

ASPEN SUMMIT 2007 CHAIRMAN'S DINNER ADDRESS

ERIC SCHMIDT

[This speech was given on August 21st during the final day of The Progress & Freedom Foundation's 2007 Aspen Summit.]

George A. (Jay) Keyworth, Chairman, The Progress & Freedom Foundation: Our dinner speaker is Eric Schmidt, Chairman and CEO of Google, and right off the bat, I found out something that I think makes him unique in this room. I doubt if there are any other of you who flew your own twin engine jet into Aspen with your own hands.

From the very beginning of the Internet, Eric was there in a leadership role, whether in strategic planning, understanding where it was going or in technology development, that is helping it get there. I first met Eric a number of years ago when he was CEO of Sun during the early days of Java and Sun's Internet software program where Eric played the key leadership role at a very critical time.

He then went on to become CTO of Novell which he piloted through some challenging times and superbly so. But for the last six years he has had one of if not the very best and most interesting job in the world as CEO of Google. It has been Eric's job to move Google from its start-up phase to a sustainable business that could grow rapidly while still preserving its unique corporate culture.

I might as well add here, by the way, that everything I didn't already know about Eric, I found out by Googling him. Now, in my welcoming comments yesterday, I noted that it's not only technology that drives innovation today but it's new business models, too. Google symbolizes that and I look to Google to help illuminate the path of opportunity that binds all of us here in this room tonight.

It is my pleasure to welcome Eric Schmidt.

Eric Schmidt, CEO & Chairman, Google Inc: Thank you very much, Jay. I have always wanted to come to this conference. I've always thought it was fascinating. So now I get a chance to come and what I fundamentally want to say -- and hopefully I'll be brief and we can get into questions and comments to see if you agree or disagree -- is that the Internet has created this remarkable set of free markets, open competition, competitive growth and we need to keep it free and open.

It's actually important, right? If it goes the other way, we've got a serious problem, because this thing is really phenomenal. So how did this happen? Well, there's a very long version and the shorter version, but the global growth of the Internet is essentially about open standards, about interoperability, and people working together to make stuff happen.

And that these platforms, whether it's Internet or mobile, are platforms of opportunity that are at a scale that we've never built before. They're at the level of roads and electricity and so forth, but it's happening quicker. It's happening more universally. It's happening faster and growing more quickly than we've ever seen.

So we're going to need a whole bunch of stuff. We're going to need to promote universal broadband access -- everybody here already agrees to that; keep the Internet open and I'll talk a little bit about that; making information available; and defend freedom of speech, all of which are fundamental to taking the Internet, which is not at the end but in fact, at the beginning of this remarkable phenomena, to the next level.

So, I actually read the PFF stated philosophy. Pretty interesting. Limited government, free markets, individual sovereignty. I agree. And the Internet agrees as well. Much of the Internet was built on these principles. You'll notice, those of you who have studied the way it was designed 30 years ago, free markets, free markets and open standards that lead to technical innovation, limited government, we all understand the role and government's always like to muck around and try this and try that. Hands off is usually the right answer, and empowering the individual.

And one of the things that people are struggling with is we've never had a tool that has empowered individuals at this scale in society. We've always had mass structures, the small numbers of people controlling or influencing or helping a large number of people. Now, we have this enormous number of individuals, not all of them are perfect and not all of them are right, who are now participating in this experiment. And by the way, my personal view is that one of the great triumphs of America is the American system. In fact, [it] not only created this for all the reasons we know but is perfectly adapted and capable of dealing with the challenges that it poses, not just this year but 10 years from now and 50 years from now and 100 years from now. Look at what we've survived as a country. We can survive you know, spam on e-mail on the Internet, too.

The statistics are phenomenal. 1.3 billion [Internet] users. There are on the order of two and a half billion mobile phone users. There are estimates that there's another billion or so people who will enter the mobile telephony world in the next three to four years many of whom this will be their primary data communications device. And these are people who have not participated in the global dialogue.

Will they see a more open network or will they see a more controlled and contained network? These are a billion people. This is a lot of people and they're important because they are suffering and we have an opportunity to influence that.

I went to our Ann Arbor Office and these are young employees, many out of college, and I said, "How many of you have a home phone number?" And I counted nine percent of the hands went up. And I thought, "God, I've gotten old". I won't ask this audience but the world has changed and it's a simple model. This is a simple example of how that's all changing.

The technology base case of all of this is not slowing down. Everyone here has heard about Moore's law? Not slowing down, doubling every 18 months, pretty exciting. There is a similar law which is even more frightening. It's called Kryder's law which says the rate of disc drives is improving at roughly double every year. So, you might have thought that you'd be spared having all of these copies of everything following you around all your life. In fact, it's the reverse. It's gotten to the point, we did a little estimate that in 2019, you'll be able to carry a device for the hard drive which will have 85 years of high quality video in it. So you would be dead before you watched everything you're carrying.

