of small businesses throughout the United States. We are proud of the work that we do with small businesses and of the fact that we help them connect with customers and partners around the world in a way not possible just a decade ago.

I'll add that, according to independent research commissioned by Google, 63 percent of America's small businesses do not have a website or online presence. So there's still a lot that Google and others can do to help small businesses get on the web and thereby connect with the world. That's why we've started an initiative to help small businesses get online. We've partnered with Intuit and dozens of local organizations to offer local businesses free websites and tips on how to grow their

online presence. To date, we have helped thousands of businesses begin the process of building an online presence at events around the country, and we'll continue to do so in the months to come.

In my written testimony I would like to focus on three key issues relating to Google and how we compete in the digital world:

- First, I'll describe the tremendously competitive and dynamic space in which we operate.

- Second, I'll describe the business principles that guide us and that we know will stand up to scrutiny.

- Finally, I will touch on the Federal Trade Commission's investigation and our view that such a process should be focused and fair.

Before I discuss these key issues, though, I'll provide you with a brief history of Google and search.

A Brief History of Google and Search

As hard as it may be to believe, Google is only 13 years old. When I started with Google in 2001, I was employee number 223. Today, Google employs thousands of people in the United States, in California, New York, Texas, Wisconsin, and points in between.

In 1998, the year Google was incorporated, Yahoo!, which had hundreds of millions of users, was declared the winner of the "search engine wars" – it got twice as many visitors as its nearest competitor and had "eviscerated the competition."

Nevertheless, Google's founders, Stanford graduate students Larry Page and Sergey Brin, believed they could build a better mousetrap, and they set out to do so in their dorm room. Over time, they overcame naysayers who thought Yahoo! had permanently won the competition for the best search engine.

Google's entry into search was based on a major innovation: the PageRank system for using web links to tap into the "wisdom of the users" to identify the most relevant websites for any given query. This represented a major advance on Yahoo!, which was offering "categories," and other search engines, which typically only used the number of times a keyword appeared on a page to rank websites. Many sites at the time, including Yahoo!, allowed advertisers to pay to be included in search results without any indication to consumers that those results were paid. Google never engaged in this practice and instead focused on improving its search results to serve users, with the result that in 2004 Google passed Yahoo! in the number of active U.S. users.

Despite the major innovations in search since 1998, the underlying principles of how search works remain the same. A search engine's software "crawls" pages available on the Internet and catalogues them. When a consumer enters search terms, those terms are processed by the search engine's mathematical algorithms, which determine the probability that any given webpage will be responsive to the search. The user then receives results that are rank-ordered based on the search engine's judgment of the likelihood that each result matches what the user was seeking in entering the search terms. This process necessarily depends on multiple variables and constant refinement.

From the start, Google has constantly refined its search algorithm, which now considers over 200 factors in assessing site quality and relevance. When a user types a query into Google Search, Google's proprietary technology analyzes these signals to provide a determination as to what the user is looking for. Google uses this ever-improving technology to organize information, rank sites, and present results to users. Google's search results are ultimately a scientific *opinion* as to what information users will find most useful.

In keeping with our focus on quality and delivering the most relevant results for consumers, Google is constantly experimenting with new innovations in presenting information. Potential refinements to the algorithm go through a rigorous testing process, from conception to initial testing in Google's internal "sandbox" to focused testing to final approval. Consumer testing is key to the algorithm refining process, and Google uses both human reviewers and samples of real search traffic in order to measure whether a proposed algorithm change improves the user experience or not.

To give you a sense of the scale of the changes that Google considers, in 2010 we conducted 13,311 precision evaluations to see whether proposed algorithm changes improved the quality of its search results, 8,157 side-by-side experiments where it presented two sets of search results to a panel of human testers and had the evaluators rank which set of results was better, and 2,800 click evaluations to see how a small sample of real-life Google users responded to the change. Ultimately, the process resulted in 516 changes that were determined to be useful to users based on the data and, therefore, were made to Google's algorithm. Most of these changes are imperceptible to users and affect a very small percentage of websites, but each one of them is implemented only if we believe the change will benefit our users.

The Dynamic and Competitive Internet Space

One of the main drivers of Google's constant innovation is the fact that we face an extremely competitive landscape in which consumers have a multitude of options to access information. If we want consumers to keep coming back to Google, we have to give them the best possible experience. And that pushes us to keep putting consumers first.

Google faces competition from numerous sources including other general search engines (such as Microsoft's Bing, Yahoo!, and Blekko); specialized search sites, including travel sites (like Expedia and Travelocity), restaurant reviews (like Yelp), and shopping sites (like Amazon and eBay); social media sites (like Facebook); and mobile applications beyond count, just to name a few.

For example, let's say you're looking for a local restaurant. You might search on Google for "local restaurant," but increasingly people are going on to Facebook and Twitter to ask their friends for restaurant recommendations. Or, you might use the Yelp mobile application on your iPhone or Android phone to find restaurants near your location. More than ever before we're competing vigorously against each of these other ways for users to access information.

