GOOGLE'S ERIC SCHMIDT SEES BOUNDLESS HORIZONS FOR AN INTERNET-CONNECTED WORLD

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Excerpts from Mr. Schmidt's Speech

Two Crises in the West: The Western world is dealing with two fundamental crises. The first has to do with globalization. This interconnectedness that is happening naturally is not going to stop. The technology is going to continue; there's all sorts of reasons why we all want to be interconnected. The world is getting smaller, and in my view, a much more livable place.

But the other thing that's happening is that, because of business innovation and so forth, the Western world has a jobless problem. I'm convinced that there is an answer. That answer is the hard answer, unfortunately: investing in education, especially a science and math education; creating models for innovation in your country; getting rid of roadblocks to creating new businesses – because that's ultimately where the jobs are created.

Reach of Technology: Technology is at a point now where we're seeing the emergence of a number of global-scale platforms that are impressive in their reach and the ability for them to change the world…. The construction of these is probably the most important new sort of business story that we see today. The combined market value of these corporations is very, very high.

Optimism: We should be very optimistic about all of this; that the world is not perfect, but the world is going to be a much safer place, a much more informed place; that the value of the platforms, and I think American values – speaking as a proud citizen – the things that we can bring to the world really will change a lot of those [developing] countries and lift people out of poverty and information poverty.

Competition for Google: Today we have one very clear competitor, which is Microsoft. We used to have two, with Yahoo, but Yahoo largely outsourced this sort of stuff to Microsoft. So we see them as the, sort of, our core competitor. We have additional competition from different corners, so Facebook is a competitor in a bunch of properties, and also for attention.

On China: The Chinese government has a truly bad set of censorship laws. They are active censorship, and it's illegal to talk about them, certainly in China, and sort of dangerous to talk about them even here. But roughly speaking, if you criticize some of the senior political leaders, or you talk about certain religions and so forth, it's very much a crime, and all sorts of bad things can happen to you.

So after trying to work with that for about four and a half years, we decided that we just couldn't deal with it anymore. So we moved to the other China. You know, they always say, you know, one country, two systems. We like the other system better, which is Hong Kong.

Anti-Piracy Proposals: The problem is that industry has overreached. What they've said is, we're going to criminalize the linking and structure of the Internet itself. So if someone posts a copyrighted, a copied video, we're going to force the intermediaries – which include Google and many others, the ISPs and so forth – to take the link down. This is known as censorship of the Internet links.

If you do that, you're doing the same thing that all these other governments want to do. So I think there are two reasons that this is important. We want to develop the tools – we in our country – to follow the money, that the people who are making money from pirated content – it's illegal, and by the way, with the Internet, we can actually find them. And they can be prosecuted to the fullest extent of the law, and they should be. And we can track it in all sorts of ways.

But if this law passes, there will be a large number of American firms who will build very, very powerful filtering, content-deletion technology, which will then be very much used around the world. And I can assure you – I hope not in America, but all these other countries I visited, they're going to love hacking away at the structure of the Internet – all that free speech, all that stuff they don't like. And the Internet is going to get Balkanized.

Threats to Society: There are two major threats to society, in terms of loss of life. The first one is a nuclear war, which hopefully will never happen, and the second one is that the compound and accelerating effects of climate change, if that occurs, with water and so forth, at the scale that's possible – we don't really know.

DAVID RUBENSTEIN: Welcome to our luncheon here at The Ritz-Carleton Washington Hotel. Our distinguished speaker today is Eric Schmidt, executive chairman of Google and for 10 years its CEO, from August of 2001 until April of this year. During the time that he served as CEO, its growth was phenomenal. When he joined the company in 2001, it had $20 million in revenue, no cash and no earnings. When it went public, it had a market value of $23 billion. It went up as high as a market value of $230 billion, ten times higher than the IPO price, and today has a market value of about $202 billion and is the fifth-highest market value of any company in the United States. So this was a long way from the company that Eric joined in 2001.

Eric had previously served as CEO of Novell, which he had sold to Cambridge Technologies, and then joined Google in 2001. Eric is a native of this Washington area; he was actually born in GW Hospital in Washington. Eric grew up in this area and went to Yorktown High School in Arlington; was a star academic performer there; graduated in one year less of high school than normal; and also was a track star – won nine letters in track and field.

Graduated from Princeton in electrical engineering, and then went to the University of California at Berkeley, where he got a master's degree in computer science and a Ph.D. in computer science. From there he went to work at Xerox, where they had a famous Palo Alto research center, and he worked in their computer science lab.

From there he went to work in a few other technology companies, and then ultimately to Sun Microsystems, where he was their first software manager and rose up to be the chief technology officer; and then was recruited away to become the CEO of Novell.

Today, as executive chairman of Google, Eric is actively involved in a number of public issues that he'll talk about, and is, in many ways, the public face and the Washington face of Google. But he also has time for outside activities. He has served on the board of trustees of Princeton University and Carnegie Mellon, and today serves on the board of the Institute for Advanced Study.

Eric is also an adviser to the President of the United States. He was an adviser to the President's transition team. Now he serves as an adviser to the President's Commission on Science and Technology and is the chairman of the President's Commission on Innovation. Eric has a wide range of technology issues that he's expert on, and he's going to talk this morning about something that I think you'll find quite interesting, and then we'll go back and talk to him about some of the Google-related issues and some of the privacy issues that are now in the forefront.

So it's my pleasure to introduce a real technology leader in our country, Eric Schmidt. [Applause.]

ERIC SCHMIDT: Thank you so much. This is a wonderful group, and David has been a colleague and a friend for more than a decade. I have been looking at society and technology now, especially in my new role, and I think all of us would agree that society should organize itself so that people can go and search for their dreams – that they should be able to achieve what they really want.

And we have the emergence now of an interesting new phenomena. It's as though we have two rival systems. We have the systems that we know today – governments, politics, law – which in many ways are beginning to converge, around international law and the other things that all of you are experts in. But we have another society that's emerging, which is the society of cyberspace – which has in many ways its own unifying principles. All of you are familiar with them. And they're beginning to come into conflict, especially in some governments in some places, because they're empowering people in a way that they were never empowered before.

