0107 CES Rich Templeton Keynote

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Rich Templeton, President and CEO, Texas Instruments
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RICH TEMPLETON: Thank you. When you think of all the memorable and fun moments of your life, it's likely that Texas Instruments has been there with you for many of them, from the world's first transistor radio to the Speak & Spell, from the calculator that helped with your homework to digital cell phones and now digital television. TI has grown up with the consumer electronics industry and quite literally we've grown up with many of you.

Our role in consumer electronics is to create and manufacture foundational technology, core platforms and processors that put more "wow" in your life. We don't do this alone; our strategy is to collaborate with the most innovative and creative companies in the world.

Yesterday's *Wall Street Journal* published a gadget guide and at least three of the eight devices have TI solutions inside: The Kodak EasyShare Camera, the Samsung Pocket DLP Projector and the SlingBox Personal Broadcaster.

In total, more than 500 companies exhibiting here at CES are using TI technologies and applications that range from broadband at your home to 3G cell phones and from the smallest multimedia jukeboxes to groundbreaking digital cameras.

In recent years we have been paying lots of attention to the television market, an industry that has been through a fascinating evolution. In my own life I remember black and white TV. Of course, I was a very young kid when TV was black and white and I think my dad was a rather late adopter.

But now the industry is moving from digital to high def television. TI's objective is to push television to the point that you cannot distinguish the recreated image from reality.

Of course, when consumers hear the words "reality TV" they don't envision picture quality. Today they think about Fear Factor or the Apprentice, which hold an important lesson for this industry: There is no room for the faint of heart and consumers won't hesitate to say you're fired. The only solution is to constantly deliver extreme makeovers for consumer technology and that's what TI has been doing for decades.

These days when TI thinks about reality TV we think about you. It's interesting that the world's first reality TV show was This is Your Live. It dates back to around the time that TI first got involved with transistors and in consumer electronics in the early 1950s. The show has been produced in more than 11 different countries and has been on the air constantly for more than 50 years.

Since it's such an international long-running and personal show we thought it would be perfect to produce our own version of This is Your Life and we've selected a very special honoree. Today's guest of honor is a hero who literally carried the economy through the last recession, the most generous person on the planet and someone who is sought after by virtually every company exhibiting at CES. Have you guessed it yet? We're here to honor you, the electronics consumer and This is Your Life.

Now, since we can't bring all of you up here on stage, we've brought in a few guests to help with our celebration and we'll get things rolling by taking a look at your life in the high definition era.

ANNOUNCER: You've watched him on television for over 40 years, whether he was on the football field leading the Los Angeles Raiders to a Super Bowl victory or in the Fox Sports studios analyzing NFL games. Here's NFL legend and Pro Football Hall of Famer Howie Long. (Applause.)

HOWIE LONG: Hey, Rich.

RICH TEMPLETON: Hello, Howie. Thanks for joining us.

HOWIE LONG: Nice little setup you've got here.

RICH TEMPLETON: We try. You spent 13 seasons with the Raiders, played in eight Pro Bowls and you're in the Football Hall of Fame as one of the greatest defensive linemen in NFL history. Do you miss playing games?

HOWIE LONG: Well, Rich, I don't miss the aches and pains that come Monday morning and I certainly don't miss the surgeries, ten and counting, but I'd do it all over again if I had the chance in a heartbeat.

It's funny though, when I first came to the Raiders I wasn't sure if I was going to make the team. When you go from Villanova to the Raiders it's kind of like going from a monastery to Rahway Prison, one week you're playing against the University of Delaware, the next you've got Art Shell, all 320 pounds of him pounding you on a daily basis. Well, I did end up making the team and in the process I learned a lot about the kind of commitment and sacrifice that it takes to be successful.

RICH TEMPLETON: Well, we're glad you made the team.

Now you have your life in the studio and Fox Sports has made a huge move into high def sports broadcasting. The world has been talking about HDTV since before you played college bowl but now it really has reached critical mass with high def infrastructure, content and equipment all in place. It's safe to say that he HD era is here. In North America alone more than 45 different channels offer more than 5,000 hours of high def

content every week and the content keeps expanding with movie channels, primetime dramas and sitcoms and, of course, sports.

HOWIE LONG: Well, speaking of sports, at Fox we had the most aggressive HD schedule of any network last year with six national football leagues in high definition every week. As a matter of fact, Super Bowl 39 will be the first ever Super Bowl shown in high definition.

RICH TEMPLETON: Well, for sports one of the big issues as we understand it has been production equipment and facilities, trucks that can handle remote high def broadcasts have been fairly scarce but all the new broadcast trucks being built now handle both HD and standard signals. What difference will consumers notice from this?

HOWIE LONG: Well, I think it means you'll be seeing a lot more regional sporting events in HD in addition to national broadcasts. Already cable companies are pushing regional high def sports to differentiate from satellite and to move the subscribers to the digital tier. Fox showed the first ever regional NBA game in high definition just last month, the Spurs versus the Magic, and throughout the course of this year Fox's regional sports networks plan to do 200 regional games in high definition.