(Laughter)

Okay, I'm not quite sure what problem this solves but someone is going to build this product and I'm going to say, assuming I'm around in 2019, "I don't have that many years left, can you give me a summary?" Maybe this is like a search opportunity or something. I don't know, but you do the math, it's frightening.

So I think one of the errors that we make is we always assume that the rate of innovation that we've seen up until now is sort of capped. We don't accurately see that it's accelerating and it's accelerating for many reasons. It's accelerating because there are new voices. It's accelerating because the rate of science and innovation, which all of us care a lot about and we respect a lot, is accelerating. It's because people can communicate more quickly. So the power of information, the power of the Internet, I would argue, is not understood in its deepest form. There are many, many examples. An example which may or may not be popular has to do with the impact of YouTube on presidential elections. And it turns out YouTube, for better or worse, has changed American politics and the people are now capturing the words and actions of our proposed elected officials. Sometimes it's not a pretty sight or maybe it is, I don't know.

But my point is this is a different change in how we elect our leaders and it's important. So if you go back, limited government, which is another thing we talked about, has actually helped. A number of us were involved with "The Internet Tax Freedom Act." Remember? That was a fun set of meetings. No sales taxes, helped. Pushed it through, it was successful. So a lot of people have worked hard to create an environment for this kind of growth which benefits America. It affects our citizens, it effects our global trade, and so forth and so on.

You know, it may very well be that, to paraphrase, "The only thing certain is death and taxes", but you could at least sort of moderate them, right? That's Benjamin Franklin, I think. You can go and you can take charge of this. You can say, I want this thing to scale. I want an outcome that empowers the most number of people. I want them to get everything. I want them to get all the information they possibly can.

Now the platform opportunities are very, very interesting. I talked about the presidential debate, the Democratic one, there's a Republican one coming, which is exciting. They had 3,000 approved questions submitted via YouTube with 500 million video views the following day. Pretty interesting. People care about this stuff. Very interesting. I assume I'll see a similar success with the Republicans.

[There are] 70 million blogs, about 120,000 new blogs created every day worldwide. People have a lot to say. They may or may not have a lot of readers, but they have a lot to say, right? They have a lot to say and they're going to say it whether you like it or not. Welcome to freedom of speech. The economy, the structure of the Internet is also creating new businesses and I don't want to promote Google's economics here, which, of course, are quite good. In 2006, Google paid over \$3 billion to publishing partners most of which were small and medium businesses creating jobs, opportunities, careers, and so forth. We're very, very proud of that, and of course, we hope that that will grow very quickly.

So when you think about one of the things that's happening as a result of all the work that we've all done, and this amazing thing that we're all part of is you get an opportunity, for example, questioning the structure of the firm. If you go back to 100 years ago, the whole theory of the modern enterprise was that you would vertically integrate because you could have lower friction costs if you had everybody under one roof. That sort of created the modern industrial corporation.

We can debate whether that was the right decision or not, but we ended up with these large structures. It's a new model. You don't have to merge any more. You can merge without merging. You just connect all your services together and everything flows. All of a sudden you can have specialized vendors, specialized services of any kind; information, products, services, you name it and they can be anywhere in all the ways that you all know, and you can just stitch them, best of breed, together. It's a different model. It's a different level of competitiveness and clearly positive from the standpoint of economic competitiveness, US competitiveness, et cetera.

It has a lot of implications for how we govern things and how we build companies and so forth. So there is a sort of new business model and it's this new platform model. Marketing folks in the industry have called us Web 2.0 but it's essentially a new model where you run everything on the web and what you do is you have an Internet platform. You go first to the Internet, you use it to sell your products, your services and so forth and so on. And you get these amazing results.

All of a sudden you discover that you have radio listeners in Germany even though your signal is only in your local town. Well, because these people came from your local town and they loved the DJ. These stories go on and on and on. We shouldn't be surprised at that. We should be excited about them.

So I was trying to think about what sort of is a call to action for all of us and I think that there are sort of four or five which I should have wrote down. We need to defend freedom of speech as more speech comes on line. It is extremely easy for even well-meaning people to find themselves at odds with the principles of freedom of speech. Corporations have all sorts of rules on them. There are all sorts of complex implications from the way the laws are written and freedom of speech is a pretty important principle in the United States and I think it's something we could do well to export as strongly as we can everywhere else.

People are always well-meaning, you know, "I want to regulate this, I want to regulate that, I want to regulate this", but it has the property that it restricts speech in many cases and I know it's a fine line and I don't want to have an argument over a specific this or a specific that but the principle is important.