So you could think of this as a community of citizens, and then a society, if you will, of governments. I've become convinced that, as they work it out, a new equilibrium will emerge, which is in fact better for both; that the cyberspace world, the one that I've spent a lot of time in, will ultimately serve to keep governments – and especially the bad governments that we know of, that exist in other places in the world – more honest in many, many ways; and that also some of the bad things that have gone on in cyberspace will also be addressed by the way the physical world, by the governments and so forth, handle it.

To me, the way this will play out has a lot to do with how our political systems work. Since we're in Washington, I thought I would ask a relatively simple question, which is: How long is the future? Anyone have an opinion? [Laughter.] Now most of you would say your own life, or the life of your family or your children or your grandchildren or what have you. But if you're a political person, it's 2 years – [laughter] – or 4 years, or 6 years in some countries. And if you're a government official who does not have a budget – [chuckles] – it's a week. [Laughter.]

So when you think about the intersection of all of this, it's important to understand that the intersection of incentives – because ultimately human systems are flawed; they're not perfect – but they're often driven by the incentives that we construct for them. And now, with our world and with the Internet, we can actually measure these things and study these, and try to really understand how it plays out.

Now in the United States, the President in his speech last week talked about this. My assessment of what's going on in the Western world is, the Western world is dealing with two fundamental crises. The first issue has to do with globalization. And this interconnectedness

that is happening naturally is not going to stop. The technology is going to continue; there's all sorts of reasons why we all want to be interconnected. The world is getting smaller, and in my view, a much more livable place.

But the other thing that's happening is that, because of business innovation and so forth and so on, the Western world has a jobless problem. But when I look at it – and I've spent time talking around the world – I'm convinced that there is an answer. And that answer is the hard answer, unfortunately: investing in education, especially a science and math education; creating models for innovation in your country and so forth; getting rid of roadblocks to creating new businesses – because that's ultimately where the jobs are created.

And what's interesting is that, in my travels now – when I come back to the U.S., I read – I look at the paper and so forth – and it's as though many of the debates are fact-free. And one of the things that we could do now – [laughter] – I mean, am I saying something that's a surprise? I think it's true, right? And I'm a scientist. So I look on the Internet – and, you know, you can actually answer these questions.

So I was in Europe last week, and I was looking at the dollar, OK? This is a $20 bill. At the back, you'll see, it's the picture of the White House, and it says "In God We Trust." So I'd like you all to repeat after me – I have a new, new saying. So, in God we trust.

AUDIENCE MEMBERS: In God we trust.

MR. SCHMIDT: All others must bring data. [Laughter.] OK? That's all – that's my only request. [Applause.] OK.

Technology is at a point now where we're seeing the emergence of a number of global-scale platforms that are impressive in their reach and the ability for them to change the world. I'm going to pick four. Obviously one of them is Google; let's pick Apple. All right, I was on the board for a while; consumer platforms, best in the world in most cases these days. People love them, right? That's a platform; it's scalable. They do a very, very good job. Let's look at Facebook, a people platform – again, a global platform for people and how they work together. And all of these companies, by the way, compete with each other in various ways; Amazon, a product platform, and Google as an information platform.

The scalable, networked architectures that the technology is delivering are rolling through incumbencies of one kind or another, political systems, business systems, et cetera, et cetera. And there are a number of other companies that are vying to be on the list to replace companies in that regard. The construction of these is probably the most important new sort of business story that we see today. The combined market value of these corporations is very, very high.

And they're not done. They're just beginning. And they're just beginning because of the math of Moore's law. Moore's law says that computers get faster and double every two years. That means within 10 years, the computers will be 30 times faster – do the math – and the connectivity of these networks allows us to do amazing things. And Google and other companies are working hard on the future – an ability to predict things, for example.

So my view – if I can sort of net this out – is that we should be very optimistic about all of this; that the world is not perfect, but the world is going to be a much safer place, a much more informed place; that the value of the platforms, and I think American values – speaking as a proud citizen – the things that we can bring to the world really will change a lot of those countries and lift people out of poverty and information poverty. You think about it. We're in

this perverse situation where it's more important to have a mobile phone than to have running water in your home. That's how powerful the drug of information and connectivity and communication and globalization really is.

My own view is that over the next 5 or 10 years – computers and humans will be distinguishable. We're not merging, trust me. But humans will be very, very, very good at what we do – intuition, fun, innovation, entertainment – all the things that we know and love about ourselves. And computers will get extraordinarily good about the things that they're very good at, which are needle in a haystack problems and infinite memories. So when I travel and I go somewhere, I want my phone to remind me I was actually in this city, and I did actually have a good time. And here's where I stayed, and here's what I did. And all of this is possible on this device.

Now, when I say it's possible on this device, it's important to remember that this device is connected to a network that many, many people worked very hard to build – which is remarkable in and of itself, the wireless network and the wired network – and they are connected to supercomputers which are, in fact, answering my question. So I don't think of this as my mobile phone, I think of this as my personal supercomputer that can answer any question that I care about in life.

So thank you very much. [Applause.]

MR. RUBENSTEIN: Eric, thank you very much. I wanted to ask you these questions about some of the things you talked about. Before we lead up to that, I wanted to ask you a little bit about your background and how you got to help build Google. You were running Novell, minding your own business, and all of a sudden John Doerr, as I understand it, called you up and said, you should get to meet these guys who are starting a company or running a company called Google. And you said: I have no interest in that. Is that right, or –

MR. SCHMIDT: We were actually at a fundraising party at John Chambers' house. And John Doerr came up to me and said, there's this interesting company. And he's a very good salesman. And I immediately assumed that this was a terrible idea, right? [Laughter.] And he badgered at me, and said, look, you should at least talk to them. And on the theory that you should at least talk to people, and John has good taste in people, I figured I'd go visit them.