RICH TEMPLETON: Well, it's clear there's no going back from here and the momentum is only going to grow stronger as the U.S. government resolves the last regulatory hurdles that are holding us back from an all digital TV world.

For our part, TI is urging Congress and the FCC to quickly establish a firm deadline for the transition from analog to digital. We'd like to see this happen as soon as possible because it's good for consumers and it's good for the industry.

HOWIE LONG: Well, speaking of momentum, TI has built a pretty good head of steam in high def, too. I see HDTVs built with your DLP technology all over the place right now.

RICH TEMPLETON: No, we love it, it's exciting. DLP first gained traction with front projectors for the business market. In fact, it took five years from 1996 to 2001 to ship our first million DLP units and then another three years to ship an additional two million units. But then things really accelerated when we got into the rear projection HDTV market. We've shipped an additional two million units in just the past eight months. That's five million total units shipped and the momentum is still growing.

For big screen high def TVs we've gone from zero share just two years ago to serve 16 percent of the North American market today and DLP has consistently been gaining share and outselling plasma. You'll find DLP inside more than 75 models worldwide.

HOWIE LONG: Well, a couple of those five million or eight million shipped are at my house. And it's a no-brainer, a better picture for basically half the price of plasma.

RICH TEMPLETON: Well, quality combined with affordability is how we're approaching this market.

But you know, we're doing it with mirrors, quite literally. DLP stands for Digital Light Processing and we use microscopic mirrors that can display more than 16 million different colors with extreme clarity and detail and we do it without tubes, phosphor or electronically charged particles. It's just pure light and accurate colors that do not degrade or fade over time.

HOWIE LONG: Well, I've been hearing a lot about this model that you just brought out. It's DLP that's so skinny you can hang in on a wall.

RICH TEMPLETON: Well, we're excited about it. This is the RCA Scenium Profile, something that we collaborated with Thompson on. While it might be a skinny DLP, it has a 61 inch screen that's rich with clarity and extreme detail. In fact, the Scenium Profile won a 2005 CES Innovation's Award and this is the second year in a row that a high def TV built around DLP has won this top award.

HOWIE LONG: I know and that's why I like it. In any light and any room DLP always gives an incredible picture. If I'm watching a movie it's just like being out in the theatre or frankly even better because I'm at home. And when I'm watching sports it's like I'm back in the huddle except it's my wife beside me instead of some butt ugly offensive lineman. (Laughter.)

RICH TEMPLETON: Well, now, your wife is Diane Long not Teri Hatcher, correct?

HOWIE LONG: Yeah, Rich, that's right, Diane Long Esquire to be correct. It's good to know when your wife is an attorney, trust me. And I'm sure Dianne really appreciates you clarifying that.

But you know, Teri and I had a lot of fun working on the Radio Shack commercials, all 170 of them. Unfortunately, now I work on them with a far less attractive Terry, Terry Bradshaw. (Laughter.)

But there is a bright side to this; working at Radio Shack does give me the inside track on what's coming up next in this very industry.

RICH TEMPLETON: Well, you know, if you were out on the floor this week the next big thing for HDTV is the 1080P format. In fact, this Samsung unit that you can see is one of CNET's finalists for The Next Big Thing award. It's high resolution, high def and that's why people refer to it as real or full HDTV. The Samsung unit we have on stage here is one of if not the first commercial HDTV with 1080P. It's a fantastic way to watch fast motion pictures like sports.

HOWIE LONG: Well, fast action resolution is why Fox currently uses 720P but as 1080P comes online it's just a matter of time before content starts coming out in that very format.

RICH TEMPLETON: Well, Howie, have you brought something else along?

HOWIE LONG: Well, this is real exciting but, you know, you're not the only one who's brought something out for this little bit of show and tell. I brought me a little box here if I can limp on over here.

RICH TEMPLETON: Those surgeries are working on you.

HOWIE LONG: Yeah. This is the Cinego Instant Home Theatre from Radio Shack and it's an Innovation Award honoree this year. In this one piece of equipment you get the DLP front projector, speakers and a DVD player. Just set it on the table, point it at the wall and then any room instantly becomes a home theatre. You know what, this is so easy, Rich, that even Bradshaw could figure this out. (Laughter.)

RICH TEMPLETON: Well, I'm not going to touch that one, Howie, but we are --

HOWIE LONG: I'll handle him.

RICH TEMPLETON: We are excited. Cinego just adds to the success of front projectors. DLP has almost 40 percent of the front projection market overall. We serve 95 percent of the projectors that weigh less than two pounds.

It's been interesting to see the usage of front projectors and how they've evolved and it's very similar, in fact, to the way things have evolved with VCRs. Both markets started with huge, expensive machines that were limited to the office but as VCRs came down in size and in price people started taking them home on the weekends. Now we're hearing stories all the time about businesspeople taking home front projectors and plugging them into their DVD and game consoles, and Cinego gives us just another market to track. I'll still my neck out and claim that TI serves 100 percent of the market for instant theatres.