We have people here who understand the law much better than I do. Let's do this in the right way. Let's preserve the openness and the freedom of speech principles. You could use Internet censorship, for example, as a non-tariff trade barrier, which we all need to fight because governments, especially non-U.S. governments, have an incentive to some degree to control the populations -- to do all the things that are obvious if you're afraid of empowering your citizens.

There's all sorts of issues. What are standards of objectionable content, how the laws differ from

country to country. All that's got to get sorted out. This is a global phenomenon, but it has to happen now. The time is now for this.

Another thing to work on; universal broadband access. I think people are familiar with the statistics. We started off in the number one position in many surveys. We're now down to 15th or 16th. We have a large operation in Japan for example. I visited our offices and I said, "How is the speed of your Internet guys", and they said, "Oh, 50 megabits". I said, "You've got to be kidding", and they go, "Yeah, don't you have that"? I mean, a wealthy company in the United States, "Isn't there some way you could get that, Eric, isn't there some way the company can pay for it"?"

Now that I've found out, I guess I could start trenching and run fiber get a permit. This is a big deal. You've got an infinite number of hard drives. You've got all these CPUs, enormous wireless standards, right? We're still sitting here on these slower networks. And this is a case where government working with industry can really help. It's a scenario where US competitiveness is important.

We also care a lot about net neutrality and I think people here may or may not agree with me, but I would say to you whether you agree with me or not, you would agree with the following principle. No entity that controls the last mile whether it's a telco or a cable company -- or by the way, a local government, since they are doing this stuff, too -- should be able to control the content that flows over it. Again, it's another important architectural principle to create this dynamic that's so powerful.

Another example: government needs to act to make information more transparent. I was reading a book about a third world country -- a fact based book -- where the local reporters were dealing with corruption in local government. We take for granted that the standards of transparency that we have, the auditing and the reporting records, are standard everywhere. They're not. Imagine if it became standard worldwide. The people just wrote down where the money went, follow the money principle, and computers are good at finding that. And our contribution, of course, Google tries to help here, we did something called Sitemaps, which is an open standard. We and our competitors are all using it, and we have now five state governments which have signed up to get all of the information that they want publicly available, obviously, not the stuff that shouldn't be public, and make it completely available on the web. Right, re-engineer their web system so it's all out there so everybody can see it. Then you can judge if your government is corrupt, brilliant, needs new leadership or whatever. It's the American way, it's a good way.

So to sort of put this together, we are living in a remarkable time. We really are. There's every reason to have enormous hope that the bringing of this technology, these ideas and these principles, which some people, you know, view as American hegemony, which I simply view as getting it right. I guess that shows you my bias. Getting this stuff and getting the information out so that people can see it. Empowering people. One of the first and most important principles about the world is everybody else wants the same stuff we do. They want cars and houses and happy kids and good educational systems and peace and non-corrupt government and they want to be able to watch Oprah and, you know, all the other fun things that we do.

All right, they want it too. So one mission that we can state as a group is that our best export is our sense of hope, our sense of impact, the engineering and technological architectures that were invented

here and most importantly, the principles, the basic principles that so drive everything that we're all doing together.

I think I've talked enough. Thank you very much.

(Applause.)

Jay, did you want to do Q&A? How would you like to do this? You can do the questions. You can do that answers. I have a few questions for you, Jay. No, just kidding.

Mr. Keyworth: I'm sure there's lots of questions.

Mr. Schmidt: Yeah, questions or comments, you agree, disagree? It's always exciting.

James L. Gattuso, *Heritage Foundation*: James Gattuso, Heritage Foundation. Since you raised the question of net neutrality briefly, I thought I just jump into that. We don't discuss it very much in Washington at all so I'd like to discuss it here.

(Laughter)

A number of us have taken the position that to the extent there is or if there were any market abuses by the ISPs in the last mile, that that should be handled as an antitrust matter rather than a regulatory matter and given that I was encouraged earlier this year when Google's head of public policy, global policy, stated that this issue should be treated as an FTC or Attorney General question, and then went onto say I understand he went on to say that getting the FCC out of the picture would be a smart move.

So my question is, do you agree with that?

Mr. Schmidt: Again, without having the quote in front of me, I'd rather -- let me talk about the principle because I think we -- let's talk about the principle. If you have three or four choices, this is not going to be a problem. Competitive markets -- the power and pressure of end users, we're going to get lots of good outcomes. Our concern is that any time you have a situation where there's not a choice, you can end up with the wrong outcome. You can end up with, you know, the wrong structure. So my general message here is that let's be honest and say that the world is a better place when everybody has a choice. It's a better place when there's a choice, an alternative to Google because it keeps us honest. It makes us talk about our principles and do better and so forth and so on.

