

Q: Obviously with us today is Dr. Eric Schmidt, the CEO of Google. Eric, once again, thank you for coming.

Answer: Well, thank you for having me again.

Q: As some of you probably remember, we had Eric here about two years ago, at his first public presentation, I think, at a conference--an investor conference, so welcome back.

What I wanted to start off with was a question that I actually ask you periodically on your investor calls. When we talk to investors, we talk about Google being much more than a search company. In fact, we talk about you having hardware expertise, software expertise. You're a tech company, a media company, you can argue a telecom company. There's a bunch of various facets that Google is in. As you think about Google being an evolving entity and moving over time, how do you think about Google morphing? And more particularly, you've thrown out a \$100 billion number as far as goal for Google over time.

Answer: I didn't say revenue or value.

Q: Not necessarily saying revenue.

Answer: Yeah.

Q: But how do you think about that over time in how Google evolves?

Answer: Google is a many, many-sided story, I guess is the bad metaphor here. We have many components of what we do, and they're all around a single mission, which is to bring all the world's information to each and every person on every device, in every language, in every location. And in order to do that, we need to have all of these different initiatives. They're all really around a common purpose. Another way of thinking about Google is that it's a systematic innovator at scale. There are a few opportunities in technology where companies -- it turns out Google has one of those opportunities -- where you can ride each of a set of technology waves in an integrated way. Another way to think about Google is as a new way of doing targeted advertising, which of course funds all of this, and targeted advertising in and of itself is a very large business.

So I think of Google as a combination of all of those different things. We try to run it well, but we fundamentally try to solve real problems that matter to real people everywhere in the world.

Q: Obviously one of the big markets developing over time here is the mobile local market. You made a very interesting comment at Battelle's Web 2.0 event back in

November, and you said that you thought cell phones should be free. Could you talk about what you meant there and where you sort of see the whole mobile local market moving over time?

Answer: I remember years ago in Italy riding the train, reading the *International Herald Tribune*, and it said, demand for mobile phones goes up as prices fall -- as though this was a headline. And the fact of the matter is that everybody wants a mobile phone. The numbers are staggering. There are roughly 2 billion mobile phones worldwide. It took 20 years to get the first billion in place, it took four to get the second billion, it will take three to get the third billion. And this is billion with a B, right? So roughly half of the world's population, approximately, will have mobile phones by the year 2009/2010. The implications of this, getting this whole new generation of people online and hearing from them is a staggering set of political and social issues. From a product perspective, all of the mobile operators are working very hard to build what are called essentially feature phones, and these feature phones have basic SMS and basic navigational Internet web browsing. As part of that Internet web browsing, it should be possible to build extremely targeted advertising solutions. And the simplest example is that folks here read the paper this morning, probably, before you came down. Anybody remember an ad? The ads just don't work that well compared to a targeted ad. On the other hand, with a phone--and remember, the key insight with mobile phones is that when you call a mobile phone, you're calling a person; when you call a land line, you're calling a location. People carry their mobile phones as though they're glued--they were born with them. And this mobile phone, a highly personal device, knows where it is. So the phone knows where it is, it can give you any kind of ad, any kind of targeting. So it could say, Eric, there is a pizza place on your right. You had a hamburger yesterday, you should have pizza today. And by the way, you don't think somebody's going to do that ad? And by the way, I'm going to turn the phone off at that point. The off button's very important on these devices.

But the lesson we have learned is that targeting ads that are historically untargeting--untargeted produces huge improvements in revenue and monetization, and it's likely that the monetization of mobile phones on a per-user basis will be much higher than any of the other categories. Google is already running targeted ads in Japan, where those ads, which are simple text ads -- none of the fun stuff people talk about -- are performing better than any other ads that we have anywhere in the world.

Q: One of the topics I wanted to touch on and investors focus on a lot is infrastructure, and there was an interesting quote that I just want to clarify here by Vincent Dureau, Google's head of TV technology. He said that web infrastructure, and even Google's infrastructure, doesn't scale. It's not going to offer the quality of service that consumers expect. And I think he was sort of relating to video and

TV here. We subsequently heard that he was misquoted. Could you comment about the scaling of (A), the Internet, and then (B), in particular, Google's infrastructure related to video?