HOWIE LONG: Well, speaking of taking them home, Rich, I'm going to take this home. You got a problem with that? (Laughter.)

RICH TEMPLETON: I assure you I do not. Someone else may but it's up to them, Howie.

HOWIE LONG: Well, I'm going to claim this one.

RICH TEMPLETON: Okay, it's all yours.

But, in fact, before you go I've actually got something to show you that's sized appropriately to my size. This is the world's first handheld DLP projector. This pocket

projector is from Mitsubishi. It runs on batteries and has a slot for an SD media card. Load your content onto the card and you're ready to go. Or you could use it for digital TV.

By 2007 and maybe sooner, cell phones will use TI's new Hollywood chip to receive and display digital broadcast TV, so you could link your phone to this projector and it's a portable big screen digital TV.

HOWIE LONG: Wow and all that fits in your pocket; it's pretty incredible. Can I get that in my pocket, too? (Laughter.)

RICH TEMPLETON: I've got a policy, I will not be in your way. (Laughter.)

You know, incredible is really what we're shooting for in this business. It keeps us up at night trying to better touch and enrich people's lives. And as you know, Howie, you've enriched people's lives in your own way, both on the field and off. We know you've got the playoffs this weekend, it was really great to have you here.

HOWIE LONG: Well, I'm glad to be here. This is really fascinating stuff. I look forward to seeing you all at the Super Bowl in Jacksonville, which we cover, by the way. As a matter of fact, as I mentioned before, it will be the first Super Bowl done in high definition, so if my head looks a little bigger or that little pockmark on Terry's face seems a little more prominent, it's okay, it's just high definition. You folks take care.

RICH TEMPLETON: Don't forget your Cinego unit, Howie.

HOWIE LONG: Yeah, thank you, buddy.

RICH TEMPLETON: Thank you very much, I appreciate it. (Applause.)

Now, from small screens to big screens, options and quality for digital TV and video continue to improve. We're seeing the same kinds of improvements as people move from their living room to go out on the town. Going to the movies is one of the great American pastimes and DLP Cinema is TI's solution for bringing incredible picture quality to the digital movie theatre. DLP Cinema relies on our most advanced Digital Light Processing technology. It can create 35 trillion different colors and that's more colors than you can capture with film.

To give you a peak at how life at the movies is changing, we've installed a DLP Cinema in the back of this theatre and we're going to use it to visit with our next guest.

He's everybody's favorite ogre, our swamp-loving fellow who churns out box office revenue like dragons breathing fire. Via the wonder of DLP Cinema, here's a true fairy tale hero, Shrek.

(Video segment.)

RICH TEMPLETON: Now, we couldn't actually get Shrek here today in person; it turns out he had a conflicting engagement in a land far, far away, but we do have a live guest that we're very excited about. In fact, he's one of the key people behind the company that created Shrek in the first place.

ANNOUNCER: He's produced some of your all-time favorite movies, he was the president of Paramount Pictures and chairman of Walt Disney Studios. Today he's the cofounder of DreamWorks Studios and CEO and director of DreamWorks Animation. Please welcome Jeffrey Katzenberg. (Applause.)

RICH TEMPLETON: Well, Jeffrey, thanks for coming to our show today. I think you did have a chance to participate this morning in Carly Fiorina's keynote, so I guess we should call this your CES sequel or Katzenberg 2, if that's okay. You're an expert at sequels.

It's really fascinating, you saw the example of Shrek playing and what's happening and in many ways digital is revolutionizing the movie and the film business. And maybe you could take just a couple minutes, give us a sense, maybe starting on the creativity side, what does it unlock, what does it let you do?

JEFFREY KATZENBERG: Well, let me talk about it in terms of both on the animation and the live action side. First on the animation side, you know, digital has really created a revolution in our business. In literally less than ten years now we've seen the business pretty much transition from 2D into CG. And I think probably the most compelling thing about CG is how immersive it is for the audience. It really is an opportunity for us to take our audience into a world that's got a verisimilitude, a sense about it that feels as though it really envelops you in its story and in its characters and it's allowing us to tell different stories and to tell the story that we do tell in way more complex and creative ways.

Let me give you a teeny, little example of this. In 1988 The Little Mermaid, which was the last movie that was inked and painted by hand, the color palette for the character of Ariel, the lead, originally was designed with 11 colors in terms of different aspects of skin tones, hair, costume and the movie was over budget and behind schedule and in order to get it back on schedule and budget we cut the number of colors from 11 to 7.

RICH TEMPLETON: It sounds like our industry sometimes.

JEFFREY KATZENBERG: Right. And so today if you were to make that, as you look at Will Smith's character in Shark Tales, there are 300-some-odd colors used and it's unlimited, it could be any number of them.

