Intel Chairman Craig Barrett Keynote
CES Las Vegas – January 9, 2009

[Beginning of recorded material]

Male Voice: Ladies and gentlemen, president and chief executive officer of the Consumer Electronics Association, Gary Shapiro.

Gary Shapiro: Good afternoon. Our opening keynote speaker today chairs a corporation that is always pushing the boundaries of innovation. I'm talking about the kind of innovation that makes our lives more exciting and fulfilling. Intel Chairman Craig Barrett is a tireless champion of technology who believes in the power of our industry to improve lives. He joined Intel in 1974 as a technology development manager and he's worked his way to the top, becoming the president and CEO and then shifting to the chairman's role in 2005. He has written more than 40 technical papers. As he says, "Technology is a tool to address some of the world's most pressing challenges."

From Auckland to Zurich and cities in between, Craig has become a technology ambassador. By last count, he's been to 60 countries and every continent except Antarctica. He even went to an island in the middle of the Amazon River. Craig also serves as chairman of the United Nations Global Alliance for Information and Communication Technologies and Development. That's a long title for saying what he actually does, which is helping governments and business in developing countries use technology to make people's lives better.

Craig has shared his ideas and actions not just at the United Nations, but also the [World] Economic Forum in Davos and at the World Congress on Information and Technology in Malaysia. He's received numerous honors for his contributions, including CEA's first ever Digital Patriot Lifetime Achievement Award. Today, this ambassador of technology shares his ideas and vision on a world of opportunity empowered by technology. We are so honored to have him here with us, and it's my pleasure to welcome Dr. Craig Barrett.

[music]

Craig Barrett: Well good afternoon, everyone. It's great to be back at CES and especially on this track of looking at the impact of technology in the emerging world, the emerging economies. You know, I've been very fortunate, as Gary Shapiro mentioned, with spending 35 years at Intel and coming to Las Vegas for many of those 35 years for conferences of this type, to see the changes in technology, and see the impact that it's had on people's lives. And I get to do a little bit of that with the United Nations work as well.

What I observed is technology can be used in tremendous ways to impact people's lives on the ground. And I do want to spend some time today differentiating between what's going on here in Las Vegas this week and what goes on around the rest of the world. I'm talking about the impact of technology on people's lives who (a) can't afford to come here to Las Vegas; (b) have never seen technology before in their lives; and (c) are people who are interested in the basics of life, the

basics of education, healthcare, economic development, and just getting along.

It's sometimes easy to forget how impactful technology can be in their lives, and I'd like to spend my hour or so today talking about those impacts. And I'll try to give you three simple messages. There are huge opportunities today and real examples of how technology is changing the lives of people. There are lots of real-life examples going on, which if we can scale them up, can impact many, many thousands and millions of additional people. And the last point I want to make is that you can help. And I'll come back at the end of the presentation to suggest how you might be able to participate and help going forward.

There's no question that the world's changed dramatically in the last decade or so. God, it's changing daily as you read the newspaper and from an economic standpoint today. But I'm talking about the big economic change, which was the three billion new capitalists that joined the world's free economic system when Russia and the Iron Curtain fell, and basically Eastern Europe joined the free economic system. China and India, Latin America, and now Africa and the Middle East -- essentially half the world's population -- almost overnight, in economic terms, have joined this new economic system that we have. And this is a great economic dislocation, if you will. It's a tipping point, as Malcolm Gladwell would say. And there are clearly going to be winners and losers associated with this change; and we're seeing some of that happen today as competition comes from new places.

Technology is going to play a big role in those countries and those economies that are successful and those that are not. And those that take advantage of technology are probably going to be the winners. The interesting thing to look at is that basically half of the projected growth in the future is coming from the developing countries of the world, not from the established economies. And if we look at the penetration of technology into those developing countries, we see it's already very, very substantial. You know, we have one billion-plus Internet users. We have three billion cell phone users. And already half of those users are in the emerging markets and not in the established economies. Goodness, there are more Internet users in China today than there are citizens in the United States. And there are more cell phone users in Africa than there are in the United States.

So it's pretty clear that there are dramatic changes taking place. And technology quite often can be used as a tool to help countries overcome the challenges that they have. And the challenges are pretty straightforward. You can't go to a country and talk to the government leaders or the business leaders or the education leaders and not hear exactly the same story.

All the developing nations are worried about three very unique features. They're worried about education for their young people. They're worried about economic development to grow their economy. And they're worried about delivering healthcare. Even if you look at the United States, we're worried about those three things as well. But in the emerging economies, they are absolutely front-and-center.

And when you look at the impact of technology in this area, what it can do, you see exactly what you would expect. Technology can play a role, but there are some fundamental aspects of the technology that are important. You need to have access to the technology, inexpensive technology. And as you wander the halls here in Las Vegas at CES, you see some great examples of inexpensive technology, the NetBooks, the low-cost computers, computers which are specifically designed for emerging marketplaces.