Answer: In the 30 years that the Internet has been around, and in the 20 years that I've been in the profession working on Internet technology, every one or two years there is an Internet crisis in the press, and the crisis goes like this. We're running out of something, okay? And by the way, the only thing we're running out of is humans, all right? We're not producing them fast enough. The underlying improvements of Moore's Law, the rate at which routers and so forth are being improved, means that there is essentially infinite forward bandwidth in the infrastructure of the Internet. There are various technical bottlenecks, all of which are overcome fairly quickly. Furthermore, thanks to the bubble, which everybody remembers -- certainly in this room everybody remembers very well -- there's an enormous amount of dark fiber, literally unlit fiber that's waiting for the ends to be connected with even faster routers and other kind of switching technologies. Any delay or problem that you see in the Internet is because of what is known as the last mile problem, literally the difficulty of getting from a reasonably centralized hub, central office, whatever, to your home or business or so forth. And there are various technologies around the world that do that -- DSL, cable, and so forth. Even there, technology improvements and now fixed wireless, things like WiMAX, are overcoming the final bottlenecks there.

So it looks like, for the foreseeable future, as far as we can see, there's going to be plenty of bandwidth to do all of the exciting things that all of us want to do, and especially in an industry which is so focused on media and entertainment. There's every reason to believe that the bandwidth that will be deliverable on the Internet will rival the kind of private networks that are used today, simply because there's so much investment, there's so many people working on the problem. And one of the sort of phrases I've been using internally is what I say--I say, very simply, don't bet against the Internet, it's a mistake. Historically, company after company has made an assumption that the Internet would screw up, that the Internet would fail in some way, that there would be some limitation that would not be overcome. Every one of those companies made a mistake. Also, any approach or restriction that you place as a company on your technology that's not consistent with the principles of the way the Internet evolves and works, the openness and the interoperability of the Internet, you will ultimately pay for as a business. So the Internet looks like the winner.

You were also asking, really, a Google question.

Q: Mm-hmm.

Answer: Google's restrictions are not cash -- of course, we have lots of cash -- but really

the rate at which we can deploy data centers, and there was a time after the bubble burst where there were this wonderful collection of empty data centers that we were able to purchase at fire sale prices. So we were the company buying all those data centers that were being written off by the people who built them unnecessarily, in hindsight, during the bubble. All of those data centers have been purchased and they're all full. And we also bought a lot of dark fiber, as has been widely reported, in order to interconnect them. So now we're building new, larger data centers, which basically you build this huge power substation and you plug it directly into the overhead line and you light up this big building full of servers that are providing the services that people use today. And with video and media and the kind of capability that we're going to be offering in the future, this is going to continue. It will simply be amount of bandwidth and the amount of rotating storage that's required to provide reasonable quality entertainment. It's going to take it, and we're going to spend that money.

Q: Well, touching on the robust growth, you made a very interesting comment recently as well where you were talking about governance of cyberspace and the growth of cyberspace. And you said that if MySpace gets to a billion people or so, does it get its own government? Is there some rule that if you get to a billion people, do you get your own country? You made this comment at Carnegie. What did you mean by that?

Answer: Well, I was having some fun.

Q: Okay.

Answer: There's a set of questions that the Internet is posing that I don't know the answers to, and I don't think society has really properly framed the debates. Let me give you a sense of those questions. The first question is, what happens when the next billion people get online? When they show up, does the world become safer or less safe? Are they more polarized or are they more integrated? Question. I don't know -- worth debating.

Another question: What happens when the billion phones -- which, by the way, all have video cameras, all of which are in the process of getting moving video cameras -- what happens when a billion people decide to do user-generated content? Does everyone take a picture of their dog or cat and put it on YouTube, or maybe do a picture of something else? Does the tribalism and the sort of bad parts of human expression take over, or do the Mother Theresa and the wonderful aspects of human expression take over? And I don't think we know. We've never run an experiment with this level of user empowerment in the world, which I think is both an interesting and wonderfully exciting opportunity.