So it's had such a dramatic impact and become an enormous creative tool for the artists, empowering them in ways that I think none of us really imagined or anticipated. Well, I

shouldn't say none of us, I'd say John Lasseter did, who really is the pioneer of CG animation.

Interestingly, on the live action side of it, DreamWorks released this last summer a movie called Collateral with Tom Cruise that Michael Mann directed and it probably represents to this moment in time right now today in terms of what's been in the movie theatres probably the most ambitious film that has embraced digital production, digital cinematography in the process of making this movie and for Michael, who we talk a lot about this, as a storyteller creatively he literally would not have made the film were it not for the creative empowerment that came from digital production. His ability to shoot at nighttime, his ability to shoot, you know, almost 30 percent of that movie literally takes place in a cab. With film you could never get a depth of field, you could never actually get a sense of the environment of Los Angeles as you were moving through it, the movie would have been too claustrophobic. The shots that he did it at night, the coyote walking across the street, literally not achievable using film.

So from a creative standpoint I think Michael would say that the film was not something that he could have or would have been able to make without this new technology.

RICH TEMPLETON: That's fascinating. How far in terms of we've got the revolutionary leaders like yourself and working with folks like you, how much change have we seen or are we just at the beginning in terms of the impact on the creative side?

JEFFREY KATZENBERG: Well, it is very much just the beginning. Again, for CG animation there's now been nine movies made in history that are really sort of the full bells and whistles production. And you think of that nine pictures in the --

RICH TEMPLETON: I think of your name associated with a lot of those nine.

JEFFREY KATZENBERG: Well, not enough, thank you.

But that is a business that's not out of the in, we're not past our toddler stage yet and the sky is the limit. I mean, the opportunities, the rate of change, the rate of empowerment that comes; this again is a tiny example of this one little detail, the facial structure mechanism for the character of Shrek, so in the three years between Shrek 1 and Shrek 2 the complexity of what we were able to do in Shrek 2 is times ten what we were able to do on 1. So whether it's the amount of controls -- and these are all things that our artists use to act, eyebrows, skin movements, cheeks, jaw line; it's just the more and more detail and complexity that we give to it the better the acting is.

So this rate of change, I have to say that I think Moore's Law actually seems to have its own application in our business, which is every 18 months it seems to double in its speed and its complexity and its capabilities. It's missing that part of getting half as expensive each time though so that part is not working out so well. We've got half of Moore's Law, the other half we've got to work on.

RICH TEMPLETON: Well, it's clear as we look out into the world today that communications and entertainment are driving technology and I think you just really hit the nail on the head. We are investing tremendous amounts of money to put more capabilities in extremely creative people's hands like yourself and fascinated by it.

But I know also as it comes the aspect of moving the creative side to the production, post production and then distribution there's a lot of change going on and underway. Can you speak a little bit about what you see there?

JEFFREY KATZENBERG: Sure. Well, I'd kind of divide it into a couple things. First is as a productivity tool again it's having a tremendous impact and we do actually see savings. The fact is again just looking on the animation side of it first, our costs of our films have actually stayed pretty constant now for the last three years and since our movies do take between three and four years to make, we actually can look out over the next three years and see again that it's holding pretty constant. That's a six year period of time. Clearly the costs for manpower goes up a little bit every year but we are getting productivity savings that are offsetting the sort of natural cost of labor that goes up. So there is a value on that.

On the live action side, again Michael Mann, you know, I have to use as sort of the example of the moment, there is absolutely no question, first of all he can do a take that's 17 minutes long, in film you've got to stop, you've got to change cartridges and you don't have the capability of doing that. The lighting packages, all of the support personnel involved in it, the stuff is so much lighter and more mobile and all of those things, so once again there is a real productivity savings.

I think the place that people are focused on right now, and rightfully so because it's the place of greatest opportunity in a way, is how do you now move into the distribution and the exhibition side of the business and there's lots of talk, there has been a lot of talk about it over the last few years and there is absolutely no question about if; it's when. And I think from a filmmaker standpoint and a distributor standpoint and an exhibitor standpoint it cannot happen soon enough. It has tremendous, tremendous cost savings involved in it on all sides of the equation and ultimately, which I think will be the real driving force for it, is for movie-going. It is such a richer experience, the quality of presentation in a great digital cinema is unequal. And we've had a lot of experience with it on the animation side of it.

And I can tell you that if you look at Shrek on film you are seeing at the very most, in perfect presentation at the very most 80 percent of what, in fact, we have created. You don't see a tremendous amount of atmosphere and detail and lighting. On one of these great monitors, an HD monitor and a high-end DVD what you would see would blow you away in the detail and the creativity and therefore the viewing experience.

And to me one of the things I'm really excited about, because again it's sort of at the essence of what we do, we create our product three-dimensionally. So the richest experience for a moviegoer is actually to see it three-dimensionally.

One of the things that will happen I think in reasonably short order of cinema around the world converting from film to digital will be a broadly available exhibition of movies in 3D, not as a gimmick but as an immersive movie-going experience unreplicateable in your home, by the way, which is part of why it's just good business. As the home experience gets better and better and better, if exhibition, if this business is going to stay robust, it must offer a better experience.