It's true at that level as well. With respect to the specifics in this, there's a very long answer to the complex debates that go on in Washington on net neutrality. A simple answer is that we, in fact, agree with our worthy opponents on this issue on many, many things. We, for example, agree that the role of ISPs and the role of data needs to have some legal protection to avoid some of the issues -- this issue of people reaching in and then creating liability frameworks and so forth and so on, a very complicated, a very painful issue. Otherwise the business will never grow.

We agree that such carriers, for example, should be able to offer value added services as they define them, like video services, as long as they avail it to everyone. So what we're concerned about is you get into a situation where you have a single vendor and a single choice and single content provider and that violates the principles of the Internet. And that's a simple summary of how we view it.

The specific mechanics -- whether it's regulatory or so forth -- the government and all of us will debate for a long time. More questions? Who has the mike? Yes.

Steven Balkam, *Family Online Safety Institute*: Steven Balkam with the Family Online Safety Institute.

Mr. Schmidt: Hi.

Mr. Balkam: So my 11 year old admitted to me the other day that she typed in the word s-e-x in Google and she was very upset about it and she was quite ashamed. What she didn't know that I had chosen in preferences the strict safe-search setting within that, so she only actually got Sex in the City and some sex education sites.

Mr. Schmidt: By the way, a good dad.

Mr. Balkam: Thank you.

Mr. Schmidt: I would encourage all of you to follow the leadership of this father.

Mr. Balkam: So my question is --

Mr. Schmidt: For sons and daughters, I might add.

Mr. Balkam: So defending free speech, absolutely with you, with that goes a responsibility for online safety. You guys have got one of the most powerful tools for doing that and yet, not very many people -- and I do my talks at the PTAs and all the rest of it -- very, very few people know about it. Can you say a little bit about your view on the responsibility as a company to protect kids online?

Mr. Schmidt: Well, in the first place, we have a legal responsibility and we have a moral responsibility. The two are important. The moral one is more important than the legal one. We're subject to all the obvious laws. And it makes us very upset when the information that's in Google is misused and there are such examples and we get very upset about it.

No system is foolproof. The SafeSearch product that you're referring to does allow parents to have some choices and everyone, I think, agrees that when we talk about free speech, we're talking about adults. Children have a different set of rights and they're important and for a whole bunch of reasons and I think parents will understand why. So we've made the SafeSearch product much stronger. It can be much stronger still.

The more we understand the structure of the net, the more we understand phrases and inferences and so

forth, we can do it better. Having said that, you'll never get a perfect solution because there's always the new person, the new evil person who tries to break these systems but we can get pretty close. Yes, sir. Take the mike so everybody can hear you.

Robert Mayer, *United States Telecom Association*: Robert Mayer, U.S. Telecom Association. You talked about the value of content and non-discrimination. Are the FCC principles on net neutrality sufficient for Google?

Mr. Schmidt: They're pretty good. The problem is that when -- and I want to speak for the telecom people because we spend a lot of time talking to these guys -- I say what we would like on a set of principles but from their perspective, they're governed by regulation and the words matter. So sometimes the principles don't get translated in exactly the right outcome. So they and again, in our debates, they're very concerned that the principle that I'm arguing would then be misused to cause some outcome that's not consistent with the principle and certainly not what they want.

So I'm trying to argue that when you judge what you do, right, since you're sitting in Washington, you're sitting in these meetings, understand that the goal is to make sure that people have choices. And the measurement criteria is not some intellectual argument. It's how many people have choices? How many people in your district have this choice or that choice? In this area in this city in this -- and is a real choice, is it a competitive choice?

We argued for example, and we've had a lot of fun with the 700 MHz auction with respect to -- and we offered a reserve bid if they agreed to a set of principles, which were fundamentally about open access because we think that that creates a better user thing and people respond very well to that.

Mr. Mayer: If the principles are not being violated, what is the issue --

Mr. Schmidt: Well, again, since the principles are not in front of me, and the regulations are not in front of me, I don't want to parse it. I want to explain my goal which is at the end of the day, if people have real choices, the market will sort it out. The problem is in many cases, they don't. More questions? Yes. I'm sorry, who has a mike? Yes, sir.

Jeffrey A. Eisenach, *Criterion Economics*: On that point, let's just be concrete, something like 97 percent of the American people have access to three or more cell phone carriers. Does --

Mr. Schmidt: May I interrupt you for a second? The question is: what is the quality? Do they have GPRS, Edge, what is the speed of the network?

Mr. Eisenach: My point is --

Mr. Schmidt: You want to look at it as a holistic, right, not as a --

Mr. Eisenach: Well, I thought you said three or four, but so, you tell me what percentage of the American people need to have access to three or more cell phone carriers, because you said three or four --

Mr. Schmidt: Yes.

Mr. Eisenach: -- before those cell phone carriers would have the right to exclude Google from their services.