You need connectivity. Connectivity in many countries -- especially if you go to sub-Saharan Africa -- is much more expensive than hardware. A reasonable broadband connection in sub-Saharan Africa costs you about $200 a month, which is about the price of a PC today.

You also, importantly, need content and solutions, because the technology we're talking about is a tool. And the tool has to solve a problem to have any importance to the local population. And the application, or the solution or content, is really what allows you to solve a problem.

So accessibility, connectivity, and content are absolutely key from a technology standpoint. But perhaps even more important is education. You know, ultimately economies are competitive. If they have smart people, they generate smart ideas and have the right environment for investment. It's always the smart people, the education, which is the most critical part. And there's lots of innovation in education going on around the world today. Lots of innovation here in the U.S. and just about every country. But if you look in the emerging markets, where

there's a crying need for education, if you look in those emerging markets, 85 percent of the youth of the world are in the emerging markets. Eighty-five percent of the one billion K-12 students are in the emerging markets. There's a huge need for innovation in education and educational delivery in these markets.

The introductory set of statistics we showed you, 75 million children are not in school around the world. Those 75 million children are predominantly in the emerging markets. What we need to do is to figure out how to use technology as a tool to help solve that education problem.

Now, I'll talk a lot about technology, and when you're here at CES, technology is all around us. I do want to make one point very clear. The absolute key to a good education system are good teachers, first and foremost. I participated in a meeting the other day where someone asked me the question of, if I had a choice of one piece of technology to put in a classroom, what would it be? And the answer was very simple -- it would be a good teacher. That's the best technology you can put in any classroom in any country anywhere.

Now there are lots of examples of technology here at CES that can go in classrooms -- lots of inexpensive notebooks. If you look at some of the big international companies that are represented here at CES, they have great programs that they're running in terms of education in the emerging economies -- the Ciscos, the Microsofts, the Intels of the world are involved in programs. The Strategic Education Initiative run by the World Economic Forum, or the Fast Track Program to bring

wholesale modification to entire countries' education systems, like what's going on in Rwanda right now. These are some great educational programs where technology plays a big role.

And there are some other examples. Those are examples where companies form public-private partnerships with governments and get involved. There are also examples where governments are taking the lead in this area and, in a wholesale fashion, bringing technology into the classroom.

What comes to mind is what Portugal is doing. Portugal made a decision a few months ago to basically provide a laptop computer -- for every child between the ages of 6 to 11 in the country -- as an aid to the educational process.

But it didn't just decide to give them [students] the hardware. It had a very holistic program where they [the government] decided, "We need to train the teachers. We need to have high-speed connectivity to all the schools. We need to have rich content in Portuguese in math, in science, in history, and language and arts to supplement the tool."

And, they also were smart enough to realize that they could also use this as an economic driver. If the PCs were build in Portugal, that would create jobs for not only building the technology, but servicing it. Content can be created in Portugal. So there's an economic driving factor here as well. So a very holistic approach to looking at education, but to make sure that you look at education from all aspects -- teacher

training, content, technology as a tool, and making sure that everything works together.

Those are some examples, from a very high level, of what to look at from technology as a tool in education. But I think if you're really worried about the 75 million children who are not in school, you have to look at a slightly different aspect. It's not the United States that's going to solve that problem, or Western Europe or Japan that's going to solve that problem, because those 75 million children are in areas which are economically devastated typically, maybe war-torn, and maybe have natural resource or natural disaster problems.

And so there's another area of education that gets to be important, and that's the NGOs -- organizations like Save the Children*. What they do as first responders on the ground is try to get kids back into school when it's a war-torn environment, a natural disaster-ravaged environment, or just an economically very, very poor environment.

And NGOs like Save the Children are smart enough, also, to realize that you have to have a holistic approach to education. You have to have the right platform, the right infrastructure, the right connectivity, the right content, and the right teacher training if you want to bring technology into play.

Rather than have me talk about Save the Children, I want to invite two people out, Carolyn Miles, who is the chief operating officer of Save the Children, and Ed Granger-Happ who is the CIO of Save the Children. Carolyn and Ed, you can come out and join me?

Hi, guys. I see you came equipped with your laptop PCs. Intel Inside®, I hope, right?

Carolyn, let's talk to you first. As chief operating officer of Save the Children, you operate in a ton of different countries. You're on the ground, first responder, trying to get kids back in school. We at Intel share a lot of enthusiasm for what you are doing. Just tell us about some of the projects you have going on.

Carolyn Miles: Sure. Well, first I wanted to say that I really think that your message about not only technology, but training of teachers is so important. And so that's why this Intel® Teach program that Intel is sponsoring is so important, because really the teacher is the core.