And again exhibition has done a fantastic job. For all of you going today, you know now the movie theatres that you go into have stadium seating in them, their presentation is terrific, those boxes that were around 10 and 20 years ago are for the most part gone and the cinema experience is way, way better today than it was even five or ten years ago.

But then when you look a handful of years into the future, we have to offer the audience a unique experience and I think the digital cinema and digital presentation is of the essence to us achieving that.

RICH TEMPLETON: Well, we are in many ways lined up. As you see the demo of the 1080P TV that's over your shoulder, it makes a brilliant image when you see it exhibited, but what you're doing creatively --

JEFFREY KATZENBERG: If I can carry it, I can take it, right? Isn't that the rule? (Laughter.)

RICH TEMPLETON: I've got a chance to slow you down versus Howie.

JEFFREY KATZENBERG: I should say. (Laughter.) Howie didn't get away with the good stuff. (Laughter.)

RICH TEMPLETON: But really as we keep taking even the home experience up we agree very strongly we want to put more powerful tools in your hands and in the exhibition hands to create a very unique experience in the cinemas. We're hoping that breaks through pretty soon and we hit that curve.

JEFFREY KATZENBERG: Well, I think it is, you know, a number of the things that we've done together people have followed and TI has been a great partner to DreamWorks. Shrek was the first animated movie accepted into competition at the Cannes Film Festival in over 50 years and when we brought it there one of the things that we were able to do was to get the Cannes Film Festival also for the first time ever to have a digital presentation and people were blown away by the quality of what they were able to see.

Once again this last September the Venice Film Festival invited Shark Tale and for those of you that were at the presentation this morning you know I talked about some of the drama of our getting the movie finished in order to make it there. The other half of the equation was the drama of putting up a six-story inflatable screen, one of the largest

screens ever built, and the fact that this was inflatable, and then we put it in the middle of San Marco Square in Venice and showed Shark Tale in digital with TI projectors and it really was an extraordinary experience.

And I think that what we are trying to do is to kind of coax along all the involved parties, including the consumer and the media to create this real interest and real demand for something that makes tremendous business sense.

RICH TEMPLETON: Well, Jeffrey, maybe I'm asking a dangerous question but can you pick your favorite film that you've worked on or is it always the next one?

JEFFREY KATZENBERG: Madagascar is my favorite film ever. It will be out in May of this coming year. (Laughter.) It's really, really funny.

RICH TEMPLETON: That was not an arranged prompt.

JEFFREY KATZENBERG: And I brought a trailer of it just in case I was asked that question.

RICH TEMPLETON: Well, the best part that I find about this opportunity today and getting to sit with some of these is I get to actually see these trailers before my kids do and they come home and tell me about them, so a great opportunity to be here and to see that.

So do you want to try to give some introduction to the Madagascar clip that you have and give us a sense of what really stands out or what's different or unique in your mind of what the team has achieved?

JEFFREY KATZENBERG: No, not really. (Laughter.) Just play the trailer and then we can talk afterwards.

RICH TEMPLETON: So they should watch some other movie coming out this year? But, no, please, if you have any setup on it or if we want to just --

JEFFREY KATZENBERG: No, I think we can run the trailer and it actually kind of tells the story, which is what a good trailer does.

(Video segment.)

(Applause.)

RICH TEMPLETON: Fantastic is all I can say.

JEFFREY KATZENBERG: Well, we've got our fingers crossed. You know, each one of these movies we just try and do something that's unique, never been seen before and, as I say, with a technology that just seems to empower the artist and push their

imagination, we just love making these movies, it's a lot of fun for us. And you know we are, we're very, very excited about this.

RICH TEMPLETON: Well, we certainly loved seeing it. All of us are either parents or grandparents or children that haven't grown up yet and seeing these films like Shrek 2, we're looking forward to this, I just can't describe the feeling it gives. I know how our kids react to it. It's a great presentation so you guys should be extraordinarily proud of what that team can do and has presented.

So we certainly appreciate you joining us this afternoon and running the Katzenberg 2 sequel. We wish you the best of luck with Madagascar and we encourage you to keep wowing the consumers of the world.

JEFFREY KATZENBERG: Well, thank you, Rich, appreciate it.

RICH TEMPLETON: Thanks very much.

JEFFREY KATZENBERG: And, as I say, we appreciate what you guys are doing.

RICH TEMPLETON: That's great.

JEFFREY KATZENBERG: Thank you all.

RICH TEMPLETON: Jeffrey, thank you. (Applause.)

Now, before we leave your life on the town, I want to note that DLP Cinema brings out the best kind of any movie, whatever style or genre. We're going to run an excerpt from the hit movie Van Helsing to demonstrate another style of picture and then we'll see a trailer from a movie that I'm sure you will all recognize. We picked this scene from Van Helsing because of the mix of colors and the degree of fine details. In particular notice the dark colors, something that has been a big challenge for digital display, but DLP makes it look easy and great.