MR. RUBENSTEIN: And you visited them and they interviewed you?

MR. SCHMIDT: Well, it was very strange. It was in an old Sun building, which I had had an office in – which is bizarre in and of itself. You walk in and they have their own office, which they share, and they had all of this food – for me, I guess – and they had projected my biography on the white wall. And they proceeded to grill me on my views of a particular area of technology called proxy caches.

Now, I was a pretty big ego at the time. And I thought: This is strange, these guys are like 25, you know, sort of pretty strong-minded. And they were absolutely wrong, in my view. And I was absolutely right in my view. And so we had this huge argument for an hour and a half.

MR. RUBENSTEIN: And then they said good bye and –

MR. SCHMIDT: Yes.

MR. RUBENSTEIN: You didn't know how the interview went, and you heard from them –

MR. SCHMIDT: It wasn't an interview; it was an argument. [Laughter.] But the funny thing is, as I'm walking out the door, I had this sense that I would be back, that I had had too much fun being right and them being wrong. [Laughter.] And the postscript that's important to state is that their underlying argument was that the device that I was making at Novell would completely fail because the adoption rate of the Internet and improvements in fiber optic would make my product useless. They were completely right.

Which is very humbling to have 25-year-olds do that to you. It's also very important that the only reason we bought YouTube is that YouTube needed this device and we built them, proving that I was right, OK? [Laughter.]

MR. RUBENSTEIN: I said that they interviewed, or had arguments with, 10 other people before they got to you, so have you ever run into these people and they said they could have done the same thing you did, or –

MR. SCHMIDT: No, what's interesting is that they had an unusual way of interviewing people. You had to spend the weekend with them. They went skiing with people, this kind of thing. I declined. One day I was talking to John, and I said, I'm the luckiest guy in the world for having had this opportunity, and it's genuinely my view. And John said, no. You're not. I said, what do you mean? He said, you did one thing right. And I said, what? He said, you said yes. Two other people said no.

I want to pause here and say, there's something about saying yes in life. We tend to think we know everything, and I knew everything – and trust me, I really did know everything and they were wrong and I was right. I'm still sore on that. [Laughter.] But somehow, I said yes to a new opportunity and changed my life.

MR. RUBENSTEIN: Have you ever run into those people who said no?

MR. SCHMIDT: Yes. It's a pleasant conversation.

MR. RUBENSTEIN: Well, all right. [Laughter.]

MR. SCHMIDT: I'm very nice to them.

MR. RUBENSTEIN: OK. So when you showed up to work there after you sold your company, in the early days you have a tiny little office and then one day you show up in the office and somebody's in your office, and he just kind of takes over your office? How did that work?

MR. SCHMIDT: Well, early Google was bizarre. It was run like a graduate school, and everyone had an opinion, which is good for a startup I think. So I'd been assigned a little 8-by-12

office by myself, with a door. And I had my little computer and my little desk. And one morning I come in and a gentleman has moved in. I say hello. And he says hello.

His name is Amit Patel. And hi, what do you do? You know, I'm a programmer. So what are you doing here? I've – you know, I've been – I've moved in. I said, well, why'd you move in? He said, well, my office is very crowded. And I said, well, where is your office? He says, no, this is my office. My office was over there and they had five people, and you were never here. [Laughter.]

MR. RUBENSTEIN: You said –

MR. SCHMIDT: At this point I had a real problem. I did not want to create a cultural faux pas, which would be to do something. So what to do? So I asked my secretary, and she said, yeah, he just moved in. [Laughter.] She said, go talk to Wayne. So Wayne Rosing was the VP of engineering. And Wayne said, yeah, I absolutely told him he should move right in. I said, thanks, Wayne. [Laughter.]

So we sit there, and he has a little desk, and we literally sit closer than this, right? And he is a programmer, so he is doing his programming, which I'm not really that familiar with –

MR. RUBENSTEIN: And you're the CEO?

MR. SCHMIDT: Yeah, apparently. [Laughter.] So I sit there with my computer and, you know, the phone rings – we used the phone occasionally – and maybe a few weeks into this – and he puts his headphones on playing his music, which is fine. I am suspicious that he's listening, OK? So one day I'm on the phone with Omid, who's the original vice president of sales, and we're having this discussion about the quarter.

And this was a quarter where we were on track for, according to Omid, about $118 million of revenue. This was based on his survey and analysis and the commitments he was making from sales. And this is something that I had a lot of experience doing, getting these sales commitments. You know, you try to judge, you don't want to overcommit them, you know, kind of good judgment. And Omid says, excuse me, but I know the revenue number.

And I said, how do you know the revenue number? He said, I just solved it. I said, how did you solve it? Well, what I do is I build the ad system and I can calculate it. And this is the number: $142 million. So I decided that I would not tell Amid I knew this. So for the next month, right, as the number slowly came up, I was busy spending more money ahead, because I knew this fact. So I learned something about business that I did not know, which is that you should be able to predict your business down to, you know, a few dollars in terms of revenue outlook, just from statistical measurements and so forth.

At Google, one of the things that we did is we did this sort of analytical measurement down to the second. Now, I expect businesses and governments and so forth to have this kind of understanding, because you could do it. Amid and I became best friends.

MR. RUBENSTEIN: Now, is he the person who came up with the slogan: Do no evil?

MR. SCHMIDT: He's one of them.

MR. RUBENSTEIN: One of them.

MR. SCHMIDT: Yeah. One of them.

MR. RUBENSTEIN: What did that actually mean?

MR. SCHMIDT: Well, I assumed it was a joke. You know, Larry and Sergey like to play jokes. One day we had – we had one offsite – that was the first and last. Larry showed up and Sergey rollerbladed in. They listened and so forth. At the end they said, the most important question, Eric, is, we want to be a hundred billion dollar corporation. I said, does that mean revenue or valuation? And they said, doesn't matter. [Laughter.]

I said, oh, my God. You know, I give up. You know, I'll never be able to work with these guys. [Laughter.] I found out later that this is something that they did with everyone, that that was their standard.

