

**CENTER FOR
STRATEGIC AND INTERNATIONAL STUDIES (CSIS)**

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**INTRODUCTION:
KAY BAILEY HUTCHISON (R-TX)**

**SPEAKER:
MICHAEL DELL,
CEO, DELL COMPUTER, FOUNDER,
MICHAEL AND SUSAN DELL FOUNDATION**

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KAY BAILEY HUTCHISON (R-TX): (In progress) – I cannot think of a more respected woman in our country today than Carla Hills. And I so appreciate her introduction and all she did for trade in our country and also what she's doing for CSIS. I also want to say that I think CSIS has done an incredible job of being a foreign policy think tank and now branching out into energy as also an international issue.

And I am on one of the advisory boards of CSIS, and my friend Anne Armstrong, another incredible Texas woman, is chairman of the board and does a great job. But CSIS is a wonderful resource for us, and John Hamre does a terrific job. I worked with him when he was in the United States Senate on the Defense – the Armed Services Committee, and he has done a great job at CSIS. And of course Sam Nunn as the chairman also has done a great job.

So, thank you to CSIS for doing so much as a resource for our country, especially in international affairs. I just look around the room. I think there is no better columnist in the foreign affairs, especially the Middle East issue, than Tom Friedman. We try to get Tom over about every month or two to just give us more insights because I think he understands the Middle Eastern situation better than just about anyone that I have seen and I so appreciate that he is here. The ambassador from Ireland, we welcome; former colleagues and friends, it's just great to be here.

But let me introduce Michael Dell. Now, he's a hard person to introduce because he is such a leader in business in our country. I am very encouraged and really inspired by his story because it shows what persistence and hard work and not taking no for an answer can do. And if ever there was an entrepreneur that personified the spirit of entrepreneurship, it is Michael Dell.

The small company that he started began in his dorm room at our joint alma mater, the University of Texas at Austin. Now, we in Texas say he is our most famous college dropout. (Laughter.) We know that Dell has revolutionized the computer industry by making computing accessible to customers all over the world. He has created a Fortune 50 company that has 90,000 employees and \$58 billion in annual revenue. Just think what he might have accomplished if he had graduated from college. (Laughter.)

What he has done though with his creativity and the company that he formed is even more inspiring. He has turned to a leadership role in philanthropy. In 1999, he and his wife Susan established the Michael and Susan Dell Foundation to address issues facing children who live in urban poverty. During its first seven years, the Michael and Susan Dell Foundation has committed more than \$330 million to non-profit organizations from Central Texas to India, focusing on children's health, education, and other issues that would benefit for children.

Earlier this year, Michael and I both addressed a Texas education summit. In his speech he pointed out that technology is rapidly changing our education system and it's making education more important than ever. Right now, our country is competing against economic powers like China and India, and we need to focus our education to meet these challenges. Dell is helping to meet that challenge, among other things, by becoming a founding partner and investor in the Texas High School Project, which is a \$261 million public-private partnership focused on improving high school graduation rates and increasing college access for students in major urban areas.

Michael has come to CSIS today to talk about another issue that certainly has international overtones, which is energy. This effort is going to require ingenuity and innovation on our parts. We all know that the price of energy is going up because of the supply growing all over the world and the demand not growing. So this is going to be an issue that we are going to have to face globally.

In 2003, Michael spoke at the University of Texas at Austin commencement. He said we are fortunate to live in a country that accepts and even encourages experimentation and new ideas. I also think we are fortunate to live in a country that has someone who would seize that opportunity and turn it into the company that is Dell Computer and the foundation that is the Michael and Susan Dell Foundation, giving back so much that will make our state and our nation the very best. Please welcome Michael Dell. (Applause.)

MICHAEL DELL: Thank you very much, Senator, and thank you all for joining us today. It's great to be here in Washington. I've had a nice day-and-a-half meeting with lots of folks here at the capital. I want to thank the associations from around the world for hosting this event, particularly the Center for Strategic International Studies.

Energy and environment are definitely hot topics, no pun intended; in fact, there's never been a time in history or business where it's been more important for organizations of all sizes to partner together to positively impact the earth that we all share. And I just left a meeting this morning of the technology CEO council, which is a group of eight CEOs in the tech sector. Each company is pursuing the energy issue in its own way and they're all focused on how they can be more energy efficient, how they can minimize the impact on the environment, and of course the White House is right now hosting the climate change conference to discuss this very issue.