So I wanted to talk for a minute about what we're doing in Bangladesh. And for those of you that don't know much about Bangladesh, it's an incredibly densely populated country, about 150 million people. About half the population is illiterate, and a very high percentage of the population is young kids. So education is really key to development in that country.

And you can see it when you visit Bangladesh. You go to a classroom and, in first grade, there are 100 kids and a teacher that looks a little harried. But there are 100 kids; they're very excited. Second grade there are 75 kids. They're still very excited; the teacher's still harried. By the time you get to the fifth grade, there are 20 kids in the classroom; and there's probably not one girl.

So there is a big issue of keeping kids in school. And not only keeping kids in school, but delivering an education that actually prepares them for the century that they're living in, not the 20th century, which is what a lot of Bangladesh is about.

So we're really excited about this new program, which gets these great Intel-powered classmate PCs into schools and, more importantly, works to train teachers. And we're starting off with 10 schools in Bangladesh. We're going to roll this out and eventually be able to reach 300 schools. It's a great example of a partnership that's really going to make a difference for these kids. And these are the kids that are going to really change the future of Bangladesh.

The other thing I wanted to touch on is that Craig mentioned that there are 75 million kids that -- forget about quality of education -- are kids that don't have a chance to even go to school. And of that 75 million, 37 million of those kids are in countries where they're either in conflict or war situations. In November, I was in Sudan, and that's one of the biggest places where the number of kids that aren't in school is huge.

So we're also really excited to be partnering with Intel on our Rewrite the Future program, which truly can rewrite the future so kids in places like Sudan just to be able to get into school. So we're very excited about that and very excited about Intel.

Craig Barrett: Well, we admire what Save the Children does and we're willing to be fully supportive of working with you in the future. Ed, I want to turn to

you for a minute. You're the CIO of Save the Children, but you've got another job. A nighttime job, daytime job, I'm not sure. But you're the chairman of NetHope*.

And NetHope is basically a consortium of first responders, like Save the Children and a lot of these organizations. You're the common information technology backbone for all of these people, right?

Ed Granger-Happ: Exactly, yes. We founded NetHope just seven years ago, and we now have 25 of the largest international non-profits. All the CIOs get together and try to solve "how do we bring technology out those last 100 kilometers to the most challenged areas in the world in which we work, where even electricity can be a basic challenge?" And we partner with technology companies, such as Intel, to do that.

As a matter of fact, our CEO of NetHope, Bill Brindley, was on stage with you at WCIT in Malaysia, where we were introducing the ruggedized version of the classmate PC, sort of the second-generation classmate. And we then took that initial relationship; and a group that Chris Thomas at Intel headed and a group that Jack Leavy headed got together and said, "What are some of the problems that we have to solve at our non-profit organizations that we may be able to use this ruggedized PC for?"

And Catholic Relief Services*, one of our members, has a program addressing the cassava root disease problem. And cassava root is like the potato, if you will, of most of the developing world. Six hundred million people depend on it in their food chain. And so we put together

a set of applications with some Microsoft* software and some Agilix* software for e-learning and also for forms routing for gathering basic information. And Intel and the NetHope team put this together in less than 60 days and it's now being deployed in Kenya.

I have here the third generation, if you will, of the Intel-powered classmate PC, a very nice tablet PC. And on this, we actually have a combination of e-learning, where there are lessons that the field workers, working with the farmers in Kenya, can go over some of the ways that they can combat cassava disease. It also has a little forms router; and this is used for data collection so that we can track the disease and see how it's spreading and being contained within the countries. And that information then feeds back and can adjust the e-learning platform as well, so we can get new information included in the learning and have a nice feedback loop of technology.

So we're really proud to be a part of this effort. We're delighted to be partnering with Intel on this, and it's great to see technology having an impact at the frontlines in the field. And we're looking forward to taking that to scale.

Craig Barrett: What I like from both your comments is basically that it's existing technology, but it's looking at a problem you're trying to solve. A holistic approach of right hardware, software, connectivity, and you can get great results out of it. Thank you both; and good luck on your continued projects.

Carolyn Miles: Thank you.

Ed Granger-Happ: Thanks, Craig.

Craig Barrett: Education is one of the big emerging economy issues. Health care is yet another one. And health care is kind of a two-sided coin; there are really two aspects to health care. If you look at the mature markets, like the United States where we spend 16 or 17 percent of GDP, $2.3 or $2.4 trillion a year, cost is the big issue. And how to get lower-cost, high-quality care and using technology is the debate du jour in the United States today.

If you look at many of the emerging markets, it's quite a different discussion. It's, in fact, how do you get healthcare to the rural parts of emerging economies, where in fact there usually are no health care experts? And so there's a lot of technology application impact to bringing medical expertise remotely to where it is needed in the rural areas.

But before I talk about that, there's a very interesting aspect as well. And we all know that prevention is always better than a cure. And in health care, that's absolutely the case. And I want to show you a great example of technology, which is targeted on prevention. And it has to do with HIV/AIDS.

