

Raymond James Financial Inc Institutional Investors Conference

Company Participants

- Chris Evenden, Senior Director IR

Other Participants

- Hans Mosesmann, Analyst, Raymond James
- Unidentified Participant, Analyst, Unknown

Presentation

Hans Mosesmann {BIO 1522582 <GO>}

Okay. Welcome, everybody, to the NVIDIA presentation. I'm Hans. I cover semiconductors. Chris Evenden is here with us, Senior Director of Investor Relations. We're going to have a fireside chat and feel free to ask questions. And there's going to be a breakout afterwards at the -- is it the (Caraba)? Is it (Corova)? (Cordoba). Okay, there you go.

Okay, Chris, welcome. So let's start. You're a graphics company. You're changing. Or, at least historically, you've been a graphics company. Can you give us an update on what's happening in your core GPU business. And why has it been so resilient in a PC markets that's been kind of weak over the past couple of years?

Chris Evenden {BIO 18934997 <GO>}

Okay. So fundamentally, we're a visual computing company. And the product we make, as you say, is a graphics processing unit. And then we have a couple of ways of making money out of that technology. And one of them is by building the GPU itself and selling it through a number of markets. And I think the one you're referring to is the GeForce market, which is the consumer graphics market.

And I think the best way to think -- and that one's been surprising to a lot of (inaudible) year or so, because (inaudible) it's doing really well. (inaudible) the PC market, (inaudible). The two markets we compete in are (inaudible) OEM and gaming. And the gaming market is actually very healthy. PC gaming is doing very well. We estimate the market's growing around 10% a year. And so, we're growing within that. I think we've gained a little bit share year on year.

In contrast, the OEM market, which is tied to mainstream consumer and notebook, largely, is a weak market. And, obviously, that's in decline. But the strength of the

gaming market is such that it outweighs that.

So we've shown quite a lot of strength in the last 12 months.

Hans Mosesmann {BIO 1522582 <GO>}

Okay. Then to -- is that working? Is everybody -- can everybody hear? So --

Chris Evenden {BIO 18934997 <GO>}

I'll just shout.

Hans Mosesmann {BIO 1522582 <GO>}

Well why don't you use this? So staying on topic of GPU, how does the game console -- there's a series of new game consoles that have come out. How does that impact or potentially impact your GeForce business?

Chris Evenden {BIO 18934997 <GO>}

Sure. So intuitively, you'd think there'd be an impact on the GeForce through a share of wallet argument, right? There's only so much money that a consumer can spend on gaming. And PC gamers, typically, have one or more consoles. They game on a lot of devices.

However, we haven't seen that. I mean, we had a really, really strong Q4. So if it had impacted our Q4, our Q4 would have been wonderful without it. So I don't -- we don't appear to be seeing any weakness due to the new consoles launching.

What are the reasons for that? There are a lot of good games coming out on PCs now. And that looks like a pattern that seems to be set to continue. And one of the interesting things about the new consoles is they are, architecturally speaking, they are essentially PCs. And although on the gaming PC scale, they're sort of right at the bottom end of the gaming PC. But they're there now. And I think that makes it a lot easier -- by easier, I mean cheaper -- for software developers, game developers, to port their games across to PCs from console. And that means that we should see more games available more quickly on PCs, which is good for gaming, because people don't buy GPUs because they want to buy a GPU, they buy a GPU because they want to play a game and experience the game better, high resolution, more special effects, whatever, what-have-you.

Hans Mosesmann {BIO 1522582 <GO>}

Okay. So staying on the GPU side of things, you've recently disclosed over the past year that you're thinking of licensing some of this technology. How does that work? What's the timing? Who would the customers be. And so on?

Chris Evenden {BIO 18934997 <GO>}

So the -- there's two ways to license technology. There's the licensing the graphics core and taking -- and providing something of value to customers. And they're also enforcing your IP, IP rights, your intellectual property rights, as well.

And so, really, we're focused on the former. We would use the latter if it came to that. But we're much more focused on licensing our core to people. So that would be people building SOCs of their own in the phone market, conceivably, or even inside other markets. So for example, in smart TVs. Smart TV is an interesting market that obviously uses the sort of -- has a need for the sort of technology we can provide. But whenever we've looked at that market, we haven't been able to make a financial case of building a chip specifically for that market.