As a global technology leader, we meet with our customers and policymakers from around the world on a regular basis. And through these conversations, two things are clear: First, that it's not enough for Dell to be an environmental leader; we also need to partner with our customers through the technology we deliver to dramatically improve our own customers' environmental performance. And second, these efforts are shaped by what we call the regeneration. The term regeneration refers to people of all ages who share a common interest in renewable resources, recycling, and other ways of sustaining the earth's natural environment.

Unlike previous generations like the Me-generation or generation-X, generation-Y, the Re-generation is comprised of globally connected individuals who use technology to harness their ideas and collective beliefs regardless of their age or geographic location. And our customers have rallied around our leadership in the Re-generation. But in talking to them, they also consistently tell us that technology is just too complicated. It's worth spending a minute on technology complexity because it's directly related to how we improve business productivity and also how we improve the environment. So here's a couple facts just to kind of illustrate the point.

Most CIOs, when you go and talk to them, they tell you that this is kind of their biggest issue. They also tell you that they spend about 70 percent of their IT resources just on maintaining the technology they have, not on developing new things or new innovations; that's really not very efficient. They also want to grow their organizations in an environmentally responsible way, but you know, with the growth that they're experiencing comes enormous growth in data which means more servers, more data centers, more PCs.

Those data centers are drawing an enormous amount of power. They count for about 1.5 percent of the nation's power use last year. That's a whopping 60 billion kilowatt hours. And digital data is growing at an exponential rate. We've estimated that there are about 161 exabytes of unique information that was created just last year. That's about 5,000 times – that's more than we've created in the last 5,000 years. So, people are storing information at just an enormous rate.

Mobility is also another major trend that's accelerating the number of devices that are connected to this network. The Wall Street Journal recently reported that more devices will connect to, you know, the global network in the next five years than have been connected in the last 15 years. So, this leads to an incredible amount of complexity. We don't just suffer from IT complexity; there's also an element of organizational complexity at play here.

Today in business, IT and energy use are kind of thought of as separate issues and they're really handled by two different departments. You have the IT department handling the data; you have the facilities department; you have somebody else maybe handling the energy, and they're not necessarily talking to each other. This is particularly worrying when you consider that between 40 and 70 percent of the costs of a corporate data center go into power and cooling. So, the people that are responsible for, you know, sort of putting in these data centers aren't really responsible for the energy that they're using, at least today in many companies. The challenges like this, I think, can also be a catalyst for transformation, and managing the high cost of these data centers has sparked a lot of new thinking about how we use technology.

In the 1990s as the industry was booming, IT professionals focused pretty much on one thing, it was the price-performance ratio. They wanted more computing power at a lower cost and that was the only thing that mattered. Well, today the IT industry is being shaped by an entirely new metric; one that is kind of transforming the landscape of

IT, and that's performance per watt. Performance per watt is how much performance you can get for each unit of energy that you're using. This is a simple metric but it really represents a sea change in how the IT industry looks at the future of technology.

Thinking about IT in terms of performance per watt forces businesses like ours to rethink the way products are designed and the way they're used. And in our company we know that simple IT means more energy efficient IT. And this point, I'm proud to say, we're an industry leader. We developed several new products that lead the industry in energy efficiency. For example, our highest volume product, Optiplex 745, for example, uses about 70 percent less power than its predecessor. And we recently launched a new server which draws about 34 percent less power while delivering 105 percent greater performance per watt over previous generations.

But IT, efficient IT, really goes beyond just software. It goes into, you know, beyond hardware, beyond software; it goes into bringing down energy consumption and there are a couple of examples of things that can be done. You've probably heard about virtualization technology, and this is a great technology that allows you to turn one server into hundreds of virtual machines. So the system can do – one system can do the work of many servers before it. Fewer servers means less complexity, easier to manage, and certainly lower energy consumption.

The second is power management and we've all seen this. You know, if you drive downtown at night and look at the building you'll see lots of computer screens aglow but nobody's looking at them. (Chuckles.) This is actually a lot of energy usage inside organizations, and there's software that can automatically power down those computers and the monitors during that time so you don't waste energy and, you know, while they're not doing anything.

So if your office closes about 6 p.m., doesn't open until 8 a.m., that's about 14 hours of energy that you can save. In our new products, we've sort of built these features in so it sort of happens automatically. These solutions are actually available today and as leaders of this Re-generation, we're going to help our customers make use of them. If you think about it, when looking at the environmental impact of a company, we've been focused on carbon emissions for a long time now and in heavy manufacturing, chemical industries, it's a really important metric.