Mr. Schmidt: If the answer is that 97 percent of them have high speed data wireless capability that is of similar quality, and there's competition in price the answer is, absolutely. And by the way --

Mr. Eisenach: Is that 97 percent of the benchmark or --

Mr. Schmidt: Let's not have the debate. The principle is it's their choice to exclude Google, and by the way, perhaps their competitor would choose to include Google and then the market would sort that out. In general, carriers do not do well by excluding choices of their customers but maybe you have a different particular model in mind.

Mr. Eisenach: No, I agree, but I think that's the counter-argument to the regulatory/legislative approach that Google has taken over the course of the past couple of years is precisely that.

Mr. Schmidt: Well, again --

Mr. Eisenach: That in fact, for a cell phone carrier today or for that matter a land line carrier to say to its customers, "Sorry, no Google" is silly.

Mr. Schmidt: Well, at the moment, none of them offer reasonable data wireless services so that's a separate issue. Again, we're not where we need to be with respect to wireless data network access, all right. And by the way, the US is behind. The 3G deployments are occurring quicker outside the United States. In the US people are catching up and by the way, these guys are spending the money, which is great. So I'm glad that they're spending all the money.

I want to make sure that those are open and interoperable networks.

Thomas J. Sugrue, T-Mobile USA, Inc.: Hello, I'm Tom Sugrue with T-Mobile USA. Google indicated that, in I think a letter that you sent to the Chairman Martin that you'd participate in the 700 megahertz auction if all four conditions were met; the FCC adopted two. But the other two, frankly, if Google won the spectrum, it's perfectly free to implement that particular set of business model. So is Google going to write the check for 4.6 billion and -- I'd like to know because we're trying to plan what to do.

(Laughter)

Mr. Schmidt: I know, I know.

(Applause)

So everybody knows, we're in the period where we can collude and after Octoberish, it's not -- a lawyer in the room will know the exact date, right? Can we get the exact date? I don't want to --

(Off the microphone speakers)

Mr. Schmidt: Oh, I see it will be delayed by a month. Yes, the experts know. So during this period, we can collude. Okay, you and I and our friends at Verizon and --

(Off the microphone speaker)

Mr. Schmidt: Verizon has no interest? Verizon has no interest in colluding. You're at my table. I'm sorry, I was joking. I apologize. It's after dinner. Take it off the record. I know we have cameras. Put your pads away. But when we looked at the FCC ruling, we felt that we got the spirit of what we were asking for. So without announcing a bid, I think it's highly likely that when we get to that point, we will see the regulatory framework and so forth is conducive to the bid that we said we would make. Now, it's important to know that the principles are different than the writing.

Again I've learned this, and that the actual rules matter. And those, of course, are in development. So I would say, "probably" would be a way to answer that and again, during this possible, what's the correct legal term? I can't use the word collusion, collaboration period, right, we are very, very clear that in the U.S. we want an open network for wireless devices. We think it's good for end users. It's clearly good for Google. It's also good for our competitors by the way and we think it moves forward and we're delighted to see what happens. Yes.

Laurence H. Tribe, Carl M. Loeb University Professor, Harvard Law School: Hi, Larry Tribe from Harvard. This is not a question on which collusion would be possible. And it's a question on which I'm sure we have fundamental agreement. I talked this morning about the fundamental importance of freedom of speech to the future of information and the Internet and the fundamental character of America and how important free speech is to the success of what everyone in this room is trying to accomplish.

But when you said that everyone in the world wants basically the same thing, a home, a decent life and so on, one of the things that worries and disturbs me given how global the progress of what you're trying to accomplish ultimately is, is a nagging question that many societies in the world, perhaps a majority, don't really share our vision of individual freedom, individual autonomy, the importance of free speech.

I have a view that even if you don't have a decent home and a decent life, you will, in the next world find your reward. In a world in which some of what we take for granted in terms of free speech and the sort of non-theological character of politics, maybe exceptional rather than universal. What, if anything, can be done with the engine of progress that you so inspiringly represent to win more of the world to our ideas of the good?

Mr. Schmidt: Let me make an analogy to tell you why -- again, you have written in this area much more provocatively than I can even articulate. One of my personal heroes is Ted Turner. And the

reason is that he foresaw the impact of the commercial satellite industry launched, helped create CNN and all of that and as a result we knew about Tiananmen Square. Okay, we knew about Kosovo. We knew about all the terrible things.

The fact of the matter is that every government, even the worst ones, you know, make your list, right, there's always a list of the worst ones, are responsive to some level of public pressure. So now this is 35 years ago, right, launch of first commercial satellites roughly 1970. Now, we have the Internet. The Internet is analogously important to the commercial satellite and the ability to see what was going on and do uplinks and so forth and so on that did not exist before the 1970s.

