GOOD afternoon! How are you guys doing so far? Great! I followed by the rules, so I don’t have any slides for you for ten minutes. Clearly, visionary should be in notes on a few sheets of paper rather than a slide. So first of all, it’s very, very exciting for me to be in the electronic industry, and I really mean it—this is something very exciting. Let me give you a couple of reasons why I’m so excited.

One, it’s very unusual to have two major computing platform cycles at the same time happening. Let me describe it. Smartphone is about 1.5 billion units compared to the mobile phone of 5 billion units, so there is the upside of three to four times, and it’s very exciting. And then secondly, tablets. iPad is growing three times more than the iPhone, and this is another big, big platform—tablets.

And it does not just stop there, there is a third cycle coming up and something that I’m most excited about—it’s wearable, drivable, flyable, and scannable. Let me describe a little bit more. Some of you know very well that I’m a big fan—I’m an investor—in Go-Pro. That is a sports camera that you wear, doing anything that you like. You can capture all the HD video, and you can share with your friends with Wi-Fi and iPhone, and it’s so exciting.

And now, even more now, is “wearable” with the Google Glass coming up, and on your wrist, and monitoring your health. There’s so many, and I’m involved with a couple of them, and I’m so excited. Some of them are going to come out this year. They’re going to be driving 50 billion units in 2020. It’s going to happen. This is very exciting.

And let me describe one that you may not recognize so clearly. It’s “scannable.” In scannable, basically you scan—you know, when you do shopping. And you can find out, chat with your friend, and see “what is this—is it good?” And check with your wife “is this healthy for me to eat—should I buy it?” And—can you believe—in China it’s growing four times every month, and it’s going to be humongous. It’s tied in with good friend of mine. He built TenCent WeChat. In a very short time, 400 million users are using that to chat, and now to do shopping, and of course scanning for your boarding pass. And there are going to be a lot of applications. It’s very, very exciting.

And the other big trend—you know, most of the VC friend of mine are addressing the mobile internet—and now the big thing they’re investing in is wearable everywhere devices and connected, smart connected device. And this is very exciting. I can’t imagine, right now I’m carrying three devices, plus the iPad is four devices. I don’t know what else I’m going to wear, and it’s so exciting.

And then the other part—look at photo. I think some of you are taking pictures on the photo and then you upload it. Can you believe 500 million upload per day? And it’s not stopping, it’s growing.
And one thing that I love a lot is video. A hundred hours per minute is uploaded to YouTube, and it's growing. And they're going to be driving tremendous mobile traffic. Right now mobile traffic is about 10%. This year it will be growing to 15%. So it's 1.5 times growing every year. That is very exciting.

So what it really all means to all of us, clearly, is tremendous challenges for us to innovate, to address and meet all these opportunities in the mobility, cloud, big data, the smart connected device that we talk about. And then the hardware, software, code design, code verification—Jim's going to talk about platform engineering. I think that's going to be very exciting. Quality—scalable quality IP is very important. It's not just a tool that if you have bug it's fine, but here quality and scalability is critical for tapeout and for shipping to the customer. So this is a really big change in our industry.

Then there's time-to-market pressure and how all this going to integrate in a timely fashion in the advanced geometry that needs FinFET and 3D IC to address. Chenming is in the audience here—you know, the father of FinFET. You're going to see a tremendous deployment and massive engaging with his foundling. So this is exciting for me.

Clearly, the industry and customers expect EDA vendors to provide the best quality, best scalable tool and IPs. We talk about FinFET—and also very important—the packaging, so there can be a really timely power integrity and signal integrity power envelope we can address. So all in all, I think it's an exciting time. I double and tripled down in my investment in semiconductor. And I told my partners: “You guys can do the internet and mobile social media, I’m going to focus on building up the semiconductor industry.” If the industry grows, we’re all going to benefit.

It's something that I'm very passionate about—so passionate about, I convinced my two sons. Right now one is doing the Master's program, and the second one is a sophomore EE in computer science. Initially they asked: “Dad, is there a future?” And I said: “Of course, there is so much future, so exciting.” And guess what—recently I saw the data—and I know some of you saw that—there's about 122,000 openings for EECS and only 51,000 graduates—2.4 times more demand than what we can supply. Boy, if you are in the EECS, you are in the right place.

I notice a lot of young generation—young people here. There's a lot of future. There's a lot of innovation needed. And we need you to do that. At Cadence, I just passed four years working with a great team that I put together. We have a culture and love for innovation. So if you would like to do something that is breakthrough, email me. You have my audience, and you have my attention right away.

We are very inspired to partner with a customer to work with the most complex issue. Let's address it and break it down, so that it can be solvable. The industry needs that. All these “application layers,” need us. I talk to my friends that back a bunch of social media hot IPOs in software-as-a-service, and they all said: “Wow, Lip-Bu, continue doing what you do, because we need to build on top of that. If you stop innovating, we are dead, and we won’t have a lot of applications that we call can enjoy, our kids can enjoy.”

So my encouragement to you is to continue with your innovation. We love innovation. We love you guys and the industry that you picked. We ask you to join me as we build an industry growing
from three hundred billion—I’d like to see before I retire—to five/six hundred billion. Join me for doing that.

Thank you.

Lip-Bu Tan  
Tan has served as President and CEO of Cadence Design Systems, Inc., since January 2009 and has been a member of the Cadence Board of Directors since February 2004. He also serves as chairman of Walden International, a venture capital firm he founded in 1987. Prior to founding Walden, Tan was Vice President at Chappell & Co. and held management positions at EDS Nuclear and ECHO Energy. He serves on the Board of Directors of both the Electronic Design Automation Consortium (EDAC) and the Global Semiconductor Association (GSA), as well as the boards of Ambarella Inc., SINA, and Semiconductor Manufacturing International Corp. He also serves on the Board of Trustees and the School of Engineering Dean’s Council at Carnegie Mellon University (CMU), and the College of Engineering Advisory Board at University of California Berkeley. Mr. Tan received an M.S. in nuclear engineering from the Massachusetts Institute of Technology, an MBA from the University of San Francisco, and a B.S. from Nanyang University in Singapore.

Direct questions and comments about this article to Lip-Bu Tan, Cadence Design Systems.