But in the technology sector, most of our carbon footprint comes really from the power and from the electricity that we use. So for us, the question is not just how do we cut the energy use, the fact is that we're a growing company, we're going to grow and we're going to use more; the issue is whether we can do it far more efficiently with a smaller carbon footprint.

So at Dell we pay very close attention to our carbon intensity, or in other words our ratio of carbon emissions as compared to our revenue. I think this is actually a much more revealing measurement about how we're dealing with our energy challenges and

I'm proud to say that our carbon intensity is less than half that of our nearest competitor and among the very best in the Fortune 50.

Nations that are looking for a comparable metric should focus on their energy intensity, the amount of energy consumed per unit of GDP. The good news is that with all the productivity increases as a nation, we're actually improving. Since 1990, the energy consumption per unit of GDP has dropped according to the international energy agency. Ironically, much of this credit goes to technology. Economists say our energy intensity is down because most U.S. businesses have adopted information technology and become more efficient. And as we simplify IT, I think that trend's absolutely going to continue.

But just riding the trend is certainly not enough and I feel strongly that governments can play a significant role in driving energy efficiency as well. So there are a few different ways to go about it. First, governments can reward green power producers and private sector organizations that achieve greater energy efficiency and these could be credits for researching or producing energy efficient technologies, could be funding for projects that teach businesses how to be more energy efficient, or incentives for businesses that encourage energy efficient practices like telecommuting.

According to a recent CEA report, this alone, telecommuting, could save 840 million gallons of gas per year reducing greenhouse gas emissions by nearly 14 million metric tons, not to mention employees might like telecommuting. Government agencies can also run more efficiently by reducing the off-hour power consumption and measuring performance per watt and energy intensity. And they can encourage their contractors to use energy efficient IT equipment and encourage their power producers to generate cleaner energy.

And I'm not just talking about here in the U.S.; these suggestions are really relevant to policymakers worldwide, and it's particularly important in emerging markets. The International Energy Agency recently said that the emerging markets will represent more than 75 percent of the increase in CO2 emissions in the next 25 years. So, whatever the specific proposal, we really have to recognize two things: the first is that technology plays an important role in helping companies meet their energy goals, and second that governments can too.

And for Dell, we're certainly going to do our part. In fact, I'm proud to say that today we're announcing that by the end of 2008, we're going to be the first major computer company to become carbon neutral; we certainly hope we're not the last. And I say this with all seriousness. I think we have a critical need to build a worldwide community dedicated to improving the environment. We need organizations to build long-term partnerships with their customers, their stakeholders, and suppliers of all sizes to make a difference.

That's why today we're not just announcing our plan to go carbon neutral; we're going to go even further. We're launching a program called Plant a Forest for Me. And

this enables our customers, organizations worldwide, to share best practices and partner with Dell to facilitate the planting of millions of trees in sustainably managed reforestation projects. And this is an extension of a program we announced earlier this year in January at the Consumer Electronics Show called the Plant a Tree for Me Program where individual consumers could, in this case you know, essentially buy a tree.

But, I'd like to take a few minutes and kind of describe how this program works. You know, essentially what a customer can do is when they purchase a PC, a notebook computer \$2, or a desktop computer \$6, essentially allows you to buy a tree which offsets the carbon emissions from the energy that that computer produces. So, pretty simple program, pretty low cost, so now we're extending that to our customers.

I'd also like to take a minute to announce who the founding members of this program are in the Plant a Forest for Me. These are companies that I think are heroes in joining us in setting a high bar on day one. These are ABN Amro, Ask.com, AMD, Salesforce.com, and Welplight, and I can tell you that there are many, many more, they're quite interested so please join me in giving a round of applause for these environmental leaders. (Applause.)

So now let me go back to Dell and what we're going to do to eliminate carbon on our own and, you know, certainly like many other companies, we're going to reduce energy consumption. We're also going to use offsets for the carbon we can't eliminate. But you'll see us do this in a unique way. I think, first of all we're going to conserve as much energy as possible running our plants and our buildings and our workforce smarter. Second, we're going to invest in more energy-efficient equipment and technology as a company. And third, we're going to buy as much green power as we can. We already get about 10 percent of our power in Austin from green power sources and if we can buy more we certainly will.