MR. RUBENSTEIN: But in the early days when you –

MR. SCHMIDT: But just to finish on don't be evil – so I'm sitting there. So they would do these things. I figured it was just another joke. These are sort of normal. We're sitting there and there's an ad product being proposed. One of the engineers is named Ron. I'm sitting at the end of the table and they're all – and this is in the original building, and I still remember – and he pounds the table and says, That would be evil. And it's like a bomb goes off in the room. I decided just to watch what happened. So then the whole schedule gets thrown away; they spend an hour and a half having this very detailed argument as to whether this particular advertising change crosses a line, and they ultimately decided not to do it.

The real reason "Don't be evil" works is, it's a thing you can pull in the company. And it's a clever design, because it means employees feel like they can speak out against the CEO, against the executives. And we institutionalized that.

MR. RUBENSTEIN: When you joined the company, the conventional wisdom in Silicon Valley was that search was really an afterthought; it was thought that portals were the way to go. So what was it that actually Google did, that made its search engine so much better than everybody else's and just zoom past all the other search engines that were out there – of which there were many others in it before Google?

MR. SCHMIDT: In 1998 and 1999, Larry Page, with Sergey's help, invented what is known as Page rank. It was a different way of ranking. Up until then, the portals had used it based on the number of clicks and things like that. The core Google innovation, that's founded the company and brought us sort of to today, is that the analysis is not around how many times you get hit or so forth. It's more about who points to you. Mathematically, for those of you who are technical, it's an inverse Fourier transform over a billion-unit matrix. What you do is, you take all the links, and you do this FFT, and you sort of re-invert it, and then you figure out the link structure.

And it was invented, as I said, by Larry with help from Sergey. It's one of the most widely cited papers in the industry. And I would argue that, if you want to create a company of

Google's scale, you need that kind of innovation. You need some kind of new organization around information or access.

MR. RUBENSTEIN: So early on, they had what some people would call a graduate-school kind of atmosphere on the campus and so forth. And they said, as university professors can take time to do other things, any employee can spend 20% of their time doing whatever they want. Did that actually produce any ideas that were useful?

MR. SCHMIDT: Yes. In fact, it's another core part of the values, and it's still in place today. What we say today to the technical folks is, you can spend 20% of your time working on anything you want. Now before you all get too excited, these are engineers. They're not that exciting – [laughter] – you know. I mean, they tend to work in the area of their expertise.

And it does two things. First, a series of products – a lot of the map stuff, a lot of the sort of search innovations – has come from somebody tinkering or some new idea that they have. But there's another thing that it does in the culture of the company. Most American corporations – and it's even worse outside the U.S. – are very hierarchical. The ideas come from the top; the leadership comes from the top; so forth. It doesn't work well when you're managing creative people. I don't think it's a very good way to run a company at all. You're much better off letting the people sort of generate ideas, and then you cull through them.

So in the 20% case, what happens is that you get sort of a middle manager who's on an ego trip – well, you know, you've got to do this – and all of us have either done this or been part of it. You know, we're under huge pressure, and so forth. The employee can look at that manager, legally and squarely in the eye, and say, I will give you a hundred percent of my 80% time. I will do everything I can in my 80% time.

Now as I said, these people work very hard. We get a lot of productivity out of them. Plus we feed them breakfast, lunch, and dinner. They bring their pets. The only thing I had to do – there was a problem. I had to establish a rule that you could not live in the building – [laughter] – that you actually had to have a residence; it was against the law to reside…

MR. RUBENSTEIN: Because these people were coming to get their dry cleaning done…

MR. SCHMIDT: Yeah, we did everything except…

MR. RUBENSTEIN: – masseuse, everything.

MR. SCHMIDT: Yeah, but you had to have a bed somewhere else. [Laughter.]

MR. RUBENSTEIN: OK.

MR. SCHMIDT: Or stay in a hotel.

MR. RUBENSTEIN: What's it like to run a company where you have two founders here, and you have three of you who are kind of running the company. You were the CEO; they were the founders that owned a lot of the stock. How did you resolve things when you disagreed among yourselves?

MR. SCHMIDT: Well, generally, it's always better to have a partner, as long as they have the same goals. And even though we would argue violently sometimes over things, and people would sort of assume this was terrible, it was the way we worked it out. They're strong-willed; I'm strong-willed as well. But we all had the same incentive, which is to build a great corporation. And I think if you have that, and the people are at least at some level socially compatible – Larry and Sergey and I, although separated by age, had the same professors, similar cultural background, similar sort of personal views of life.

So we sort of segregated it around. I worked on building the organization, making the trains run on time, running the meetings, establishing the intellectual basis for how decisions got made. They ran ahead. So there was never a meeting that I was in involving products, where they had not already had the meeting and were bored by mine – [laughter] – right. There was never a situation where I was ever able to add value to what they were doing – [laughter] – because they literally were running ahead. And so my job was to sort of catch up and make sure the whole company was behind what they were doing.

MR. RUBENSTEIN: Now, people frequently Google themselves, I gather. Do you ever Google yourself and are you happy with what comes up? [Laughter] If it's not, can you change it, or can you –

MR. SCHMIDT: No. In fact, it's extraordinarily important to state that Google employees, especially the CEO, cannot change any results in any order. No, we do not change it. One of the crown principles of the company is that the answers that we give are independent of any other facts. So they're not influenced, for example, by advertising, which is another innovation at Google.

We get lots of criticisms about our ranking. But ultimately ranking involves making a decision, and these are the best decisions our ranking algorithm can make today. But of course, it's always changing.

MR. RUBENSTEIN: Now to get hired at Google, it was famous that you and/or Sergey and Larry had to interview the people or oversee the interviewing. Can you still physically do that? And what's the best way to get hired at Google? I heard it's harder to get hired at Google than to get into Harvard.

MR. SCHMIDT: It is statistically true. This actually was a Larry idea. The idea was to run hiring committees different from the way normal companies hire. Normally the way you hire people is, a manager knows somebody and they like them and they've worked with them before, they have good references, and you hire them.