(Van Helsing, Star Wars Video segments.)

(Applause.)

RICH TEMPLETON: It's certainly hard to top that but from sports to movies we've seen that you have a world of fantastic entertainment to choose from and digital communications can literally bring it all home.

But what about taking content from your home and transmitting it anywhere you want to go? The convergence of communications and entertainment has opened up some fantastic opportunities for your mobile life on the go.

In fact, our next guest has a solution that lets you access all of the content you have at your home, whether it's cable TV, radio, DVR, whatever and enjoy it anywhere.

ANNOUNCER: He's the CEO of Sling Media and his company's invention is the 2005 CES Innovation's Honoree for online Internet products. Here's Blake Krikorian. (Applause.)

BLAKE KRIKORIAN: How are you doing? Good to see you.

RICH TEMPLETON: Blake, welcome. Your company's product made its debut here at CES, the SlingBox Personal Broadcaster. Besides the Innovation Honoree Award, you're also a CNET Next Big Thing finalist, but why don't you take a few minutes and tell us how it works.

BLAKE KRIKORIAN: Sure, thanks for the opportunity, we're really excited about this. So hopefully you're in for a treat and we'll have better juju than a few days ago in those other keynotes, so we'll see how it goes. (Laughter.)

We have a product called the SlingBox Personal Broadcaster and it's a really empowering product I think for consumers, at least for me as a consumer and I think for many others. It allows you to watch and control your live TV programming coming from your living room and watch it anywhere in the world.

RICH TEMPLETON: That's a good start.

BLAKE KRIKORIAN: There are a few different scenarios and I'm going to walk you through some actual real, live demos that will actually simulate them, some of them actually will be absolutely real.

The first one that's simulated actually is watching it in and around my home. I'm obviously not at my home here but I have the exact same type of setup.

Because a lot of people when they first hear that they think about, wow, I can watch my TV when I'm in Singapore from a hotel room and, yes, you can, but we think there's just as much interest actually in turning an off-the-shelf wireless laptop that's become very successful in the consumer market, turning that into a wireless LCD TV.

So just to show you a couple of things in terms of setup, the SlingBox basically takes TV signal in, whether that's analog cable, digital cable, satellite, a PVR, what have you, takes the TV in and spits IP or Internet Protocol back out to a host of devices.

So here we actually have a TiVo plugged into it. So if we can go onto the screen here, this is a Sling client that's running on the laptop. And you can see over here in the My SlingBoxes area there are a few different SlingBoxes, some of which are at my home, one called living room that is here, one that we had at our office and I have a couple of my other teammates on here for demo purposes.

So let's go ahead and just connect to my living room. And if you look over on the device there, I don't know if you can switch the cameras at all, but over on the device you can see how the end lit up. That's actually telling somebody that, hey, someone is watching the TV here.

So I'm now watching live programming from I think it's channel 4 in Las Vegas.

Now, I cannot only watch it but, of course, I need to be able to control it. We really want to extend that living room TV experience to wherever you are. That's our challenge, how do we make that as seamless as possible.

So, for example, if I want to go ahead and like see what I might have had programmed on my TiVo box, I should be able to simply hit TiVo and it should be able to come back up. Maybe not.

RICH TEMPLETON: This is the suspense part.

BLAKE KRIKORIAN: That's the suspense part. Well, actually let me go ahead and stop that. I might have, as I was turning around, hit the wrong button. Let's try it one more time. Yeah, I did, I hit underneath it.

So I'm going to bring it back up, I just reconnect it to the SlingBox, local SlingBox. We're now watching, you see it took my command actually, but let's just go and show how we can, if I wanted to watch the 20 most awesomely bad something or other I could go ahead and do that.

Okay, moving right along.

RICH TEMPLETON: Okay, we're working on this.

BLAKE KRIKORIAN: We are working on that. I'm not sure why.

Let's go ahead and disconnect from that guy and we'll go do something that actually is a little harder so hopefully luck is on our side there and actually it's not.

RICH TEMPLETON: This is the freeze up.

BLAKE KRIKORIAN: This is the freeze up.

RICH TEMPLETON: But we don't want to boot to the next frame.

BLAKE KRIKORIAN: No, exactly.

RICH TEMPLETON: So, Blake, you've got a demonstration on the cell phone.

BLAKE KRIKORIAN: On the cell phone as well. So actually why don't we do that and then we'll go back to this guy.

So what I was about to show you here was a laptop connecting back into my home, my direct TV back home but what I'm going to also do is connect a phone, which is a phone that hasn't come out yet by Motorola.

RICH TEMPLETON: I hope it has the right chips in it.

BLAKE KRIKORIAN: It does, it does have a few TI chips, one TI processor, and simply I'm going to connect on this guy over to it and then I'll go back over to the PC and we'll connect as well.

RICH TEMPLETON: It's streaming over that phone?