Another example of a question that we don't know is, what happens when we

have simultaneous translation between 100 languages? Google is one of the companies that we think we have the best technology that does simultaneous statistical machine translation. This technology is amazing. It's absolutely bizarre. It does not use a dictionary. It uses mathematics that have been explained to me many times and I do not seem to understand them, which basically takes a very large corpus of one language and automatically translates any form of text into a language. What happens when the million books in Arabic that have never been translated into any language other than Arabic are translated into English? What happens when all the English texts that have never been translated into Arabic are translated into Arabic? A lot of the global issues that we have are fundamentally because of language limitations, and languages are not going to go away. All the fans of Esperanto will--may fight me on this. But the fact of the matter is, language is going to be with us for the rest of our lives.

Another example of a question has to do with privacy. What happens when everyone discovers that they've given up a lot of personal privacy in the course of this? What are the rules, how does it work? I talk about MySpace as a very strong and positive example of a very strong Google partner. What happens when people discover that maybe they shouldn't have written all that stuff that they did five or ten years ago that everyone is now--because it's not lost, it's still there? My daughter calls this too much sharing at a young age. And you have to wonder, are we really prepared as a society for all of these new choices? And they're coming. And I don't think the debate has occurred, and I think it needs to be. And it's a political question, it's not a technical question.

Q: Well, this is a media conference. Why don't I change gears a little bit to more on the media side? As far as YouTube, could you talk a little bit to the investors about, what's the value proposition you're bringing to the content owners? And maybe, what are some of the near-term roadblocks you've had with some of the content owners, say, like a Viacom?

Answer: Well, first place, there was--last spring something happened, and the Internet is like this. You'll be sitting around one day thinking nothing's happenings, and all of a sudden there's some new, huge explosion, and somebody will run into my office or more likely send me a message in all caps -- I'm sure you'll get that -- like PAY ATTENTION, ERIC. And the explosion that occurred last spring was an explosion in video. We don't know why, but all of a sudden video took off big-time, and it took off at Google. Google had a product called Google Video, and also we saw it in the growth rate of YouTube and other sites. As part of our collaboration strategies, we talked to all of the other sites, because we were busy trying--we have an ads business which monetizes those sites. And we talked to YouTube and we saw that not only were we doing well, but they were doing even better -- and after a few conversations, we bought YouTube. And we bought YouTube because of the traffic, we bought YouTube because of the community.

And indeed, YouTube's business success going forward--traffic success has been phenomenal, and continues to grow faster and faster and faster.

One of the things that happens on the Internet, for those of you who have not studied the math of it, is it follows something called a power law distribution. And in a power law distribution there is a small number of winners, and those winners tend to crowd out more specialized players. And so our analysis was that the combination of YouTube plus Google Video had a good shot at being the winner in video, and something which we were obviously investing in heavily. The opportunity for Google is multifold. The first is that our mission is to serve people's information interests, and there is no question, just looking at the traffic, that user-generated video has tremendous interest.

There is a large advertising opportunity to be built on top of that traffic, but we are, I think, experienced enough to understand that you don't leave the advertising, you leave the user. Start with the user. There's an old joke in the Internet called--you know, the definition of a URL is ubiquity first and revenue later. And that was used pejoratively in the bubble, but in fact it's true. But if you can build a sustainable eyeball business, you can always find clever ways to monetize it.

So as part of the YouTube acquisition, we immediately began conversations with all of the major media companies, which were widely reported, along with many, many other companies. In the last week we've managed to announce two interesting deals, one with the NBA and another one with the BBC. There are many other smaller deals that we've announced, and we are in continuous conversations with all of the large media players, many of whom are represented in this conference, and the conversation goes something like this. Users are going to make copies of your copyrighted content, so the first thing we want you to know is that we recognize that you own this content -- we're not into the stealing business -- and that we're going to give you tools, which we call claim your content, by the way, CYC, which allow you to identify that content, and then if you tell us, we can take that down. And this mechanism is protected under something called the DMCA, Digital Millennium Copyright Act, and we observe that it is the law of the United States, and we fully implement that.