I think most of you know that the U.S. government, President Bush, has a program, the Emergency Plan for AIDS Relief. And this is really a combination of public-private partnership of the U.S. government, initially the Kenyan Government, 19 international corporations. It’s

basically a public-private partnership to fight AIDS, to create an HIV-free society going forward. And when these people, these experts from these different organizations, sat down, said, "Well, exactly how can we do this? What sort of prevention program would work the best?"

All you have to do is walk through the halls of CES and I think you can get the answer.

One of the ways to influence the next generation and their behavioral habits, their attitude towards sex, their attitude towards communicable diseases, is to approach them through a tried-and-true method, which is interactive games. And Warner Brothers Interactive Entertainment* actually has designed a game to increase HIV awareness with youth. And it's a game which has started to be deployed -- three test sites in the Kenyan and Nairobi environment. And it has all of the right characteristics, which are youths in the game, which are symbolic of role model youths in the Kenyan society. Five different youth characters in the game have to interact with each other. And, through their interactions, they have to make choices. And the choices can lead to learning in terms of social behavior, social activities and sexual activities.

Let's just take a quick look at a trailer of this game that's been created.

[Video plays]

Craig Barrett: That's just a trailer that just shows the characters that are involved. But I think the really neat thing about this is, in fact, it's interactive. Five

people can play at once, representing each of the characters. They have to go through a series of decisions and choices in the slums of the African/Nairobi-like environment with local music, local characters. The decisions that the young people make playing the game can influence them, and that's the hoped-for impact.

But the initial results from the trials are being, in fact, monitored by the behavioral psychiatrists at Emory University* such that the game can be modified and improved going forward. The other interesting thing about the game is that if you're at all familiar with Africa, you know that just about every African country has an AIDS problem. You have to localize the content, and the game is set up to make it easy to localize the content going forward. It just rolled out about a month ago and is in trial today, but there's great hope for this and congratulations to the Warner Brothers team that put this together.

Now, that's part of the problem, prevention. Another part of the problem is, what do you do when you have inadequate resources to meet the need? Most of the emerging economies have urban environments and rural environments. The medical resources are in the urban environments; they're usually overwhelmed. If you're in a rural environment, it's very difficult to get resources.

There's been a lot of great technology work that addresses this problem. And we have a simple device here, a mobile Internet device, that has some great applications software put into it. And the application software is from Acuitec* and from Vanderbilt University*. The Vanderbilt University Medical Center has been a

leader in creating monitoring software capability that allows doctors to monitor patients remotely; and what better type of device than a mobile Internet device, as I'm showing you here.

Basically, wireless connectivity -- this one even has a WiMAX connection to it -- allows a doctor immediate access to a patient's vital signs, their medication, or their medical history when they're visiting the patient or even remotely. And this device also has video capability to allow remote monitoring of an operating room, or even remote monitoring of Vanderbilt doctors in the United States to patients in Africa. So in fact, you can rely on distant doctors to be monitoring the case as well.

So I think this sort of technology, relatively standard -- broadband connectivity, devices that are available from a number of suppliers, this is from [OQO] -- but their hardware, software from Acuitec and Vanderbilt University designed for applications in a rural environment. And you can just imagine that this is not just something to use in a hospital. But if you get into a rural environment with a broadband connectivity capability, a nurse or a doctor can take this device into a rural environment, and be in immediate contact back to medical expertise in a hospital or even in a different country and use it for diagnostics, and then treat the patient on the spot. Standard technology can have a huge impact on health care going forward.

By the way, somehow I hope HHS [the Department of Health and Human Services] in the United States realizes that this technology exists and will be able to reimburse patients in the United States for

the same sort of treatment that these patients in Botswana, South Africa, Kenya and India are going to get with this experiment.

But this is great use of technology, medical care, in rural environments.

I mentioned that that device has a WiMAX connection. Broadband connectivity is extremely important. I mentioned earlier if you go to sub-Saharan Africa, broadband connectivity is incredibly expensive. There is the opportunity to leapfrog to the next generation. That next generation capability is obviously going to be 3G and 4G like WiMAX, which is available today. If you've walked the halls of CES, you've seen some WiMAX demonstrations at various booths.

Two cities in the United States, Baltimore, Maryland and, this week, Portland, Oregon have been wired, or unwired, for WiMAX capability. There are about 400 active implementations of that around the world. We expect that to grow dramatically. And within the next three or four years, well over a billion people will be covered by that technology, not all using it, but it will be available in population centers exceeding a billion people.

But it's that sort of rich connectivity, the same sort of thing that president-elect Obama is talking about now -- broadband for all in the United States. This is what's happening in the rural economies today in terms of leapfrogging to the next generation of broadband technology.