BLAKE KRIKORIAN: Yeah. So this is now live TV coming from my house in the Bay Area.

RICH TEMPLETON: Phenomenal.

BLAKE KRIKORIAN: So now let's just try this one more time.

RICH TEMPLETON: Oh, he's feeling lucky on the second chance here. I thought you'd quit with the phone working on this one, Blake, and with success.

BLAKE KRIKORIAN: I think it will be good. So now I'm going to connect to Blake's house and we're coming up just fine. So we were watching some talk show, I don't know exactly what that talk show was and here we go gray. So, yes, I want to go ahead and I want to control, should be able to hit my TiVo button, which is back home again.

RICH TEMPLETON: TiVo control is capable to run.

Well, Blake, it's got the ability to put content throughout the home but there's a lot of things that we see at CES sometimes that begin as very high-end instruments with very high cost. What are we looking at in the case of SlingBox?

BLAKE KRIKORIAN: One thing that we've done is we've felt that consumers have paid quite a bit for the services that they have in their house already, they're paying for a lot of content, and so we worked really, really hard to get the price point way down on this product to make it attainable. So many of them are in the 900, $500 price point. Our product is priced at 249 retail and most importantly no additional service fees. We feel you're already paying for those. So we want it to be a very, very simple sale.

RICH TEMPLETON: That's great. It looks like a superb idea in terms of where things are and we really are glad you had the time to join us today and thanks for coming. Okay, Blake, thanks a lot. (Applause.)

Now, as long as you're celebrating your life on the go, we thought we'd take this show on the road. We wanted to talk with real people about real products that can be part of your life today, and here's what they had to say.

(Video segment.)

(Applause.)

RICH TEMPLETON: Well, we certainly hope all those wows are people buying consumer electronics products and we're excited. It really is gratifying to see how people respond to what we're doing with companies like Mitsubishi, RCA, Kodak, Samsung and many others. Collaborating with customers like these is fascinating, it's what we do, and the result is that the technology revolution is always just beginning, it's always moving from state of the art to something even better.

The impact of this constant revolution is far-reaching. Take the medical field, for example. Right now researchers at the University of Southern California, in addition to celebrating the national championship, are using TI's most advanced DSPs to develop a vision system that will allow blind people to see. Progress on this has been excellent. Other researchers are developing mobile medical devices such as portable MRI machines. This will give medical technicians greater ability to save lives outside the hospital.

When we look a little further out, something incredible is coming into focus on the horizon, something straight from science fiction yet it's becoming reality as we speak. You could think of it as high definition driving. I'm talking about vehicles that use TI's signal processing to safely drive and navigate themselves with no human intervention required.

Beyond the wow factor, autonomous vehicles offer special benefits. As any parent of a teenager would appreciate, a car that could recognize when an accident is about to happen and automatically take preventive action is a great thing and any commuter would appreciate a vehicle that drives itself while you take a nap or read the paper on your way to work. Now, we don't recommend that.

Self-driving vehicles are a great way to end our discussion of your life on the go and our final guest is here to tell you all about it.

ANNOUNCER: He's the president of Velodyne, famous for high performance subwoofers, but he's also president of Digital Auto Drive, a world leader in the development of completely autonomous vehicles that safely drive and navigate with no human intervention. Please welcome Bruce Hall. (Applause.)

BRUCE HALL: Good to see you.

RICH TEMPLETON: Welcome, Bruce. Now, Digital Auto Drive or Team D.A.D is actually a moonlighting project for you. By day Team D.A.D is more recognizable as the guys behind the fantastic subwoofers from Velodyne Acoustics when you felt those walls shaking earlier today during those clips that made Bruce's heart run warm. But tell us about this sideline you guys have.

BRUCE HALL: Well, the quick background, Rich, is that developing autonomous vehicles is a government project. There's even a congressional mandate that one-third of all military vehicles be totally autonomous by the year 2015. Autonomous in this case means that no human intervention is required to drive the vehicle whatsoever.

The agency chartered with reaching this goal is DARPA, the same folks that brought us the Internet, and the ultimate goal for both military and commercial applications is to create vehicles that know where they are, can see where they are going and safely travel to where they need to be. And along the way there will be several intermediary benefits particularly for highway safety.

RICH TEMPLETON: Well, DARPA is actually sponsoring a race to speed up this development, correct?

BRUCE HALL: That's right. DARPA is hosting a race called the Grand Challenge, which offers a $2 million prize to the team that can field a fully autonomous vehicle that can complete a tough 150 mile course through the Mojave Desert, right down here from Barstow to Prim, as a matter of fact. No team completed the course in the first race but we did make it six miles and DARPA said that Team D.A.D brought truly groundbreaking technology to the party.

The video you're seeing is from the last Grand Challenge that was last March and keep in mind that the truck you're watching to drive itself has no remote control, nobody with a joystick, just a truck that is navigating and driving itself.