A better opportunity for you, Mr. and Mrs. Media Company, is to think of this as a--this person as a potential monetizable target. Think of this person as a fan -- and fan, remember, is a derivation of the word fanatic. This is somebody who likes your content, your show, your product so much that they uploaded a copy. This is somebody you want to get to know. Under this set of assumptions, we can then convert that box, that content, into a licensed copy, and then take that fan and his or her colleagues, friends, and parts of a social network in to use that and in to review it, and basically give them lots of interesting ways of making money. Our

analysis says that the biggest next business opportunity that's not creative in these media industries is monetizing those viewers. There has been a shift in attention, people are moving to the Internet from other technologies, here is a way to monetize them.

Some combination of targeted advertising, advertising around the chrome(?), pre-roll and post-roll advertising will build a business as large as the media businesses that we all grew up with. We want to be the company that enables that. We want to be the advertising company that can actually provide the tools to monetize that viewership. If you go back to my earlier comment about, don't bet against the Internet, when you look at YouTube, Google Video, the other online videos today, they don't have the quality of the television that you see today. They don't have HD quality and so forth. But think back to 20 or 30 or 40 years ago. I remember when television converted from black and white to color -- which, by the way, as a boy, was a really big deal. The fact of the matter is, technology moves forward. And in the Internet, if you follow the don't-bet-against-the-Internet, take this opportunity seriously, because all of us, certainly Google, are working to provide much better tools for end users, much better tools for advertisers, much higher viewing quality, and much broader distribution.

Q: Let's switch gears from online to offline. Obviously with the acquisition of dMarc, Google is making a big effort going offline, particularly on radio. But I think, besides offline print, people are assuming digital billboards down the road and ultimately TV, et cetera. Could you talk about some of the value proposition there? The Steelbergs recently left the company. How does dMarc stand right now, and how are--how is the progress going with, once again, the distribution in that case -- the Clear Channels, the \_\_\_\_\_, et cetera?

Answer: Again, similar answer as to the other technologies. As part--as the part of Google that's trying to be a broad advertising supplier for targeted advertising, we prioritized radio and, in fact, television, as an even bigger market, pretty highly. And the reason is that the markets have not had any particularly new invasion of technology applied to them. They still have the old advertising model, it's still completely untargeted. The dMarc team figured out a way to do more highly targeted radio advertising, which was why we acquired the company. The new(?) founders, who are entrepreneurs, have gone off to do their next company, which is what we expected, and they're very good, so we wish them very well.

Q: Mm-hmm.

Answer: The underlying business looks like it's going to be very successful for us. There is no one else trying to do targeted radio advertising in the way that we're trying to do. There is an analogous opportunity in television which we're also exploring, where, again, you go back to--the easiest example is that in your home--if you

think about television and you turn on the television, the ads are not targeted. Here you have a home and assume that there's no--for example, there's no babies in the house, and yet the television, turned on at the right hour, will show baby things -- highly untargeted ad, highly inefficient advertising. And with all of these technologies, there are new ways of doing targeting. An example would be with television -- it's an easy one to understand. Many of you have digital set-top boxes. The next generation of digital set-top boxes are fully IP-addressable Internet devices, so we can talk to them and we can do targeting of one kind or another, and that makes a--it makes a huge difference in terms of the economics of advertising.