However, if you were to go to a TV manufacturer who's already building their own chip and say, here's the world's best GPU, video encoder, all the other blocks we have, then that would conceivably be a market there. So phone manufacturers and other adjacent businesses.

Hans Mosesmann {BIO 1522582 <GO>}

And the timing?

Chris Evenden {BIO 18934997 <GO>}

Timing for that -- we're having conversations with people now. There's nothing to report until there's something to report is the challenge I have there. So it's not something I can say 78% complete. It's --

Hans Mosesmann {BIO 1522582 <GO>}

Why not?

Chris Evenden {BIO 18934997 <GO>}

Why not, says Hans. Last time I ever do a fireside chat.

Hans Mosesmann {BIO 1522582 <GO>}

But you're coming back (inaudible).

Chris Evenden {BIO 18934997 <GO>}

Yes. Always.

Hans Mosesmann {BIO 1522582 <GO>}

Okay.

Chris Evenden {BIO 18934997 <GO>}

So it's just difficult to -- until you've actually signed the deal, you haven't got a signed deal, I think is it in a nutshell.

Hans Mosesmann {BIO 1522582 <GO>}

Okay. It sets up the next question that I get a lot from investors, that you have an arrangement with Intel, a cross-licensing agreement. It's the second of such agreements. And it ends in 2016-2017. And the concern with investors is that the \$60 million or so that you get per quarter from Intel, net, will go away. It goes to zero.

Can you explain what the puts and takes are of a potential new agreement. And why would it happen or why would it not?

Chris Evenden {BIO 18934997 <GO>}

So that's right. So we have a licensing agreement that was originally signed in 2004. And then updated in 2010, 2009. And it runs through to March 2017. And it covers our patents through that March 2017 in perpetuity. So Intel has the rights to those patents in perpetuity, as, by the way, do we. We have the rights to Intel's patents through that period in perpetuity, as well, which is an important point.

Now. So that means as of April 1st, 2017, there's nothing for us to -- Intel has the rights to all our patents. But that's a situation that starts rectifying itself fairly quickly, because we file around 500 to 1,000 patents every year. And so, we'll have to see what we think is the right strategic approach to take towards whether we want to renew that agreement, how we want to renew it, what we think the value is going forwards.

The bear case is that there's zero probability of us renewing that agreement with Intel and there's 100% probability that no one else will sign any sort of licensing agreement with us in the meantime. And I think the truth isn't that black and white. And the truth is going to be somewhere between that. So somewhere there will be more licensing revenue between now and then.

And as we get closer, we'll be able to report-- as we actually sign deals, we'll be able to report that. And as we get closer to the March 2017, then, yes, we'll be able to talk more about Intel and where that goes.

Hans Mosesmann {BIO 1522582 <GO>}

All right. So before you go to Tegra, the exciting stuff, any questions from the audience?

Questions And Answers

Q - Unidentified Participant

(technical difficulty).

Q - Hans Mosesmann {BIO 1522582 <GO>}

So to repeat the question, you've recently stabilized pricing or raised prices?

Q - Unidentified Participant

Yes. They're supposed to be going down. And they haven't.

Q - Hans Mosesmann {BIO 1522582 <GO>}

Okay, yes.

A - Chris Evenden {BIO 18934997 <GO>}

Interesting statement there that prices are supposed to be going down. I mean, one of the beautiful things about the GPU market is the prices are not going down. And I would say in the last 12 months prices have actually gone up. And that's largely a mix thing, because, as I mentioned, gaming is strong and OEM is weak. And so, the blended ASP is actually going up. But within -- even within the gaming, the ASP is at least flat. I'd have to look at the data to be sure. But I think it's at least flat.

So absolutely, we have a strong competitive position. AMD has just launched their range of new cards. And we launched a couple of new ones. And we've re-jigged our lineup. But we're about to start launching our new set. We just launched our first Maxwell generation architecture, as well.

So we feel pretty good about the competitive position. If you look back at the market share numbers for the last three years, we've been somewhere between 58% and 66% market share for that entire time. So it's moved around a bit. But it's been relatively stable. So I would expect that to continue.

