

Carnegie Mellon

Google Chairman and CEO Eric Schmidt's keynote address at Carnegie Mellon University's 112th Commencement, May 17, 2009.

Carnegie Mellon President Jared L. Cohon:

We are honored that Eric Schmidt has agreed to provide the keynote speech for today's commencement. At this time I would like to invite him to do so. Ladies and gentleman, Dr. Eric Schmidt.

<audience applause>

Eric Schmidt:

Well, thank you very much President Cohon. I want to start by congratulating all the graduates, and I want to especially congratulate the parents. And for the parents, remember that the students will still need you and maybe now they'll listen to you now that they've graduated. <audience laughter> And when I see computers and mobile phones, and I want you to look and think about everybody here has a mobile phone with you and a camera, I want you to remember that everything you touch was probably invented by computer scientists that came from Carnegie Mellon. <audience cheers>

And this startling and surprising statistic is actually true, that in the '60s, much of what we know in modern computing was invented here by giants in my field. And I as a young person, roughly your age, worked with people who seemed much older than me in their 30s, who had come through that program, who ultimately came to develop the networks, the workstations, the personal computers, and the mobile computing that we use today. I was so impressed by what Carnegie Mellon had done for computer science that not only did I become a trustee for a while, but Google now has one of its very top ranked development centers here right on campus, <audience cheers> where we have, in many cases, the very best graduates and employees that we could possibly get. These are people who do amazing things as part of our underlying system, and they occasionally do interesting things as well that you wouldn't expect. They just released a product called Star Joy. You take your mobile phone and turn it towards the sky, and it tells you what the stars are doing. Right, how neat is that. <audience laughter>

Why is Carnegie Mellon the place that is so exceptional? I think it's because the culture is a culture of getting things done. It's not a purely theoretical culture, it's not a purely tactical culture, it's a culture that's about accomplishing things for the world, and that is true regardless of the division, the department, the college, the institute that you are part of and that you graduated from.

So when I think about you all, I think about you as the Facebook and the Google generation, the first generation that really grew up with the Internet. When I grew up, you know, we had Tang, you had Red

Bull. We used a program that was called basic, you all used Java. We had VCRs that held a half an hour of video that cost \$700, and you all can upload 15 hours of video in to You Tube every minute. We got our news from newspapers, you get yours from blogs and tweets. And for those of you who don't know, that's not what you hear in zoos. We stood in line to buy Pong, you stood in line to buy Wiis. We just didn't tell anyone about our most embarrassing moments, you record them and post them to Facebook and You Tube every day. I am so happy that my record of my misachievements is not around for posterity. I'm looking forward to yours being there for many, many years. <audience laughs>

Did you know that we use mainframe computers with 300 megabytes of storage to go to the moon six times? Your iPods, 120 gigabytes have 500 times more just to get you to your next class. <audience laughs> We thought friend is a noun, right, you think it's a verb. We had phone booths, anybody seen a phone booth recently? You have cell phones. We wore watches, took pictures with cameras, navigate with maps, and listened to transistor radios. You have a cell phone. <audience laughter> We thought that the marvels of computers and technology again, largely invented here, would change the world. You agree, and we're both right.

Why did you all go to college? To develop the kind of analytical thinking skills, confronting the spin, the crazy choices of information that you'll have going forward. And then I would argue that you have the opportunity to be the greatest generation because right in front of you now are tools that we never had, that you can take advantage of. And you sit there and you say this guy must be made, and maybe that's a little true, but in front of us you say oh, you know, the world's falling apart, we have this recession and so forth. I mean I did some research using my favorite search engine, of course, and the Great Depression spurred some incredible innovations ... Rice Krispies, Twinkies and the beer can. You would never have gotten through college without these three things. <audience laughs> So good things happen in recessions.

Why is ubiquitous information so important? Why is it so important that we have access to all these things? It's a tremendous equalizer. In our lifetimes, literally, certainly in yours if not mine, essentially every human being in the planet will have access to every piece of information known on the planet. This is a remarkable achievement. God knows what these people will do, and it's going to be pretty amazing. And information serves as a check and balance on politicians. You know, if you were a dictator, which you're not going to be because you're fine graduates at Carnegie Mellon, the first thing you would do is shut off all communications to make sure that people couldn't take advantage of knowledge and overthrow you. So what you do now with oppressive regimes and people who do evil things is you attack them with information. You get that information out there, you use the tools and technologies that all of us have worked so hard on to make the world a better place.