Q: Let's focus on competition for a second. Two years ago I asked you this question and I thought your answer was very interesting. I asked you about, who do you see as your competitors and who keeps you up at night type of thing? And you said, Bob, when I think about our radar scope of competition, I don't think much about Yahoo! and Microsoft, and the reason why is because they're so big and they're on the screen. They're taking up so much of your screen, you can't help but not think about them. And what you were worried about was more the, being too arrogant and having two PhDs coming out of Stanford changing the game all of a sudden on you. And that's one of the reasons why we thought YouTube was such an interesting acquisition, was you realized they had a--they'd beaten you to a certain point in the market and you thought it would be better to acquire them and bring them in and leverage them. What do you look at now? What's the next frontier as far as competition? Where is the game changing that Google really has to keep a close eye on?

Answer: I think that answer still holds from two years ago. It is the Silicon Valley story, right? Young founders see a new vision, they exploit a hole in the armor of a large, established corporation, and they get it right and they grow very quickly, and a lot of people help them. In our case, the most likely competitive issues will come from new forms and clever forms of advertising targeting.

Q: Mm-hmm.

Answer: The advertising story that I'm telling you now is not one that's a secret anymore. People have studied it, they've studied what we've done, they understand it. There are many, many companies that have been formed to work in corners that are interesting in this space. The most interesting set of new targeted advertising that's occurring is in the mobile space. And I think because my earlier argument about the scale and impact of mobile, I think it's reasonably obvious, if you think through, how good that advertising could be.

Q: Mm-hmm.

Answer: So that's an example of one we worried about. We were very worried about video because we saw it exploding, but we believe that the YouTube acquisition, which is going very well for us, really does cement our leadership there.

Q: Mm-hmm. Well, we only have about five to ten minutes left. I don't want to hog all the questions. I'll have a ton more. So, with that, are there questions in the audience? Or I could keep going here. If you have a question, raise your hand. Right in the middle over here?

Q: I'd like to discuss your opportunity and your problem with regard to copyrighted media of a large scale. I've had the chance to talk to some of the managements, and the ones that were sort of nice put it this way. They said, well, Google are nice guys but they don't fully appreciate the value of the kind of copyrighted media that we have. The guys that aren't so nice say, these guys are just arrogant. They don't--they really don't get it. So let me ask the question. Are you arrogant? Are you so arrogant that you lose the opportunity? And conversely, if you're not, how do you resolve the issue of resolving a fair revenue sharing when a company hypothetically owns--it's not one of the companies--Raiders of the Lost Ark or something like that, it's not one of the companies \_\_\_\_\_ property?

Answer: I'm sure we're arrogant. And I can't think of an answer that isn't of the form of, I'm guilty to that question. The--first place, the kinds of comments that you're referring to are in the context of a business negotiation, and I have learned that as part of being a player in the media industry, the way one negotiates is everything is leaked and you're sued to death. This was news to me. So the lawsuits that go on in the media industry appear to be in the course of normal doing business, and it's maybe because there's a lot of lawyers or because it's a good way of running business. I don't really know. It's not normal in the technology industry, I can assure you.

Ultimately, product value is determined by whether people view it, and in our world, product value is measurable. And so one of the things that's going on is you have people who say, my product is worth X, and Google says, prove it. And it is in that context that I think there's both genuine disagreement and also an opportunity for a new experiment. We have been very, very careful and really do believe that we need copyrighted material to be successful on the Internet, because, remember, our goal is to serve end users, and they actually want the high-quality stuff, and they do understand it. But ultimately it is not my decision whether Raiders of the Lost Ark -- which happens to be a very good movie -- it's not my decision, it's the millions of people who use Google. It's their decision, and they vote with their clicks. They vote with where they go, and we know that. And we can go back to these partners and we can say, that hit that you thought was so wonderful, on the Internet, no one watches it -- and we can prove it. And that's often a difficult conversation.

Q: Right behind him?

Q: You just mentioned that clever forms of targeted advertising are perhaps your greatest competition that you know about. So for mobile search, something you really think is a big opportunity, what prevents carriers who know their customers best from doing a sort of consortium of search even though it's good \_\_\_\_\_ stuff? What prevents them from doing that?