That power is very difficult to stop because even if you shut it at the borders, and even if you make it criminal to possess and so forth, people will get the information out because the technology is inherently empowering. So whether we like it or not, that's going to happen. And governments that are stupid, right, will just try to prevent that and they'll fail.

The really smart ones, will say, "This is going to happen, but then how do we control it or prevent it in some way because we're not in favor of empowerment in individuals. I accept that as a technologist culture is more important than technology because culture drives everything in society and we all understand that. And I disagree a little bit with your premise about people maybe they don't want the rewards now, they want them in the afterlife. I think people would like them both places.

But we can debate that, but the important point is, the technology is going to be there. People are going to use this. They're going to take video cameras, they're going to record what they see. I believe that it's important that we get a chance to see that. I believe that it be available to the world to see and then we can decide what to do about it, right? That if there is, for example, a terrible war or a terrible injustice, we saw this recently in the Sudan, and Google was one of the companies that was involved with satellite imagery to try to get people to understand how serious this terrible, terrible genocide was. These things happen all the time.

Why don't we figure out a way to stop them using technology? And I think that's a pretty good outcome and then let the cultures adapt with good leadership and smart governments, even if the cultures are different and they'll work it out. And maybe they won't call it free speech and open elections and so forth, but it is a check and balance on the role of government even in those cases.

Mr. Keyworth: Transparency is viral.

Mr. Schmidt: Thank you, transparency is viral. Jay, of course, is very good at this. Transparency is really fundamental. If you go back to the notion of small towns, you never had any privacy in a small town because everybody knew what everybody else was doing. That served as a check and balance on the bad behavior within the town. Okay, now we have an opportunity to see what's going on in the town across the ocean. All right?

And it does serve as a mediating effect on the bad aspects of human behavior and it gives us a chance to reward the good in my view. Some more questions. Do we have a mike over there?

Participant: Mr. Schmidt, while Google offers an amazing variety of really cool services which I enjoy using, the vast majority of your revenues are advertising revenues. We're in a period where advertising money is migrating from old media to online. What changes do you see in the online advertising market between now and the end of the decade and what is Google doing to capitalize on those changes?

Mr. Schmidt: Well, Google can also be understood as an advertising company as you point out, the vast majority of our revenue comes from advertising. We have been able to participate in the transition from untargeted to targeted advertising. There are lots and lots of examples of this.

When you watch television, it shows you ads for products that you'll never purchase, right, you know, baby food for a house that doesn't have any babies in it, that sort of stuff and that's essentially a wasted advertising spot. We started in text ads, which has been very successful for us and we've branched out into display ads and some other areas.

We're now experimenting with some significant success in radio, television and print. And in each case, what we've tried to do is use our technology to provide a more targeted ad. So we take the view that advertising is good if it's targeted and it's bad if it's a waste of your time and the advertiser's money because there's no reason to waste your time watching the ad. There's also no reason to waste the advertiser's money, whether it's television or newspapers or so forth.

And we're running a series of experiments. For example, with newspapers, we federate their ad network and we actually can take all the print ads that they do, put them in an ad and basically get them all and basically provide additional reach for their sales people. That's an example of using our ad technology which looks very promising.

So a simple way of saying it is that Google and I think our competitors as well, in this targeted ad space, will all with varying degrees of success, try to take the traditional models of advertising and make them work in this new model and that should provide, if it works, even higher revenue for those media, because a more targeted ad is more valuable than an untargeted ad.

So put it another way, if all of the television advertising were targeted, the revenue from the advertisers would be higher because the ads would be worth more. And of course, technologically, that's extremely difficult for many, many reasons, but you get the idea. So the spread of targeting is the key strategy for the next -- and by the way, all of this works worldwide. All the same principles work everywhere.

And I should, just to toot the mobile phone for a bit, everybody here has a mobile phone. You carry it for safety, for information, for entertainment what have you. Your mobile phone has a GPS in it. There are more mobile phones that are cameras than digital cameras sold right now. So by definition, every computer is a phone, is a camera, is a GPS. That is a hugely targetable advertising product. So you can imagine, I'm driving along and my mobile phone and it says, "Eric, you know, you're at this intersection and there's pizza on the right, but you had pizza yesterday, so you're having a hamburger tomorrow." At which point I will turn off the phone, right?

(Laughter)

But that ad is worth a lot of money. Sorry, my favorite example. More questions or comments. Yes.

Participant: I just wanted to briefly ask you to talk about Google's vision of what might have happened, just hypothetically, if the FCC would have taken you up on your offer with respect to Carterfone and what an open platform would be like in the cellular industry in your view.