One caution around market share numbers, though, is that it is a unit share number. And so it's not a dollar share number. And so, that means it's dominated by high-volume, low-ASP, low-gross-margin-percentage OEM sales. And so, you can see a fairly significant shift in % market share, unit market share, without actually seeing much change at all in revenue. And, of course, even less change in profit share.

And in fact, there was one quarter last year where our unit share went down, according to the Mercury numbers. But our dollar share clearly went up as we continued to perform very well at the high end.

Q - Hans Mosesmann {BIO 1522582 <GO>}

Any questions? All right. So let's go to Tegra. So Tegra is -- your average tech analyst will have mixed emotions about Tegra in terms of Tegra 1, Tegra 2, Tegra 3, some lofty goals and how there's a more reasonable goals. Now you've been able to incorporate a modem functionality into some new Tegas here, the Icera modem.

A - Chris Evenden {BIO 18934997 <GO>}

Yes.

Q - Hans Mosesmann {BIO 1522582 <GO>}

Give me an update on where you are with Tegra. And is it more than just tablets, going to smartphones, or are deemphasizing smartphones and you'll be going into other areas, automotive, for example? So give us a rundown.

A - Chris Evenden {BIO 18934997 <GO>}

You stole my thunder there. So Tegra is all about the intersection between visual computing and Android. So the basic strategy is that we believe the Android is on the verge of becoming ubiquitous. And wherever visual computing, wherever that visual experience matters in Android, that's where we believe that we can be successful with Tegra.

So that might be high-end smart phones, super phones. It might be tablets, automotive, set-top boxes or gaming devices, a la Apple TV, that sort of product.

So where we are right now, we've just launched our new Tegra chip, which we call Tegra K1. And this is the first chip that we've launched that has a PC-class GPU in it. And so, you're worried about power consumption when I say that. The power consumption fits within the envelope of a smartphone. But we have all the functions you'd expect from a PC graphics chip, OpenGL 4.4, DirectX 11. And so on. And we also have the CUDA programmable cores, as well. So general purpose compute on a GPU.

And so, what that enables is, for example, with regards to gaming, the Unreal Engine 4 has been ported across to our new chip. And so that means that it makes it -- Unreal Engine is middleware for games. So it makes it -- it's essentially a programming language for games. So you write the game on top of the Unreal Engine. And so it makes it very, very easy, trivial almost, to port a game from one platform to another if they're running on Unreal Engine on both. And I think Unreal Engine is probably the most popular AAA-- game engine for AAA titles. So Gears of War, for example, was written on a previous version of Unreal Engine.

So the demos we actually used at CES to show off Tegra, Tegra K1, one of them ran-- one of them was written for PS4. And one of them was written for PC. But we just ported them straight across because they were both written for the Unreal Engine on both of those platforms.

The other thing we showed at CES was the 64-bit version of Tegra K1. So I think we're the first company -- I think, still, the only company -- that has demonstrated Android running on a 64-bit chip so far. So you'll see devices based on that in the back half of this year. You'll see devices based on the 32-bit version of Tegra K1 in the first half of this year.

At Mobile World Congress last week, we showed Tegra 4i, two Tegra 4i phones. So these are -- 4i is the integrated application processor plus baseband. So you'll see it.

Q - Hans Mosesmann {BIO 1522582 <GO>}

LTE baseband.

A - Chris Evenden {BIO 18934997 <GO>}

Multi-mode LTE, yes. So 2G, 3G, 4G, LTE. So that's really where we are.

Q - Hans Mosesmann {BIO 1522582 <GO>}

So when you're taking about the -- going up into the PC space, running games, what you're saying is that on Android you'll be able to play PC games and compete basically with Ultrabook-class Intel or AMD-based platforms?

A - Chris Evenden {BIO 18934997 <GO>}

So yes. So "compete" is a strong word. I don't know if we'll actually compete. But you'll certainly be able to build Android or Chrome devices that have as much computing and graphics power as those devices. So the Tegra K1, we think, is more powerful than the Xbox 360 or the PS3. So last generation consoles.

So you'll be able to have a gaming experience, a user experience, of that level of quality. And I don't think we've got any benchmarks that compare it directly to current integrated platforms. So I shouldn't comment on that. But I suspect that the GPU we have is more powerful than most of the integrated platforms that are available on the x86 side of the fence today.