We reject that argument. What we do is, we run hiring committees like a university does. We also hire the person independent of the job. So we'll bring in people, and we'll say, we're hiring you, but we won't tell you what you're going to work on until you show up. That's also helps us with our intellectual property protection. And people come.

The hiring committees were interesting. We had to study the question of, how many interviews did you have to have? We had this poor gentleman who we interviewed 16 times before we rejected him. You know, it was out of control. So I initially mandated the number

eight as the maximum number of interviews you would give people before you decide – because if you're interviewing people that many times – they're on the edge, in which case you're probably better off letting them work somewhere else, or there's some internal screw-up.

We've since modified that to the magic number five. What we do is, we correlate the outcome of hiring in our feedback post-hiring compared to our feedback before hiring. And five is predictive. So basically you can run it with a hiring committee in five interviews, and off you go.

MR. RUBENSTEIN: And when you went public, you used a complicated style that is called a Dutch auction.

MR. SCHMIDT: Yes.

MR. RUBENSTEIN: Why did you use that style and reject what was traditionally done on Wall Street? And was that the right decision?

MR. SCHMIDT: Google is in the business of doing what are called Dutch auctions, so-called second-price auctions. What happens is, as you advertise on Google, you publish the price that you're willing to offer to have this ad, and we in fact will give you the price of the person who is lower than you. So you're guaranteed a price equal to that price or lower. In auction theory, this produces the most efficient auction possible. We probably run more auctions in the world than any other organization, and probably we'll always be doing that.

So when we faced the question of going public, the question was, did we want to go through the traditional mechanism of underwriting, which was largely a negotiation? One of the board members said that the problem of interests, self-interest, between the bankers and the company is an unsolved problem. Well, of course, at Google, we are sufficiently arrogant; we decided we would try to solve this problem. And we were pilloried in the press for this, for many, many reasons.

What happened was, I got this letter from a little old lady, or an alleged little old lady, saying that she wanted to be able to purchase the stock, and she didn't want it to be limited to institutional investors. So we embarked on this process, which was ultimately a hybrid, where both retail and public investors could essentially bid on the price.

But for reasons that I don't think we've ever understood, the outcome that we got was pretty similar, in my view, to what we would have gotten had we done a traditional institutional thing. So I wouldn't say that our experience proved one thing or the other. It may have been a unique effect.

MR. RUBENSTEIN: Well, when you did go public, though, you created a fair amount of wealth in Silicon Valley and elsewhere. How did you deal with the fact that hundreds of your employees were now fabulously wealthy? Were they still working as hard? And how did it change the culture of your company?

MR. SCHMIDT: Well, you know, the people who join the company join the company to change the world, not to make a large amount of money. So for them it was sort of entertaining that all

the money showed up. Google as a phenomenon was so fast during this time that we simply had a decade's worth of experiences in a year.

So you have IPO, career path, make too much money – what am I going to do with my life, and so forth. And they're all 30 years old, right? It's all compressed. But it's the same movie, just run faster. And the same will now occur in the bubble that's going on right now with respect to the IPO in 2012. All these companies are now all going to go public, and they'll all go through a similar phenomenon because these are young people, and they also joined the companies for reasons other than what's going to happen to them.

MR. RUBENSTEIN: So, for example, Facebook is a company that some people say is going to go public next year. Is that one of your biggest competitors now, or is that your biggest competitor, would you say, for what you're trying to do?

MR. SCHMIDT: Well, today we have one very clear competitor, which is Microsoft. We used to have two, with Yahoo, but Yahoo largely outsourced this sort of stuff to Microsoft. So we see them as the, sort of, our core competitor. We have additional competition from different corners, so Facebook is a competitor in a bunch of properties, and also for attention.

We're more likely to face new competition – and there's lots coming – in these vertical applications that answer questions. We haven't talked about it very much yet, but people search differently on the mobile phones. In the next year, more searches will come off of mobile devices and more page views than on PCs and Macs. That's a huge, huge change. So that provides a new competitive front for us.

MR. RUBENSTEIN: But on the 20% time – did that produce ideas like Google Earth or Google News? And have you made money from any of the 20% kinds of things?

MR. SCHMIDT: Google News was 20% time. Google Earth was an acquisition. One of the things that we haven't talked very much about is that we did a lot of acquisitions of small companies for talent. And typically, Larry and Sergey would just buy them and tell me after they'd done it, which was always exciting.

These people would sort of show up – very nice people, always. [Laughter.] You know, so Android showed up. Google Earth showed up. And they set this sort of technical framework, which we would then plow resources into, you know, to scale.

MR. RUBENSTEIN: Recently you said you buy a company a week, and you don't disclose them. You said you didn't necessarily feel you had to disclose them. Why is that?

MR. SCHMIDT: I think, in general, we do disclose them. I think sometimes, maybe, we forget, or they're just too small. You know, the ideal acquisition is, you know, four technical people who can solve a very, very precise problem, who are brilliant and don't have a high valuation already.

MR. RUBENSTEIN: Now, a quarter of the searches done on the Internet are alleged to be pornographic. I'm sure that's –

MR. SCHMIDT: That's not true.

MR. RUBENSTEIN: That's not true?

MR. SCHMIDT: The number is significantly – I don't know the exact number, but –

MR. RUBENSTEIN: Lower or higher?

MR. SCHMIDT: Lower.

MR. RUBENSTEIN: Lower, OK.

MR. SCHMIDT: Thank goodness.

MR. RUBENSTEIN: So how did you deal with the issue of pornography, in terms of people doing searches through Google? How did you keep that –

MR. SCHMIDT: Since the beginning of the company, the company has had as its default something called Safe Search Moderate. And so you're unlikely to encounter pornography unless you are looking for it, in which case, as long as it's adult pornography, it will show up.

One of our employees, Matt, would run an internal test – I walked in, I thought, what a strange culture – his wife would bake cookies. And if you could find porn, his wife would give you a cookie. [Laughter.] So here we have a company full of people who are searching for porn, to try to break the porn algorithm. I said, come on, Matt. But indeed, that's how the company sort of policed it.