Mr. Schmidt: Well, I think that the regulatory ruling that is in the process of having will basically -- as long as it's possible to walk up to the equivalent of a wireless network with a device that you paid full price for that is properly registered and doesn't do bad behaviors and so forth and connect to it and pay for your usage of the network, that's a pretty good outcome. We think that that will then create a competitive environment where operators and other people will say, "Well, we'll give you a free phone and we'll subsidize it with subscription or advertising or whatever." It's important that the choice be possible. That's the principle and we think we're essentially there.

And again, it is the Carterfone principle as you pointed out, the ability to do -- any device can connect into this. These networks are incredibly important. The telecommunications industry is doing an incredibly important thing -- they're building the infrastructure that we all depend on. It's important that it be done right. It's a national issue.

Brandon Watson, Founder & CEO, IMSafer: Brandon Watson, I'm with IMSafer. Given the reach that Google has now had especially with the addition of Double Click, and the inventory and the ad reach that you have, since your algorithms decide who sees what ad and where those ads ultimately lead, it's not purely based on who is willing to pay more, is there some risk that at some point in the future Google might fall under the same scrutiny of the last mile problem considering you're the gating factor of getting to businesses?

Mr. Schmidt: Well, there are a couple of things. First, we're acutely aware of our role with respect to that targeting and the company, I think, has been largely successful because of a set of principles. Here's an example of a principle. As we've grown, people have been concerned about our size and they've compared us to others and so forth who misbehaved. And what we've said is we're very focused on end users so you can govern our behavior by looking at whether our end users are happy or not.

And end users are a pretty strong-willed bunch in the world. It's us, right, all of us. And anything we do that would restrict choice for an end user, that would somehow prevent them seeing the best of breed, would not be in our interest no matter what we did. And advertisers follow where the end users are. We've also said, for example, that we won't trap user data. Right, so if you become -- if you are a Google user, you become dissatisfied with us, we will make it very easy for you to move to our competitors as opposed to preventing you from doing it, which is what others have done in other parts of technology.

So the principle of you can move, you can get rid of us, you have a choice, we try to run our own business that way. It's highly unlikely that any advertising network will become the kind of -- get to the criticality point that you describe and the reason is that advertising is not the same thing as the zero

sum networks. If you have a strong advertising product and you have a competitor, it's also good.

Advertisers use both. It's not a one, either or both. They actually do both. And that's one of the reasons why our industry is likely to remain very, very competitively. You're not going to get these 80 or 90 percent markets for solutions for that reason.

Mr. Keyworth: Two more.

Mr. Schmidt: Tom from Verizon can now rebut my --

Thomas J. Tauke, *Verizon Communications*: No, I'm not going to rebut. I'll just comment. I think that the principles you outline are principles we can probably all agree with. It's the details that are always the challenge. The -- you haven't talked about intellectual property. And as technology has evolved, we are making available to consumers in a wonderful way so much information and so much intellectual property in a way they could never consume it before.

The ease of that access to that information of course, is thrown into turmoil, the framework for our policies governing intellectual property. As you look to the future, what is your view about what the intellectual policy -- intellectual property policy should be in the country?

Mr. Schmidt: In the first place, everybody here is familiar with all the music stories and the video issues and so forth and so on and that's a good example to start with. Copyrighting something is very important. Copyright is an important legal right. It's an ownership right. There are many, many industries that Google depends on crucially whose economics depend on copyright.

So let me state the problem as follows. We are all in agreement that copyrights are important and an end user who is either unfamiliar with the law or chooses to ignore it, violates the rule. What should we do, okay? This is happening. Right, it is happening today. One thing is that we can sue them. We can take each and every one of them and put them in jail, you know, along with everybody else or whatever.

It's expensive, probably doesn't work. They come back with kind of a bad attitude. The -- maybe there's another alternative. Maybe you can give them a choice that allows them to achieve their goal while paying a moderate and a modest fee for what they're doing. I'm on the Board of Apple, so I have a conflict of interest here. iTunes has done this. Apple managed to figure out a way to get legal and licensed content in a tool that works on a set of devices that work, and it's ended up with a pretty good outcome, right, from the standpoint of end users have a real choice. They don't have to steal the stuff.

So given that there's a new person in town and that new person in town, it's a new problem, the technologies are naturally enabling people to knowingly or unknowingly violate the copyright law. What are the set of things that we can do to make it easier for them to achieve what they want and also easier to detect those violations?

There are obvious solutions. The industry is working on watermarking. Watermarking is a way of basically keeping a registered copy of it. We -- to the degree that those things emerge, we will

absolutely support them. Google has a content management platform which allows owners of content to register their content and then we automatically detect and throw it out if it gets illegally uploaded.

So there's a set of technological tools that all of us can participate in but I think you have to do two things. You need a carrot and a stick. Right? Part of it is that you have to use the best technology that you can to detect violations of the law and the technology is at the current state and you do the best you can, and the second is that they're actually trying to do something. They're actually trying to consume something.