Q - Hans Mosesmann {BIO 1522582 <GO>}

And going back to Tegra or the Tegra 4i. So, what's the strategy there? You're seeing a number of new players such as MediaTek and Marvell and Broadcom and even Intel want to joint this LTE modem integrated SOC party that has been the sole kind of party for Qualcomm for the past couple of years. And you're just another guy.

What's the differentiation? What's the strategy?

A - Chris Evenden {BIO 18934997 <GO>}

The differentiation has to come back to the visual experience. So gaming or visual computing in general. You're right in that there's a lot of talk about LTE modems. But I think that's really an artifact of the fact that there's only one player in modems at the moment.

And so, two years hence, there'll be a bunch of people with perfectly competent LTE modems. We'll be one of them, obviously. And at that point, you won't think twice about the modem. We won't be having lots of conversations about the mode, because any more than we have conversations about the WiFi chip in your PC, right? It'll be just another piece of equipment.

And so, there'll be some modems that are better than other modems. But they'll be, probably good enough. It'll probably be very difficult for the average consumer, if downright impossible, for the average consumer to differentiate between modems.

And at that point, the conversation goes back to application processors. And what can you do to change the user experience. And we think that with our combination of graphics technology. And the software, the ecosystem, that we've built around it, then we can differentiate ourselves and give consumers a differentiated experience, whereas someone who's relying on a modem, solely a modem, won't be able to differentiate that way, because the modems will be all pretty good.

Q - Hans Mosesmann {BIO 1522582 <GO>}

So any questions on Tegra for Chris? All right. So I'll move to Quadro, which is a workstation, professional solutions business. And Tesla, which is high-performance computer for supercomputers. And that portion of your business is 20%-plus of sales. It has very, very high gross margins, very sticky. Can you tell us or explain layman's terms how that business transitions to GRID? What is GRID? And the Street is trying to figure out how big is it, when. And all that kind of stuff. So GRID.

A - Chris Evenden {BIO 18934997 <GO>}

So I don't know that it'll transition to GRID. I think GRID is separate.

So Quadro is graphics, professional graphics. So principally CAD workstations. But also all the special effects Oscars, all those were composed on Quadro video editing, that sort of thing, professional users.

Tesla is something different. It's using the same GPU. But with -- but not for graphics. But for compute. So you're actually performing mathematical calculations on it. So -- and a number of applications map very well to that, parallelize very well. So weather simulations might be one. The Black-Scholes equation, modeling derivatives, is another one, actually, that maps very well for that.

And GRID is putting the GPU in the cloud and making the graphics performance available over the network. So the graphics is running remotely.

And so, these are the three different businesses. So if we want to talk about where they're -- let's just talk about GRID. So GRID -- the main focus right now -- there's a number of ways you can monetize that technology. Once you've managed to virtualize a GPU and put it on the network, there's a number of ways to make money out of that.

Gaming we're looking at -- we have a 6,000-person beta for streaming gaming running in Northern California right now.

But the main focus today is improving the user experience for Citrix and VMware users. So we can -- we can do two -- by adding a GPU to the virtual desktop infrastructure that's used by Citrix and VMware, we can both improve the user experience for the average user. And also enable new applications, 3D applications, that weren't previously supported by Citrix, by XenDesktop or by VMware.

And today we are at the stage where we have hundreds of trials worldwide of that running. And the number of trials is increasing rapidly. It's up, I think, 40% Q-on-Q. But we're not at the point yet where I can talk about revenues, because it's enterprise IT. The purchase cycle is two years. We've been doing this for around six months.

So by the end of this year, I would expect us to have a better idea of the conversion rate of those trials. And of the average deal size, which is not data that exists yet.

Q - Hans Mosesmann {BIO 1522582 <GO>}

Right.

A - Chris Evenden {BIO 18934997 <GO>}

But by the end of this year, I would start -- I would expect to start to see some of those convert into production systems.

Q - Hans Mosesmann {BIO 1522582 <GO>}

What's the TAM, roughly speaking?