Consumers have a truly vast array of options – some search and some not – from which to access information. Well-known shopping sites like Amazon, Wal-Mart, and eBay are essentially search engines that focus on product search and provide customers with an opportunity to buy a good at the end of their search. In this category, they have been extremely successful. For example, eBay

handled more than 2 billion U.S. searches in the third quarter of 2010, and Amazon saw 847 million searches during the same period, while Google handled only 226 million product searches during that quarter. Among these three companies eBay had 65 percent of product searches for the period while Google had just seven percent.

The same holds true for popular travel search sites like Kayak, Priceline, and Expedia. Students looking for encyclopedia-like entries on different topics often go directly to sites like Wikipedia and About.com. Patients searching for medical information often go directly to sites such as WebMD and eHealth. For current events, news-seekers can visit the websites of major publications like *The New York Times*, *The Wall Street Journal*, or *The Washington Post*. And all of these websites have corresponding apps to make them even more readily accessible on mobile devices.

Among major search engines, Microsoft's Bing has continued to gain in popularity, perhaps because it comes pre-installed as the search default on over 70 percent of new computers sold. Microsoft's Bing is the exclusive search provider for Yahoo! and Facebook. Microsoft recently signed a deal for Bing to power English language search on the fast-rising Chinese search engine Baidu, which Baidu has acknowledged will help it become more competitive in markets outside of China. In addition to Internet Explorer, Microsoft has integrated Bing into its popular gaming console, the Xbox 360, which it is in talks with cable companies to convert into the set-top box of the future. Microsoft's Bing launched in June 2009 and has grown so rapidly that some commentators have speculated that it could overtake Google as early as 2012.

And there's the most popular website on the Internet, by an "enormous margin": Facebook. Facebook and similar sites have extensive search and information functions. Facebook Questions, for example, allows users to determine the best pizza restaurant in Washington, DC or the best movies of the 1970s. Consumers, particularly young ones, increasingly are turning to their online friends to find out what to wear, where to eat, and what to watch. And because of its exclusive search arrangement with Microsoft's Bing, Facebook and Bing can harness the power of search algorithms and a customer's social graph to answer a query. This is a tremendous competitive advantage.

Most importantly, all of these options for obtaining information can be accessed *without ever using Google*.

From an advertising perspective, Google's search advertising tools compete for ad dollars every day against other forms of advertising including TV, radio, newspapers, magazines, direct mail, and online banner ads. Our advertising system is based on an auction where advertisers bid what they're willing to pay, so advertisers set their own prices and can easily assess the return on their advertising investment. Advertisers know that they have other options and they can and do turn off their Google ad campaigns whenever they want.

Google's success despite strong competition is based on its persistent focus on satisfying consumers – getting them to the answers they want quickly and accurately. Keeping up requires constant investment and innovation, and if Google fails in this effort users can and will switch. The cost of going elsewhere is zero, and users can and do use other sources to find the information they want.

Our Business Principles

These are the principles that have guided us from the beginning:

Do what's best for the user

We make hundreds of changes to our algorithms every year to improve consumers' search experience. Not every website can come out at the top of the page, or even appear on the first page of our search results. That's why our search rankings and the format of our results are designed to give users the most useful answer.

Provide the most relevant answers as quickly as possible

Today, when a consumer types "weather in Madison" or "how many feet in a mile" into our search box, you get the answers directly – often before you hit "enter." Sometimes the most useful answer to a query is a link to website, but other times it might be a map, video, flight time, mathematical equation, quick fact, or shopping result.

All search engines – including Microsoft's Bing and Yahoo! – have been working to provide new forms of answers for users, beyond the traditional "ten blue links." In fact, according to an October 2010 study published by Comscore, Bing contained these "rich results" on their results pages 54 percent of the time, while Google only provided rich results 33 percent of the time.

Advertisements offer useful information, too, which is why we also work hard to ensure that our ads are relevant to consumers. Our ad systems ensure that the ads users see next to their search results aren't just from the highest bidder, but also reflect the relevance of that ad to the user's query.

Label advertisements clearly

Google was one of the first search engines to clearly distinguish advertisements from our organic search results, and when the FTC issued guidelines in 2002 to search engines about ad labeling, Google already met the recommended guidelines. As we experiment with new ad formats and new types of content (such as hotel and flight booking ads), we will continue to be transparent about what is an ad and what isn't.

Be transparent

We share more information about how our rankings work than any other search engine, through our Webmaster Central site, blog, diagnostic tools, support forum, and video instruction on YouTube. We recently introduced an option in our support center for webmasters to contact Google privately. Through our Webmaster Help channel on YouTube, we provide more than 400 videos to help websites understand our rankings and how to improve their sites.

We also give advertisers detailed information about the ad auction – including their ad quality score, our "bid simulator" to help them estimate their ad performance, and tips to improve their ad quality scores.

We've recently introduced even more transparency efforts, including announcing major changes to our algorithm, providing more notice when a website is demoted due to spam violations, and giving advertisers new information about ads that break our rules.