I've talked a little bit about education and health care. Let me talk a little bit about the entrepreneur. And technology is being used creatively in the emerging economies to enable global entrepreneurs, and we see that everywhere. Technology allows you to reach well beyond your national boundaries. And you can access expertise and resources and funds to take an idea and bring it into the marketplace.

And that right environment, that access to technology, can have an impact on youths. One of the things that Intel does each year is to sponsor something called the Intel® International Science and Engineering Fair where literally millions of young children each year in high school do science experiments, go to local science fairs. The top 1,500 children from around the world come to a city in the United States each year for the International Science and Engineering Fair finals. This year, I think it's in Reno, Nevada, not far from here.

One of my favorite examples in this was a student in 2006 from India. The science experiment that he had was, in fact, to create technology, a low-cost device to help paralyzed people communicate with each other. And the interesting thing about that high school experiment from a youngster in India is that now Honeywell* has picked that technology up and is looking at it for application.

If you can think about it, if you're in a fighter aircraft pulling 9 gs, you're effectively paralyzed. And to be able to effectively communicate, that same sort of technology that this young Indian entrepreneur, a high school experimenter, was demonstrating to help

paralyzed people communicate, Honeywell is looking at that for its avionics package now.

But the other thing this young man did that I thought was very interesting was when he came to the United States and participated in the science and engineering fair finals, and he had 1,500 other youngsters like himself there, he saw the entrepreneurial expertise and experience and enthusiasm from all his counterparts. And so when he left, he started to create, in fact, a virtual community of people to comment on how to use technology to solve problems in the emerging economies.

And he now has a group of 400 of his young friends, plus several thousand university professors, and business professionals, in a virtual community, online, talking about, critiquing, and making suggestions to how to improve technology in the emerging marketplaces to solve problems. A great entrepreneurial approach from a youngster just in high school.

But there's an additional challenge here that if you're in an emerging market, and you have a great idea, how do you make advantage of that? How do you take it forward?

And this is really the issue of how do you finance bright ideas, whether they're tech ideas or just ideas in how to make a living. I think we're all familiar with Mohammed Yunus and the Grameen Bank* and Grameen Communication Company* and the telephone ladies of

Bangladesh. Dr. Yunus got a Nobel Prize for his pioneering work in micro-finance.

A few organizations have extended upon Dr. Yunus' work and taken that to the next level. A very simple, but very profound next level. The next level is if you're a poor person in an emerging economy in Pakistan, in Botswana, in Peru, or in Columbia, and you have an idea of how to grow your economic well-being, how to be an entrepreneur at the local level, but you don't have a bank account or any money, how do you get that financed?

Well, Kiva, K-I-V-A at Kiva.org has used Internet technology to achieve this. And Kiva has a very simple business model. Basically, what Kiva does is collect business ideas from 40 or 50 different countries in the local language, has a group of volunteers that translates those ideas into English, puts those ideas on its Web site, Kiva.org, and then allows anybody in the world to help fund those ideas. This is not charity. This is an investment in the entrepreneur.

There's a ninety-eight percent repayment rate, very similar to what Yunus found with his phone ladies in Bangladesh. Kiva does about one loan every 30 seconds or so, 20,000 loans a week. I would highly suggest you go to the Web site, Kiva.org, and see what it's all about, and see how you might contribute or might get involved. We'll come back to that in a few moments.

But let's just take a look at the impact that Kiva has in a place like Sierra Leone.

[Video]

Not a single one of those entrepreneurs is a high-tech entrepreneur. Very simple, fundamental business operations and opportunities, but the technology has indirectly allowed them to get the funds to progress, to make their life better going forward. A great of example of technology and what it can do.

I talked a little bit about public-private partnerships. The AIDS issue from Warner Brothers and the president's program on helping to eradicate AIDS, I think, were good examples of public-private partnerships. Quite often, public-private partnerships allow the system to move together much more rapidly than just the government alone or the private sector alone.

The governments can create policy, national agenda, and a vision. And they can increase the opportunity to embark on innovation and use technology through their polices. The private sector brings something to it as well. The private sector usually brings a sense of impatience and wanting to get on, make things happens. But quite often working together, the public sector and the private sector can make things happen that a single government or a single organization can't do alone. And that kind of collective effort, I think, has a great opportunity.

I wanted to give you a simple example of one of these in southwestern India, a little village called Baramati. It's relatively close to Pune. And

they embarked on a program there, in fact, to create a digital village. And they recognized that part of a digital village is, in fact, to bring PCs and information and technology into the classroom.

And if you take for a minute and look at India, it has somewhere around 800,000 small villages. And most of those villages may not have electricity. They may not have power of any sort. They have schools without books and without desks. To bring computer classrooms to those schools is extremely difficult. So they came up with a very creative approach, which is to say, "Gee, if you look at India, and you don't count in India PCs per school, you count schools per PC, how do you bring PCs into the classroom?"