Answer: They certainly could. And one of the issues with the carriers is that they have typically approached the Internet -- again, by violating the rules of the Internet -- by creating wall(?) gardens. And so a clever carrier approach would be to convince all the other carriers to have an open, interoperable network where they jointly offered search and advertising services. They have not done so. They've typically preferred to have more closed networks where they have their own proprietary solutions, which ultimately doesn't scale. So they're on a different path from the question that you asked. I think it's unlikely your scenario will occur, but it could always occur.

In the back over there?

Q: Thanks. Could you--going back to some of the offline ventures, could you talk about when something like Google Radio would be sort of fully ready to launch and out there in the market? And the same thing with the TV portion of it?

Answer: The radio products are in use today in smaller markets, and we're negotiating larger distribution deals. Again, because of the way radio works, it actually does require partnership and revenue shares and so forth, and we're doing that. With television, we're doing a couple of trials that are essentially ad insertion trials -- and this has been publicly discussed for some time -- and we're measuring whether our ad systems provide incremental value over the traditional ad and ad targeting. If those trials are successful, we will expand. One of the characteristics of Google is that we tend to keep our products in beta test, as it's called, for a long time -- often a year or two -- so that we can continually refine it. So my guess is that this will be a year in the television area of trial, just as last year was a year of trial in the radio area.

Q: As we're waiting for that next question, I wanted to touch on Checkout for a quick second and sort of what we sort of see as a great enabler as a fourth model for you, right? So everyone here is very aware of CPC...

Answer: Sure.

Q: ...CPM. The next sort of getting going right now is sort of Click2Call, more of a

local phenomenon. How does Checkout--or does Checkout open up sort of a CPA or cost-per-action type model for you?

Answer: It may. For those of you who don't know, Google Checkout is a new offering from Google which allows you--when you see an ad, you click on it, and if the merchant has been Checkout-enabled, as it's called, you essentially click this button and the product that you're looking at is delivered right to your door. We at Google maintain the credit card, the shipping address, and all of that. And to protect end users' privacy, there is an option for the end user where that information, except for the shipping information, is not even given to the online merchant. It's proving to be very successful, especially for a product that's so new. If it is successful, we think its primary benefit is it actually makes the advertise buy cycle that much quicker. So I like to think of Checkout as, first and foremost, a tactic around velocity -- literally speed. And you can imagine, if you're an advertiser, the quicker you can get that person from the hey-I-want-it to hey-I've-got-it, that makes a more valuable ad, and we've so far seen some evidence of that. If Checkout is successful in this first phase, it's possible that we could use that system for many of the kinds of things that you're describing -- much more measurable CPA kinds of solutions. Google itself has a system which allows you to fully measure whether people see a site, buy things, and so forth, so it could be another part of the CPA solution. But it is primarily today simply a mechanism to make advertisers get their products sold more quickly -- again, so far, very successful.

Q: Last question, I guess, over here.

Q: Some people would say that Google's had the lead on monetization while Yahoo!'s been trying to develop their Panama project. Now that that's launched, do you have plans for trying to leapfrog them, or how do you deal with that competition \_\_\_\_\_?

Answer: All the measurements that I've seen have indicated that the--that Google has had a monetization lead for quite some time, and our partners tell us this as well. We have not yet seen any impact from Panama, which would indicate to me that the monetization lead has maintained. We make continual changes. There's not a leapfrog, there's not a product we're waiting for. Every day or every two days or every five days sort of changes, and they're very, very small improvements in ad targeting. We have a periodic sort of quality meetings, as they're called, and quality at Google results in increases in revenue, and many of the financial results that you've seen over the last couple of years have been directly a result of this consistent and methodical approach to improving the quality of targeted ads. We think we're the best in the business. There are many, many ways in which we can improve the targeting of ads, so it's a big project for us and something we're working on very hard. One of the--many people have said, well, you must be

hitting some limit in terms of targetability, and that's not true at all. We've not-- we're nowhere near any sort of limit in that area, so there's lots of room for improvement and we're working hard on it.

Q: With that, unfortunately, I think we're out of time, so please join me in thanking Eric.

Answer: Well, thank you very much.

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