And fourth, we've asked all of our primary suppliers to report their greenhouse gas emissions data to Dell; for those who don't, or if their emissions are deemed excessive, they can be penalized in the quarterly business reviews that we conduct with all of our suppliers. And fifth, we're going to partner with consumers to help the environment to make every individual, to help every individual make a difference.

One of the ways we're doing this is through this Plant a Tree for Me program where customers can participate and you know, put essentially a tree in the ground, \$6 for a desktop, \$2 for a notebook, and 100 percent of the funds for that go towards these, planning these reforestation projects.

So to conclude, it's clear that we'll continue to listen, to engage, and create opportunities with our friends and competitors to join us along the way. In fact, while we vigorously compete in many areas in our business, when it comes to environment there actually are no competitors, only partners. And I believe technology plays an indispensable role in the American economy and we believe technology should play just as critical a role in energy efficiency and environmental protection in the years ahead.

So, thank you very much for the opportunity to share this news with you today. I think Carla is going to come up here and join me and we're going to take a few questions.

(Applause.)

CARLA HILLS: Well, I think you all agree that Michael Dell has stretched our mental horizons about what is in the art of the possible. He is on a short timeframe, but is able to take a couple of questions. Are there any questions? Yes, right there in the middle of the room. Would you state your name and affiliation?

Q: My name is Henry, vice president for – my name is Henry Hernandez, and I'm a vice president of Diversity Inclusion for American Express. And in one of my previous lives, I was actually in the environmental industry, and I could see where leveraging the environment could also be a business driver for a company similar to what diversity inclusion is today in creating a business imperative.

But what I'm curious about is how are you integrating your sustainability efforts with the things you are doing from a philanthropic perspective in order to drive those same efforts as well as trying to create a competitive advantage in the marketplace?

MR. DELL: Well, I think from a philanthropic standpoint, our company has been very focused on really how do we get computers in front of more kids who don't have them. And certainly there are lots of issues for our company to focus on but that is one that our company – that has kind of resonated inside our company. We also have lots of programs. I mean, this is community involvement month at Dell so we'll have about 40,000 people who will volunteer their time, actually volunteer their company's time, to participate in any number of activities, whether they are environmental or any type of community activities.

I also think that when you consider the things that we're starting to do now with our suppliers, when you say, okay, let's look at our supplier community and how do we help them reduce their greenhouse gas emissions, how do we fundamentally lower energy consumption in our highest-volume products by 70 or 80 percent, the micro-effects of that in terms of this are actually tremendous because you actually can shape the entire industry in terms of the incoming ingredients – you know, we'll sell 40 million computers a year, so essentially every component supplier has to figure out how to reduce its energy.

You know, and I talked about this 70 or 80 percent, it amounts to about 70 or \$80 of reduction per year for an end customer. And that sets up a competitive dynamic and causes the rest of the industry to kind of want to respond to that. So I think if you multiply all of that out, I mean, it gets to be a pretty big impact.

MS. HILLS: Maybe one more question. Yes, or no.

Q: Thank you. (Off mike) – CSIS. Mr. Dell, I wonder if you could give us your view of where you think we'll be about 10 years from now with IT doubling in power every year, which is I guess multiplied by a thousand in 10 years. Where is all of this going, and what is your view on Ray Kurzweil, "The Singularity is Near," if you have read it, the merging of the super computer with the human brain 20 to 30 years out.

MR. DELL: Well, I have heard Ray speak many times and it's quite fascinating. You know, I think we are really still at the beginning – (chuckles) – of what the fundamental technologies can do. And if you think about computers today, you have this incredibly powerful microprocessor, and then we have our brains, okay. And the interface between the microprocessor and the brain is still quite primitive. It's a keyboard – (chuckles) – and a screen. Well, visualization is actually quite powerful as a way of transferring information, but the keyboard is maybe not so fast, and certainly we can imagine things far faster than we can make them happen on the screen.

If you imagine an architect or a scientist trying to design something, it might take them an enormous amount of time or energy to put their idea into the computer, if you will, and then leverage all of the strengths of computers. I think there is still enormous potential in the area of human interface and visualization, and certainly there is not going to be slowdown in the amount of computing power. And, you know, it's going to continue this idea of taking power that was available to only a few and bringing it to really anyone.

So if you look in bioscience field, you see really small companies now essentially able to purchase super computers to create new compounds and simulate them, which was just simply not possible, you know, four or five years ago.

MS. HILLS: Please join me in saying thank you for taking your time to be with us.

(Applause.)

Terrific – a really terrific presentation that added so much to our day today.

(END)