MR. RUBENSTEIN: For example, today, let's suppose somebody is going up for a Senate confirmation, and the Senate were to call you up and say, we'd like to see whether this person has looked for pedophilia kind of searches. Can you actually Google the term of what any single person in the country or the world has actually looked for, and can you can that information to the government, or could you just get it to a Google employee?

MR. SCHMIDT: Well, in the first place, we would only do so under a large number of court orders and some guns. So that's the first answer. So there are situations where we maintain the logs of peoples' queries. And, in fact, you'll see on our website, it's quite detailed. But a rough rule is that the information that's identifiable to an IP address is retained for on the order of a year.

Now, this is important. Identifiable to an IP address does not necessarily mean to you, David. For example, if you're searching from your corporation, that would show up as just the corporation. It wouldn't be identifiable to you. We've had a series of cases where the government has decided to do over-broad subpoenas, where we have fought, because we want to respect the rights of individuals.

But it is true that for a period of time, the record of your searches is retained, and then, at a certain point, we anonymize it. And we anonymize it in such a way that you couldn't go back. If an employee were to do what you're describing, they would be fired in –

MR. RUBENSTEIN: All right, but could a Google employee who, let's say, doesn't like person A, but thinks person A is looking for the wrong kind of things on the search engine – could that person get access to that information? And –

MR. SCHMIDT: It would be extremely difficult, because they would have to be able to both do IP targeting as well as get into the data logs. We've not had such a situation, and we have a lot of protections against it.

MR. RUBENSTEIN: OK. And right now, in China, you've had some discussions back and forth. What is your current situation? Are you in China? Are you staying in China or not?

MR. SCHMIDT: Well, the Chinese government has a truly bad set of censorship laws. They are active censorship, and it's illegal to talk about them, certainly in China, and sort of dangerous to talk about them even here. But roughly speaking, if you criticize some of the senior political leaders, or you talk about certain religions and so forth, it's very much a crime, and all sorts of bad things can happen to you.

So after trying to work with that for about four and a half years, we decided that we just couldn't deal with it anymore. So we moved to the other China. You know, they always say, you know, one country, two systems. We like the other system better, which is Hong Kong.

And China's organized with something called the Great Firewall, which, again, we're not allowed to reveal the existence of – but I can give you its URL and address. [Laughter.] So you can look at it yourself, and it's been heavily studied by many people here. And this firewall is a series of proxy servers, basically, that when you go through, look at what you're doing, and if it's one of these forbidden terms or what have you, it shuts down the connection or puts it over for a review. And that's technically how it works.

There turns out to be one of these firewalls between Hong Kong and the mainland. So if you're in Hong Kong, you can see all of Google. If you're in Beijing – and I was just there a few weeks ago – you can't see the same thing. The way you get around this is using a technology called virtual private networks.

And all of the Americans who are there know about this, so if you have Chinese colleagues, they'll tell you about it. The Chinese government, of course, is well aware of them, and so they play Whack-A-Mole, where a VPM – and they go wham, VPM – wham, VPM – wham. And there are techniques that the Internet industry is using to try to route around that censorship, which we view as really quite, quite bad.

MR. RUBENSTEIN: Now, there's legislation in Congress now that you are opposing, dealing I guess, with pirating of copyrighted information. Why are you opposed to this – to this bill?

MR. SCHMIDT: Well, mostly because it criminalizes the intermediaries. The first comment I would make is that – please don't steal copyrighted content. It's against the law, and we need these people to be able to build their businesses and to actually make money. Google exists to take people to high-quality content. I hope that's clear.

The problem is that industry has overreached. What they've said is, we're going to criminalize the linking and structure of the Internet itself. So if someone posts a copyrighted, a

copied video, we're going to force the intermediaries – which include Google and many others, the ISPs and so forth – to take the link down. This is known as censorship of the Internet links.

If you do that, you're doing the same thing that all these other governments want to do. So I think there are two reasons that this is important. We want to develop the tools – we in our country – to follow the money, that the people who are making money from pirated content – it's illegal, and by the way, with the Internet, we can actually find them. And they can be prosecuted to the fullest extent of the law, and they should be. And we can track it in all sorts of ways.

But if this law passes, there will be a large number of American firms who will build very, very powerful filtering, content-deletion technology, which will then be very much used around the world. And I can assure you – I hope not in America, but all these other countries I visited, they're going to love hacking away at the structure of the Internet – all that free speech, all that stuff they don't like. And the Internet is going to get Balkanized.

MR. RUBENSTEIN: So you recently said that Google TV would soon be embedded on all the televisions sold, let's say, in the United States, around the world. What will Google TV do, and why will it be embedded?

MR. SCHMIDT: Google TV is now on its second version, and we're in the process of obtaining agreements. It's free, by the way, so please feel free to use it on your television as well. It's typically installed by the television manufacturers. Most of them are putting it on their high-end televisions – not all televisions, but high-end televisions.

It's the first system that fully marries television and the Internet video world. So you turn it on, you watch television. The moment you want to, you can switch over to YouTube and the other video services – Vimeo, et cetera – and you can see everything. But more importantly, you can now write a program that will intermix the two. So in television, you can now overlay data sources and other Internet things. This has been a dream of people in the media industry for decades.

And it's based on Android and Chrome, which is a successful browser and operating system platform from Google that have a large number of people developing for it. What's interesting is, it's been very controversial, because people are afraid that, somehow, it's going to interrupt the way the television industry is working.

My view, in fact, is it will cause people to watch more television – that most people, the majority of people today, watch television with a device – a second screen somewhere: a phone, an iPad, you know, what have you, a game console. So there's every reason to believe that if we can get that integrated, it'll probably promote more television viewership, not less.

MR. RUBENSTEIN: And today, you spend more time in Washington – where you were born, as I mentioned earlier, and grew up in this area. You do it not because you love the area so much, though you don't dislike the area –

MR. SCHMIDT: I love Washington, and I love the Senate. [Laughter.]