So they took about a half a dozen school buses and just ripped out the inside and made them into computer laboratories with a microwave link on top. And they drive the school bus from school to school to school and let kids participate. I happened to be at one of the schools when the bus came by. And I was able to participate with the kids in their hour or two of learning that day.

And I came out of the bus. There was a young 10-year-old girl standing there. And I asked her, as I often ask young children, you know, "What's your favorite subject?" And she looked at me and didn't even blink, and she said, "Tuesday."

[Laughter]

And it took me about a microsecond to realize the bus was there. It was Tuesday. Her favorite subject was the school bus that came with the computer laboratory in it. Let's just take a little look at what happens every Tuesday at that school.

[Video]

Now, that school bus idea was the brainchild of Dr. Gogi at Vidya Pratishthan Institute of Information Technology* in Baramati. I was there about two years ago. I think it would be fun if we could just maybe go back and check in with Dr. Gogi today and see what's happening. So if everything works well, what I'd like to do is see if we can have a video conference with Dr. Gogi. And he's going to join us from Baramati.

And you can see on the Google Earth here, we're going from downtown Las Vegas over to India. And we're going to go zooming in to southwest India to Baramati. You can see where Pune is there. We're going to [Atella] Health Center apparently where Dr. Gogi is. Dr. Gogi, welcome.

Dr. Gogi: Great to see you, Craig, here.

Craig Barrett: Good to see you again, sir. I wonder if you can update us on what's going on since I was there in 2006. What other projects have you got going on?

Dr. Gogi: We are really happy that you are talking of half dozen buses. Now I am seeing a dozen buses out there now. We have around 13 such mobile vans. And since your last visit, we increased it by seven more buses. And right now we are giving the computer education to 20,000-plus kids.

And, in fact, this is growing day by day. And a lot of corporations have been coming forward to help us. And now, we will be getting another 17 more mobile vans in another six months. That is what is going on. So we have been busy in constructing the buses. We are having modifications. We are adding new systems. Now, we are coming to [unintelligible] PC to adding to the buses. So that's where we have been busy in that.

Another program we are running right now is to train the women of rural India in computers so that they should know how to use computers. And as a rule, they should give that facility to their kids. So we are running 107 such computer centers. And as [unintelligible] we are giving computer education to 12,000 rural women. So this is how we are going on.

Craig Barrett: That's fantastic. It appears you're in a medical clinic right now. That's part of your digital city program, isn't it?

Dr. Gogi: Yes. You are right that right now I am sitting in the [unintelligible] medicine unit of Baramati, which you must be remembering that you inaugurated at that time. This is now taken very well [unintelligible], and it is running very well. The facility which we are having in this

unit is the [Tele ECG]. This is a simple ECG machine which we are using to take the ECG of the patient which is electrodes which we are connecting to the patients.

And this ECG machine we are connecting to the computer. And we are getting the ECG on this computer screen, which we are transferring to the expert hospital, to experts. And we are getting the result of that within a few minutes, which we're giving to the patients. And we're giving the further treatment, what is needed.

Similarly, we are having another unit of [optomology] which we are using it for taking care of eyes. We are taking the anterior and posterior images of eyes, and we are sending it to the experts. As [of now], 700-plus patients have taken use of this ECG and 1000-plus patients have taken the facility of this optomology. And very soon we are expanding this to six to seven hospitals. That's all.

Craig Barrett: Well, congratulations on what you've been doing. I wonder if you could just take a minute and tell the audience from your perspective what it takes to make these programs scalable and sustainable. Do you have any secrets there?

Dr. Gogi: As the scalability is concerned, the results of what we are giving out versus what we are getting, because of which the corporations are coming forward. As far as sustainability is concerned, we are very clear that the sustainability [unintelligible].

And the education we are giving to these kids, we are charging $3 a year, which is sufficient to run the mobile van throughout the village. That's why this is a self-sustainable project. And we are getting these results these last few years. So we are happy with the self-sustainability, the participation of corporations, as well as the community itself.

Craig Barrett: Well, let me offer your congratulations to what you've accomplished, and the fact that you're really assisting in helping thousands of your fellow countrymen move forward. You've done a great job. Congratulations.

Dr. Gogi: Thank you.

Craig Barrett: Thank you.

[Applause]

Craig Barrett: You know, this is a university dean at an information technology institute which basically saw a need in a local community, saw what information technology could do to impact that. You heard in his words about school buses turned into computer buses, education institutions for women to teach them computer skills, and now, basically, medical clinics remotely located from the big hospitals, but still treating patients with big hospital care and quality. Standard technology applied in small doses impacting people's lives going forward.

You know, this whole issue of one step at a time, I think, is very important. When I was in Kuala Lumpur at the World Conference on IT several months ago, I came back to my room one of the nights. And quite often, you find on your pillow there's a little thought for the day. It's kind of like a fortune cookie, but on your pillow instead.