So what can we do with a vastly more powerful Web? Right, the Web of information that comprises all of what we know. You can obviously have face-to-face meetings with colleagues around the world, but more importantly now we can do dynamic translations so we can translate between languages so you could actually understand. You're traveling in Mongolia and you're on a motorcycle — many of you will do this right after you graduate, right, to get away — and you have an accident, and you can actually

have a doctor consult with you around the world and they can translate and provide you the healthcare that you need. These are very real wins.

But most importantly, you can ask Google the most important questions that bother you, like where are my car keys after all. You know, computers are really good at remembering some things, and in the new world much of this, again, technology that was invented here, we know where everything can be, we can find them, we can keep track of things, we can make your lives more functional. But you can also ask questions like what's the solution going to be to global warming, where's the vaccine for pandemics ... and you thought finals were hard. Right, think about the challenges before you.

So what should you do now? It seems to me that you should, you know, think about George Bernard Shaw who said that all progress depends on the unreasonable man. Don't bother to have a plan at all. All that stuff about plan, throw that out. It seems to me that it's all about opportunity and make your own luck. You study the most successful people, and they work hard and they take advantage of opportunities that come that they don't know are going to happen to them. You cannot plan innovation, you cannot plan invention. All you can do is try very hard to be in the right place and be ready. You know, the pacemaker for example was invented 70 years in one form or another before it was applied. It was applied to this one poor fella, and 25 pacemakers later he was still alive. But the important part is he wouldn't have been at all had the pacemaker not have been invented. You never know.

And life is like that. Life is ... this is a John Lennon quote ... life is what happens to you while you're busy making other plans. So live it with its fullness, and if you live your life and forego your plan, you could also forego fear. In some sense you've been penalized for making mistakes historically, now you have to go out and make them because mistakes allow you to learn and to innovate and try new things, and that's a culture of innovation that is going to create the next great opportunities for all of you as you come to run and rule the world and the rest of us retire.

What should you do? How should you behave? Well, do things in a group. Don't do things by yourself. Groups are stronger, groups are faster. None of us is as smart as all of us. You can use Twitter as a form of social intelligence and its successors as well. Watson and Crick who discovered the structure of DNA met at a university, today they would meet on Facebook, and they would find each other and then they would do these amazing things. And they'd say to each other, "What are you doing right now? Oh, finding the secret of life. Oh, then off to a pub, LOL." You know, <audience laughs> sort of, it's okay. So, I would tell you that amidst all this change, some truths endure. Leadership and personality matter, we saw that from our student speaker. Intelligence, education, and analytical reasoning matter. Trust matters in a network world. Trust is your most important currency, which brings me to my final question, what is the meaning of life? Correct question to ask any university. In a world where everything is remembered and kept forever, the world you're graduating in to, you should live for the future and the things that you really care about. Don't live in the past, live in the future.

And what are those things? To figure this out, you need to actually turn off your computer. I know this is difficult. You need to turn off your phone, you need to actually look at the people who are near you and around you, and decide that it is humans who ultimately are the most important thing to us, not the

other aspects. You'll find out, I hope, what I believe very strongly that people all around us of every race, color, and viewpoint fundamentally want the same things. They want a great and safe world, and they want prosperity and peace among all of us. You'll find that curiosity, enthusiasm, and passion are very contagious, and I want you to show that because you have it by virtue of being here. You'll find that nothing beats the holding the hand of your grandchild as he takes his first step. You'll find that a mindset in its own ways, set in its ways locked down is a mind and life wasted. Don't do it. You'll find that the resilience in the human spirit is amazing. It's what got us through World War I and World War II, and it will get us through our current challenges just fine.

You'll find today is the best chance you have to start being unreasonable, to demand excellence, to drive change to make everything happen. But when you do, speaking to the graduates, always remember to be nice to your parents and true to your school. Thank you very much and congratulations.

<audience applause>

The speech is on the Carnegie Mellon You Tube channel:

http://www.youtube.com/watch?v=xiYwUde3wNo&feature=channel_page

It's also available for download at Carnegie Mellon on iTunes U:

<http://deimos3.apple.com/WebObjects/Core.woa/Browse/cmu.edu.2071419470>