RICH TEMPLETON: Well, it's certainly an example of extreme technology in action and this is just the kind of application that TI works so hard to make possible.

But you've been using our DSPs for some time now in other ways.

BRUCE HALL: Our main business, as you said, as Velodyne Acoustics, where we make high performance subwoofers for music and home theatre applications and about 18 months ago we started using TI DSPs in our subwoofers to control them. You just can't beat the precise control and high performance that TI DSPs offer. In fact, every new sub we're developing now is DSP controlled and we actually spend more time doing software development than we do doing speaker development.

And by the way, we'll be needing over 50,000 DSP chips from you this year alone.

RICH TEMPLETON: I am here to take your order.

BRUCE HALL: I'm glad to hear that. I have my PO right here.

Outside of Velodyne, my brother, Dave Hall, who is actually our team captain and chief engineer, has been into robotics for many years. He competed in Robot Wars and Robotica, many of those shows. And it seemed like a natural step to combine his broad expertise in autonomous systems with our experience with TI DSPs to create a vehicle that can drive itself.

RICH TEMPLETON: So, Bruce, tell us why it's so hard to build an autonomous vehicle.

BRUCE HALL: It requires many integrated disciplines, very complicated project, from navigation to obstacle detection, plus all the basic mechanics of actually driving the car. Working on this project I've really come to appreciate the human machine and all the more complex that it is when you realize how hard it is to actually drive a car.

As for the specifics of the technology we use with you, we have a vision system that actually over clocks your fastest DSP chip for our obstacle detection system, and the system maps the terrain out in front of us at 60 times per second, which is faster than this kind of task has ever been done before, and, in fact, until you introduced that 1 gigahertz chip, this type of system was impossible, so we're really just now getting the technology enabling us to move forward with autonomous technology.

We're using one of your other DSPs to control the other functions of the car such as steering, braking, acceleration and such.

RICH TEMPLETON: Well, now, I understand no team finished the course last year. What's the outlook for the Grand Challenge coming up in October?

BRUCE HALL: There are no guarantees but we are very optimistic. Last year we were doing pretty well in the race until we had to stop, actually the government stopped us to let a tow truck pass us to haul off a competitor that had gone of the road, so they had to pull them away. And unfortunately where they stopped us we were right up against a large rock and for safety reasons the rules say that the fastest you can drive in that particular section of the course is five miles per hour. So when they restarted us we hadn't programmed the truck to give it enough gas to pop over that rock from a cold start. If we'd just had a couple more hours of programming time, I think we could have won the race. As great as your chips are, they don't program themselves.

RICH TEMPLETON: That sounds like a typical software comment. (Laughter.)

BRUCE HALL: The programmers take full responsibility sadly.

You can bet we've addressed that kind of issue for this year's race so we're actually very optimistic.

RICH TEMPLETON: Well, that's great. Given the performance trajectory for TI's signal processing technology, I believe that we'll see cars that drive themselves within our lifetime, cars without steering wheels and many lives will be saved before we reach that point, thanks to incremental deployments of autonomous technology. At the end of the day it's all about saving lives.

BRUCE HALL: I agree with you and we'll see developments occur in stages beginning with safety, and so far when you think about safety systems they're all designed to help you as a crash occurs, if you think about airbags and crumple zones and things like that and those are fine systems, but automation lets us move backwards in time to greatly minimize the effect of an accident or even prevent it entirely.

As an example, think about when you're driving along and falling asleep, you start to veer across, there are systems now that can vibrate the steering wheel and wake you up, other systems that have you look into your rear view mirror and light up when someone is in your blind spot, so technologies like that are moving us forward.

And I completely agree with you that in our lifetimes we will see cars without steering wheels.

RICH TEMPLETON: Well, I can see the day when you hop in, tell the car where you want to go and then it will get you there safely. Combine this with in-vehicle entertainment and the SlingBox and we're talking about a GPS tracked mobile living room with high def game, movies and TV. The next time your kids ask, "Are we there yet," they'll really be hoping that they can just stay in the car.

BRUCE HALL: And the bar.

RICH TEMPLETON: Yeah, that could be.

Bruce, thanks again and really the best of luck in this year's race.

BRUCE HALL: Thanks, Rich.

RICH TEMPLETON: Thank you very much.

BRUCE HALL: Good to see you. (Applause.)

RICH TEMPLETON: You know, it's clear, cars that drive themselves, sight for the blind, TV images that are indistinguishable from reality; the things we're working on right now will touch your life in significant ways in the future, just as TI's technology has enriched your life in the past and in the present, in your home, on the town or on the go. It really is all about you.

And I have one thing to say to all the consumers we've been honoring today and it's a very sincere thank you. Thanks for letting us be part of your life, it is a privilege we take very seriously.

As the decades ahead unfold, you'll develop new needs that you haven't even dreamed of, but we're dreaming about it and we're working with our customers on it. We'll be there with you; wherever your life takes us, TI is here to help you live your life more richly because, after all, this is your life. (Applause.)

(Video segment.)

END