And the thought for the day that I saw in Kuala Lumpur was very, very simple. And it said, "A small deed done is better than a great deed planned." And what we've been trying to show you today are, in fact, small deeds done. That is, people taking technology, you know, and not the glitzy, glitzy technology we saw on the floor here at CES, but standard technology and applying that to the lives of people in emerging economies and rural environments and helping to change their lives one step at a time.

And I think it's always important to take a fresh look at what can happen in this respect. How technology can be used in creative ways to solve real-world problems. And, you know, the real-world problems we're talking about are hunger, poverty, education. Take the UN's Millennium Development Goals, if you will. Those are the problems we're trying to solve one step at a time.

And I think there's a much higher probability that we can solve them one step at a time than if we just wait for the high authorities to come up with the master plan and then cascade that downward. We have the opportunity to move forward.

And what we're doing is, in fact, coming up with a challenge for you, something called the "Small Things Challenge", one step at a time. And what we're going to do with this Small Things Challenge is, in fact, focus on some of the examples you've seen today, the Save the Children group and Kiva.org, for education and economic development.

And we've created a Web site, and we've got some supporters behind this program. It's smallthingschallenge.com. If you go there and click on it, my company, Intel, will donate a nickel for every click that happens, within limits.

[Laughter]

But, more importantly, if you go to that Web site, what you find, in fact, are links to Kiva, links to Save the Children, the opportunity for you and me as individuals to do something.

Now, we can't hope to do this by ourselves, you know? This is Las Vegas. You need star power to make something happen in Las Vegas. So what I have to do is have some star power out to help me. And what I want to do is invite one of the stars, the singing stars, Adam Levine, who is the lead singer of Maroon 5*, to come out and join me. Adam? There he comes.

[Applause]

Adam Levine: How you doing?

Craig Barrett: Hi, Adam.

Adam Levine: Good to see you.

Craig Barrett: You know, Adam, first of all, I've got to tell you my grandkids like you.

[Laughter]

Especially my granddaughter. You know, it's great having grandkids. I've discovered the four most powerful words in the English language.

Adam Levine: What are they?

Craig Barrett: I love you, grandpa.

Adam Levine: You're supposed to spoil them.

Craig Barrett: Well, you're supposed to spoil them. That's what I do. But, you know, I went to Maroon 5's Web site when I knew you were coming today, and it kind of reeks of social responsibility. How come?

Adam Levine: I think that we feel that it's our responsibility to do that, you know? We've been blessed with a lot of success, and the least we can do is give back in any way we possibly can.

Craig Barrett: You know, what we've been trying to do today is get the audience moved in that exact direction, which is it's all of our responsibility, and we can all take small steps to make things happen. One of the organizations that we talked about today that I think you're aware of is Kiva.

Adam Levine: Yes.

Craig Barrett: And you've got any thoughts about Kiva?

Adam Levine: Well, they're able to connect lenders to entrepreneurs in developing countries. So a food vendor can open a shop, or a water carrier can purchase a new cart, which means more jobs in the village, which means more economic growth for their community. And they're not looking for a handout. They're looking for an opportunity to better their lives. And you can help. Everyone can help no matter how small it is. So give them that chance, it would be an amazing thing, by going to the Small Things Challenge Web site.

Craig Barrett: You know, I think there's just immense opportunity. You travel a lot with your band, and I get to travel a lot with my company. And when you go to the emerging economies, you see what the crying need is for impact.

Adam Levine: Oh, yes, absolutely.

Craig Barrett: And when you can see that you do something that changes the life or the attitude of a small child, you know, that makes it all worthwhile, makes it very rewarding.

Adam Levine: Yes.

Craig Barrett: And this is all small things, one step at a time. And what I'd like to do is to help create this program, or create interest in this program. We've created a short video. And this video is going to appear on some Web sites. It'll appear on the smallthingschallenge.com Web site and YouTube and a few other places. But Adam helped us create this video that popularizes the Web site. And let's just take a look at this and see what it looks like.

[Video]

[Applause]

Craig Barrett: Thank you.

Adam Levine: Thanks.

Craig Barrett: You know, you do need star power to make these happen. And what Adam had to say about this, I think, is absolutely accurate, which is you travel, you see the impact that technology can have, you see the impact that your donations can have, and you see the impact in giving a child an opportunity for the future, hope and opportunity. And that's really what we're trying to do is give every child in the world hope and

opportunity. And that really requires them to have an education going forward.

Now, there are many artists supporting this. You saw them in the video that we just showed. And I want to bring another one of them out that you may have recognized, and that's Adam Duritz, who's the lead singer of Counting Crows*.

[Applause]

Adam Duritz: Thank you very much.

Craig Barrett: Thanks for joining us.