Find a way for them to consume it in a way that works for them. And I think if we do both right, we will end up in a very good place. And I don't think we need lots of new legislation to do that. I think this is a question of the industries, all of us, recognizing that we've got to do this, we've got to do it together, you know, et cetera.

Couple more. Yes.

Hance Haney, *Discovery Institute*: Hance Haney with Discovery Institute. I want to thank you for your remarks and ask just a hypothetical question. How would you feel if Google were unable to cut deals with broadband providers, for example, feature the Google search bar as the default search bar for all of the broadband providers to customers because if future Congress or future FCC were to apply common carrier type regulation which would prevent them from differentiating between content in any way?

Mr. Schmidt: There are an awful lot of hypotheticals in your question. I mean, if indeed, there were a common carrier structure, I would hope it would be defined pretty narrowly at the bit rate thing and that the common carrier would not prevent the common carriers from monetizing their service in any way that they chose. So the problem I have with your argument is you're saying that you're going to end up with common carriage which also then regulates the way in which they make their money which I think is a mistake, right?

You're much better off regulating if you have to regulate at a level of equal access, equal treatment, right, than saying, "Thou shalt price this way or thou shalt not do these deals". So if -- the answer to your question is, if we ended up in that set of hypotheticals, with such a regime then there would be other ways in which we would work with the operators and carriers to help monetize their services. There's a lot of money to be spread around here, right, because people are using these services and they can be monetized, but you have to be clever as to how you pay for things, because end users, they want the stuff quick, it has to be fast and they want it all and they want it all right now.

And all of these traditional systems that have all these barriers, you know, it takes forever to log in, you can't buy it, you don't have your credit card and so forth, they end up with five percent penetration. The goal here is to get 100 percent using your service and that's a hard problem.

Can we have Ed, Ed have the last question? He's been raising his hand for 15 questions.

Ed Black, *Computer & Communications Industry Association*: Thank you. Ed Black with CCIA. I

guess it's kind of a politics of Internet issues that I wanted to raise. In the long term, I think, the spread of the Internet, the tens of millions of people who are going to be seeing the importance of the Internet in their lives, will in essence create a new political force of, if you will, Internet consumers. But it's not self-aware yet. It's still a little bit in the future.

Mr. Schmidt: Is that sort of a matrix sense of self-awareness?

Mr. Black: Not that far, but in the short run basically you have a lot of -- and legitimate in many ways, but entrenched in interests and old business models, which really have been around and have a great deal of control over the political system. And I guess I'm trying to figure out what point in time you think the political power of the Internet consumer world is actually going to be sufficient to make sure that the political outcomes on critical Internet issues override some of the rather backward looking entrenched interests.

Mr. Schmidt: I think in many ways we're there. The statistics on use of broadband, although I was complaining about the quality of the broadband, the fact that people have any broadband is very, very high. Homes passed is well above 70 percent. Broadband usage on a home basis is in the 60 percent range and growing at a reasonable rate. Everybody here has access to broadband in either your home or your work or over a wireless data card.

Again, they could be faster but everybody here has access. All of us use the services that Amazon and eBay and Yahoo and so forth provide for shopping in one way or another. I think everybody I've talked to in the political sphere understands that nothing they can do can shut that stuff down. So it would be very hard to foresee the government passing a law that would stop any of the current activities, because it's just too penetrated. It would be too easy.

And by the way, all of the political leaders, Republican and Democrat, even the independents, are all attempting to use the Internet to get political gain. It's axiomatic that in the 1980s the Republican used a southern radio strategy to gain significant material wins in the South which caused the South to move over to Republicans which is a historic event in American politics.

We've not yet seen the analogous effect of Internet political activity but it's probable that it will happen in the next five-ish years, because you have too many people with voices, too many people with broadband and too many political leaders who are trying to use it to get elected. So the good news is, you know, when I used to go to Washington and spent a lot of time in Congress, I was always worried that they didn't actually understand what we did at all, right?

Now, I go and the leaders have Blackberries, they have cell phones, they used Google and our competitors. They're all familiar with it, so I think that we're in a good place there. It's now the subtleties, these complicated questions, common carrier issues and so it's very, very complex issues and the good news as I said, and I want to end with this because I know we really have run over and I appreciate Jay letting me go on, the message is overwhelmingly positive here, that this is just at the beginning of the empowerment and all of us, and I mean this literally, working together, the billions of dollars that have been spent to do both wireless and wireline data deployment networks, all right, the huge server farms that Google and our competitors are putting in, right, all of the new applications that

solve problems that you didn't even know you had, right, that you're going to discover are incredibly important, this is all happening now, right, and it's a very good story.

So with that, thank you very, very much.

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