MR. RUBENSTEIN: OK, but you spend a lot of time –

MR. SCHMIDT: I have a great deal of respect for the Senate.

MR. RUBENSTEIN: All right. You spend a lot of time dealing with government officials. Why do you think that Google has attracted so much attention? Your product doesn't cost anybody anything. You operate for free. Why are so many people upset about some things Google does?

MR. SCHMIDT: I think, you know, in the first place, the folks that are looking at Google here and in Europe have a job to do. And they are plenty of complaints about Google's rise – almost all, it seems to me, from business partners who were unhappy with something that we did. And we're a pretty big fish in the ocean, or whatever metaphor you want. It's also been funded by somebody who should know better, which is Microsoft. And so there's a lot of evidence that this is largely about competitive dynamics.

We say, and I said in my testimony, that it's very important to understand that Google does not block access to anything, that if we make an innovation, we continue to offer the information that we previously did, so you can still find it, et cetera, et cetera. At this point, I feel like we've told that story, and it's now a legal matter. I'm quite confident that we're in good shape on the legal front.

MR. RUBENSTEIN: And now, you're spent some time with President Obama, and you were a supporter of his. Would you say that Silicon Valley is, today, as supportive of him as they were when he first ran? And would you ever consider going into the government full-time?

MR. SCHMIDT: The latter question is not only a no, but a heck no. [Laughter.] I think that – because it's not a data-driven conversation. And the government, as you know – we had that – we already had our little pledge.

MR. RUBENSTEIN: Right.

MR. SCHMIDT: You've had your share of dealing with the government, I know, and I know you share my view. I continue to be a supporter of the Obama administration and what they're trying to do.

With respect to Silicon Valley, Silicon Valley is, because, first of all, it's in California, obviously. Silicon Valley tends to be united as fiscally conservative and socially liberal. So there's very little difference between the Democratic and the Republican people within the community that I live in.

And we live in our own little bubble. We have not had the same economic situation that the rest of the country has had, and so forth. So I don't think Silicon Valley is a particularly predictive group of the rest of America. The President clearly has strong support, probably not as strong as he did before. But as you know, the presidency is ultimately a choice about a person, and people make that decision for many, many reasons, not just their programs or what have you.

MR. RUBENSTEIN: So you now have a great deal of wealth by almost any standard, and you are a young man by almost any standard. So what would you like to do with the rest of your active years? Would you like to stay at Google? Would you like to run another company?

Would you like to spend time on philanthropy? What would you like to do for the next 10 or 15 years?

MR. SCHMIDT: I think for me, personally, I'm extremely interested in the future of, sort of, everything. I've come to the conclusion that the ride that I have had is hard to explain, because it happened so fast, and that it will happen again and again and again because of the nature of the Internet, networking of society.

I'm quite convinced that many of the industrial structures that we have erected will be threatened and/or changed by all the things that I'm talking about. I'm also now quite convinced that many governments will be affected, and many will fall – not necessarily in the United States – where they don't anticipate the empowerment that this new technological model is providing. And those are the problems that I'll work on. And I'll stay at Google.

QUESTIONS FROM THE AUDIENCE

MR. RUBENSTEIN: We have for some questions. So you're also a pilot, as I understand, and when did you learn how to fly? Do you have time to fly while you're also working?

MR. SCHMIDT: Yes. I fly with professional pilots, I should add. I started flying when I was at Novell because it was so hard to do a turnaround. As a comment about turnarounds, in my view, you only have one turnaround in your professional career. So that was mine. You know, they're very, very difficult. But I needed a distraction, so I learned how to fly. The instructors said, basically, you have to focus on this or you will kill yourself. So it was a good focusing device. [Laughter.]

MR. RUBENSTEIN: OK. Question?

QUESTIONER: First of all, thank you for coming, and I find it absolutely fascinating. Today, I noticed that magnetic pulse was a subject of discussion by [former Speaker Newt] Gingrich. What do you think of that? And then, I often Google Earth. What is that information used for by you, when I Google Earth? Thank you.

MR. SCHMIDT: My view on the magnetic pulse thing is that we should have the physicists be experts on such matters. [Laughter, applause.] And the consensus on the physics is that– as best I can understand the consensus – of the threats that there are from the nuclear age, this is not a high one, although it's at least possible.

But there are many things that are possible. But again, let's have a fact-based conversation and say that the real issues with nuclear weapons have to do with nuclear proliferation, the very real danger of people stealing this stuff, and dirty bombs and those kinds of things, which we're all well aware of.

There are two major threats to society, in terms of loss of life. The first one is a nuclear war, which hopefully will never happen, and the second one is that the compound and accelerating effects of climate change, if that occurs, with water and so forth, at the scale that's possible – we don't really know.

With respect to Google Earth, when you say information, what kind of information do you mean? In the first place, when you're running Google Earth, we don't know where you are. So please feel free to spend as much time in North Korea as you like. [Laughter.] Google Earth – even though I'm a pilot, I did not appreciate how powerful it was to have a third dimension around the Earth.

Did you know, for example, that we've now proven that cows arrange themselves in a magnetic-field direction? This was discovered using Google Earth by scientists who must have had nothing else to do, looking for cows and their alignments. And it's head to tail, there's this particular order. No one is quite sure – this is one of the great mysteries of the modern age. [Laughter.]

They've discovered a set of impact craters that had not occurred before. We've been able to chart the loss of biodiversity and the changes, and so forth, in really remarkable ways. The other thing about Google Earth is the pictures are not instantaneous. For many, many reasons, we did not want to have it be a real-time satellite feed. So there is a latency, and that's by design.

MR. RUBENSTEIN: By the way, what devices do you use? Do you use an iPad? Do you use –

MR. SCHMIDT: I use everything.

MR. RUBENSTEIN: Everything. So you're on Facebook, you use Twitter?

MR. SCHMIDT: I use everything – Google Plus is my preferred – [laughter].