Loyalty, not lock-in

As much as we would like them to stay with Google, if consumers don't like the answer that Google Search provides, they can switch to another search engine with just one click. And we make it easy to leave our other services too. We have a team of engineers – nicknamed the "Data Liberation Front" – whose only goal is to help our users move their data in and out of Google products.

We want consumers to stay with us not because they're locked in, but because we're innovating and making our products better. For example, if a user wants to switch from Gmail to Yahoo! Mail or Microsoft's Hotmail, we make it easy for her to export contacts and messages easily and for free. If a user wants to leave Google+, our social networking service, we provide a tool called Google Takeout that lets users download all their posts, contacts, and photos. We do this for dozens of Google products – Maps, Voice, YouTube, Calendar, Finance, etc. – all listed on dataliberation.org. And we make sure the files that consumers take out are actually useful; they're in flexible formats a user can read or upload into a competing service.

Our "loyalty, not lock-in" approach is good for our users and also a smart long-term business strategy. Would you eat at a restaurant where they lock the doors behind you when you sit down to eat? Of course not. We think it's smarter to leave the door open all the time. That's how we get rapid, candid feedback on what's good and what's not. It spurs us to innovate faster and build better products. And that freedom makes for happier, more loyal customers.

Be open, not closed

When we think about the meaning of open, we think about open technology, which includes open source software (meaning we release and actively support code that helps grow the Internet) and open standards (meaning we adhere to and help develop accepted standards) that improve the entire Internet.

At Google we believe that open is better than closed. "Open" means developing an open marketplace like the Android Market and the Chrome Web Store, where any developer can submit her applications for the world to try. "Open" means extending our products through application programming interfaces – APIs – so developers can build on top of these unique tools, helping them create great applications that would be practically impossible to develop otherwise.

"Open" also means supporting features that have been approved by formal standards bodies, and, if none exist, working to create standards that improve the entire ecosystem. And "open" means releasing the source code to numerous projects that were developed by Google so that third parties can utilize these technologies to build their own products without having to reinvent the wheel, thereby speeding up the innovation cycle and providing consumers with even more choices.

Open sourcing software has real benefits in the marketplace, as competing browsers like Rockmelt and Flock have already been developed using the Chrome code base. Similarly, rather than having

to build their own operating systems, companies can and do use Android, as a full-fledged operating system, to power many different types of devices. In fact Android 's openness allows anyone to take it and develop it independently – Amazon reportedly is doing this with a tablet expected to go on sale this fall and others have too. Android's openness has helped make mobile computing competitive by allowing the introduction of lower-priced smartphones and pushing other companies to innovate and improve their products – all resulting in better phones for less.

The Federal Trade Commission's Investigation

In June of this year, Google received Civil Investigative Demands from the Federal Trade Commission regarding certain aspects of our business practices. While no company would request such a government investigation, we are confident that our business practices will stand up to scrutiny.

We are fully cooperating with the FTC's investigation, and we hope that it will be conducted in a focused and fair manner so that we can continue creating jobs and building products that delight our users.

We know that several companies have complaints with Google, which they may have raised with government regulators here and abroad. In our experience, most of these complaints come from websites that don't like where their sites rank on Google's search results page or argue that in providing better answers like maps, shopping, or local results, we are hurting individual sites.

When you hear these complaints, I'd urge you to keep two things in mind.

First, we built search for users, not websites, and no matter what we do, there will always be some websites unhappy with where they rank. Search is subjective, and there's no "correct" set of search results. Our scientific process is designed to provide the answers that consumers will find most useful.

Second, unlike technologies of the past, the great thing about the fundamental openness of the Internet is that, if consumers don't like what one website is providing them, they can switch to another website with just one click. Using Google is a choice (and a free one), and there are no barriers to consumers navigating to www.kayak.com, www.nextag.com, www.bing.com, www.yelp.com, www.expedia.com, or any other website.

I am not a lawyer, but I take comfort from the fact that every decided antitrust suit that has been brought against Google regarding our search results has been dismissed. As recently as last month, an Ohio state court dismissed a private antitrust suit brought against Google. I believe that this demonstrates that our business principles and, in particular, Google's focus on putting consumers first, are also the same values that are behind the antitrust laws.

That does not mean that we do everything perfectly. The fact that we made over 500 changes to the algorithm last year is an indication that we are constantly refining the way that we organize and display information. And, like any good business, we are always happy to hear criticisms and concerns from consumers so that we can continue to improve.

Conclusion

Chairman Kohl, Ranking Member Lee, and members of the Subcommittee, thank you for inviting me to testify today.

At Google we recognize that with success comes scrutiny. By investing smartly, hiring extremely talented engineers, and working very, very hard (and with some good luck), Google has been blessed with a great deal of success. But given the rapid pace of change in the technology industry, we take nothing for granted.

I look forward to answering questions you might have about our efforts, and Google looks forward to working with members of the Subcommittee and others to ensure vibrant and consumer-focused competition on the Internet.