Adam Duritz: Thank you for having me.

Craig Barrett: You know, I feel awed by all of you singers around me. The one good thing is none of you have asked me to sing. So don't break that, right? But why are you interested in this program? What's important about this Small Challenges? What's important about helping people around the world from your perspective?

Adam Duritz: Well, I think it's a lot like the sort of things that we work on in our organization. For me, I think one of the biggest challenges we face in the world today is getting people to actually believe they matter, and to get them to believe that the lives they lead and the things they do can actually make a difference.

That sort of thinking is actually the only reason that a country like the United States exists. It's certainly the reason it came into existence. And at its core, it's the best and brightest justification for its continued existence today. Ask yourself, what's a democracy? Ask yourself, what does it mean to be part of a democratic nation? It means we come together in this place, bonded by an ideal, that the hopes and dreams and thoughts and beliefs of every single person matter. And no one person's wishes are more valued or valid than those of his neighbor.

When my band Counting Crows started the GreyBird Foundation*, it was with the intention of reminding people that it is still possible for each and every person in the world to make a difference. And that this is only possible if you believe that you matter. And that's why we work on a local level with local non-profits to raise awareness of the work being done by your neighbors in your town.

It's why on our national level we run our voter registration drive constantly. See, your voice matters in a democracy. And in a democracy, you speak the loudest when you fulfill the pact that we have made with one another to come together and take part through voting in making a nation. It's why on an international level we work with Kids for Tomorrow* to build and fund schools in Africa, beginning with the one we are helping to fund and the one we're helping to build right now in Nairobi.

And that's why I've come here today to speak to you on behalf of Save the Children and Kiva. Each of these organizations, like GreyBird, finds ways to empower and encourage people to step forward and take

their place in a world that has always told them it has no room and no place for them. We disagree.

Through education, the boundaries of our lives are shattered. That dirt road that marked the end of these kids' homes and the further horizon of a child's life, that dirt road becomes a path to an endless, boundless cosmos of knowledge and the opportunity of life their parents and grandparents can never even have dreamt of.

Save the Children knows that education is the key, especially for children. Save the Children knows that knowledge unlocks the doors that their parents have worked so hard to push open for them. And with Kiva, with Kiva it's possible for their parents to get the small bit of help that they may, it may be all they need to turn a possibility into a reality.

The truth is that micro-loans are changing the way we view the world today. And they're simultaneously changing the way millions of people all over the world look at the life that lies before them. So often and for so many people, a dream has been just that, a dream. But an organization like Kiva shows us that the difference between a dream and a life may just be something as small as the money it takes to buy a farmer some seeds or a cow or a motor for his tractor or the bicycle someone needs to get themselves to a job they now find themselves educated enough to perform.

Look, it's the oldest cliché in the book, but it's still true. You can give a man a fish and feed him for a day, or you can teach a man to fish and

feed him for a lifetime. All our organizations help teach people to fish. Save the Children and Kiva and GreyBird all work in vastly different ways. But in every case, and in each case, one thing remains true. We believe in the value and the universe of possibilities that exists inside each and every one of us.

And we want to work as hard as possible to remind each and every one of you that you are a part of this world. And the things you choose to do can and will make a difference. This is your world. There is nothing that you can do today that is more important or will make a greater difference than waking up and being a part of it. Thank you. That's really what I wanted to say.

[Applause]

Craig Barrett: Beautiful, well said.

Adam Duritz: Thank you very much.

Craig Barrett: We look forward to working with you on this program. And I'm actually looking forward to your concert tonight. All right?

Adam Duritz: Thank you. Our foundation really appreciates the chance to talk about this here.

Craig Barrett: All right.

Adam Duritz: Thank you very much.

Craig Barrett: Thank you.

Adam Duritz: Thanks, everybody.

[Applause]

Craig Barrett: What we tried to show today in little bits and vignettes is that, in fact, technology can make a great impact on people's lives in the emerging markets. It can change their lives forever going forward.

Whether it's Save the Children or Kiva or the programs going on in Baramati, or the [unintelligible] tech program in medical health care, or NetHope and the cassava root disease problem, or the HIV problem that Warner Brothers is working on, all of those are one small step at a time to make the world a better place, focusing on education, on healthcare, and economic development.

We've also tried to show that these are not problems that any one organization can solve by itself. Each and every one of us can play a role going forward. And partnerships and collaborations are fundamental to drive these solutions, big companies, companies working with governments, but, more importantly, individuals making a contribution as well.

So what I hope we've tried to convince you, and what I hope we have convinced you of today, is you can make a difference. You can make a difference for the future of the children whose faces you've seen today.

Go to the smallthingschallenge.com. Get your friends, your cohorts, your family to go there. Do something wonderful today. Lots of work has been done, but lots more needs to be done. Thank you for your time today.

[Applause]

[End of recorded material]