I would encourage all of you to use all of this, not just Google or anybody else's. And the reason is that there are differences between them. I think you learn a lot by playing with them. Your children will use them all anyway. You know, you might as well sort of spend the time. It is what our age is about.

I marvel at what people are willing to say and do and construct and build online. Today, it was announced that we have crossed the million mobile applications platform on these – primarily this device, which is an Android phone.

This, in my view, is the best phone ever made, and I say that with bias. It's been out for a week. It's called the Nexus Prime, basically the Android and iPhone. There are more mobile apps coming out faster than at any point in any software development world I've ever seen. If you're a young person today, as a programmer, like I was, you're building for a mobile phone. That's where the action is.

MR. RUBENSTEIN: By the way, if Facebook were to go public at, let's say, a $100 billion valuation, and you had a chance to buy it at that valuation, would you buy it?

MR. SCHMIDT: I haven't seen their internals. I'll tell you the numbers. In IPO history, the majority of IPOs are lower 6 months after they go public than the price that they go public at. So that would inform my decision. It's at least two-thirds or lower. It's quite startling, because one of the things that's interesting, when we went public – and, of course, we were all there, and our partners on the trading floor – so how do you actually start trading?

Well, they have a fella whose name is Killer. And I'm not making this up. And he's a young man who screams a lot. And so we're all sitting there, jet lagged because we've been up all night – and, David, you will remember this – we're sitting there, we run in, and there's this guy, and they at exactly noon Killer will start the trading. And he starts screaming. And it's going this way and that way and so forth. And somehow the price stabilizes. So before – when you think about IPOs, remember that there is no trading price, and Killer is doing the first trades. [Laughter.]

MR. RUBENSTEIN: Time for another question here.

QUESTIONER: Eric, you have a strong interest in the oceans. How did that develop?

MR. SCHMIDT: The question has to do with my strong interest in the oceans. On a personal basis – well, first is Google Earth has something called Google Oceans, and you should spend some time with it. You can actually go from the Earth and go right underneath and visit a lot of the wrecks and other things that we've discovered under the oceans.

The oceans occupy 70% of the globe. The majority of the cultural biodiversity that's being lost is being lost in the oceans. There's a mass extinction going on right now, primarily because of ocean acidification, things like that. It affects our weather cycle. The oceans are a source of food for 40% of humans, on and on and on.

There's very, very little understood about what's going on in the oceans. There's a million mountains underneath the oceans that are unmapped and unnamed. All right, think about how big those are, and they're underwater. You can't reach them except with sonar, which is a very low bandwidth and very slow. They know these facts because they can look at magnetic field things from satellite, that's the level of primitive knowledge. So I'm interesting in funding research into how to address all of this.

MR. RUBENSTEIN: And speaking of a search and research, when Google was coming along, some people thought it would do well, some people weren't so sure. Given your technology background, where would you suggest that somebody might invest if they wanted to find the next Google-type company? What area will you think it'll be in? Clean energy or some other technology-related kind of company? What area are you most attracted to as a way – if you were an investor – to make money?

MR. SCHMIDT: Well, as far as the White House project, I worked on an advanced manufacturing project that the President actually announced as the AMP Program, which you can look up. MIT and Carnegie Mellon are working on it. The problem in America is that there's a loss of manufacturing jobs. It's sort of on the way of agriculture, if you will.

And I think many of us, and probably you, would agree that the loss of manufacturing in the United States is really a profitability, lifestyle, wealth, middle class kind of a problem So are there industries where we could be a manufacturing leader globally? The answer is: There are. There's a whole new set of advanced materials and especially drugs and so forth and so on. So that's where I would emphasize.

The problem with climate change and green energy is it has very, very high capital costs, whereas the industry that I'm in, which is software scalable networks, the capital costs are

relatively fixed and you have high rates of growth because of scale. So it's easier for us to operate than in these more capital-intensive industries.

You understand this in your business because you have invested in a number of these, especially when the capital markets are tight. Everybody could make a lot of money when capital is cheap, right? Because it's easy. When interest rates are very low you can go invest in all these factories and do whatever you want. But when capital is tight, it's another matter. We do not have that constraint in my industry.

MR. RUBENSTEIN: So my final question would be, where do you think the egos are bigger – in Silicon Valley or in Washington, D.C. – based on your experience?

MR. SCHMIDT: I think there's a serious competition. [Laughter.]

MR. RUBENSTEIN: Eric, I want to thank you very much for your time. On behalf of The Economic Club of Washington, I want to present you with this antique map of the District of Columbia, with our thanks for coming. And I appreciate everybody's coming. It's great. [Applause.]

MR. SCHMIDT: Thank you very much.

Eric E. Schmidt

Since joining Google in 2001, Eric Schmidt has helped grow the company from a Silicon Valley startup to a global leader in technology. As executive chairman, he is responsible for the external matters of Google: building partnerships and broader business relationships, government outreach, and technology thought leadership, as well as advising the CEO and senior leadership on business and policy issues.

From 2001-2011, Dr. Schmidt served as Google's chief executive officer, overseeing the company's technical and business strategy alongside founders Sergey Brin and Larry Page. Under his leadership, Google dramatically scaled its infrastructure and diversified its product offerings while maintaining a strong culture of innovation.

Prior to joining Google, Dr. Schmidt was the chairman and CEO of Novell and chief technology officer at Sun Microsystems, Inc. Previously, he served on the research staff at Xerox Palo Alto Research Center [PARC], Bell Laboratories, and Zilog. He holds a bachelor's degree in electrical engineering from Princeton University as well as a master's degree and Ph.D. in computer science from the University of California, Berkeley.

Dr. Schmidt is a member of the President's Council of Advisors on Science and Technology and the Prime Minister's Advisory Council in the U.K. He was elected to the National Academy of Engineering in 2006 and inducted into the American Academy of Arts and Sciences as a Fellow in 2007. He also chairs the board of the New America Foundation, and since 2008 has been a trustee of the Institute for Advanced Study in Princeton, New Jersey.