A - Chris Evenden {BIO 18934997 <GO>}

TAM questions are always challenging, right, because you have to look at (inaudible). It's in the billions, we believe. So we'll probably have another look at this at our Analyst Day, which is -- I'll get our plug for the Analyst Day out -- March 25th. So only three weeks away, three weeks tomorrow.

But in the billions is what I'd say. But it's -- at the moment, we're single-digit million in revenue. So we're somewhere away from that.

Q - Hans Mosesmann {BIO 1522582 <GO>}

All right, (Ted), here he comes.

Q - Unidentified Participant

(inaudible) keeps talking about financial software like an addition to the model (inaudible).

Q - Hans Mosesmann {BIO 1522582 <GO>}

Can you repeat the question?

A - Chris Evenden {BIO 18934997 <GO>}

Yes, sure. So I was asked, then, about the potential for software licensing as part of the GRID business. So that would be a fairly way, a fairly typical business model for the enterprise IT market. And, truth be told, we will be updating the software regularly to stay up to date with the latest applications that these enterprise users will be running.

So absolutely, that's a possibility. It's -- we're -- it's too early to discuss exactly the business model for that. Obviously, we're in discussions with potential customers right now as they run through their trials.

And quite happily, our new CFO actually has that background. So if there's anyone who can help us figure out the right business model for that market, it's her.

Q - Unidentified Participant

I had a question about share buyback. Can you give us an update on that, or would you wait until your Analyst Day to do that?

A - Chris Evenden {BIO 18934997 <GO>}

So I was just asked about share buyback. So where we are, last year we returned \$1 billion to shareholders. This year we said we'd return \$1 billion again. About \$160 million of that is dividends, roughly, assuming it stays at the current levels. So that leaves \$840 million for share repurchases. We announced a \$500 million ASR in February.

Q - Unidentified Participant

(inaudible).

A - Chris Evenden {BIO 18934997 <GO>}

So that's actually an ASR that's executing. So the authorization is north of \$1 billion. I forget exactly. I think it's about \$1.3 billion.

But the \$500 million is executing. And that runs through to June. And so, we think -- and we think an ASR is how we did the last major buyback. And it feels like it's the right way to go. I mean, we all that companies are terrible at deciding when to buy their stock. So if you spread the risk over a period of time through an ASR, you actually get a discount to the volume-weighted average price over that time.

And you get 60% of the shares up front. So in theory, everyone wins. We win because we get to take the risk out of the equation. Investors win because a lot of the shares are taken off the table up front. And whoever executes the ASR assumes they can generate profit through the trades.

Q - Hans Mosesmann {BIO 1522582 <GO>}

Another question.

A - Chris Evenden {BIO 18934997 <GO>}

Yes.

Q - Unidentified Participant

If you're going to license your (inaudible) technology to board manufacturers. So they can use (inaudible), were they, then -- what will your competitive advantage (inaudible)?

A - Chris Evenden {BIO 18934997 <GO>}

So that's -- so, the question is, if I can reinterpret the question, is, if you start licensing your GPU technology, then doesn't that compete with Tegra, essentially, right? That's what you're saying?

So I don't think so, oddly enough. And the reason for that is because it's an ideological decision about whether to build your own chip or not. Or maybe a more flattering way to put it, it's a strategic choice that a company makes.

And they make that choice based on -- I don't know the -- I have no special knowledge of the matter. But I imagine Apple didn't decide -- they didn't sit around the table and look at the detailed strategic choices. They -- the idea probably sprung fully-formed from Steve Job's head that they had to build a chip and they had to control that aspect of it, for example. Right?

So in a way, actually, licensing our technology opens up a market, because there'll still be emergent semiconductor market that you have to compete for. And there'll be a market that you can compete for. So if I can use an example without implying one thing or the other about whether we're in there or not, if you look at Samsung, for example, they both have their own chip. And they have -- and they buy chips from companies like ourselves.

So I don't think they're going to change either of those two strategies. That's their way forward.

Before we started licensing our technology, the only way we could compete for Samsung business is through Tegra. So that will be some percentage of their devices, not all of their devices. Now, with the licensing technology, we can compete with all of their devices.

So like I said, that example is for illustration purposes only. But it gives you an idea of how we think of the whole market -- the market as a whole.

Q - Hans Mosesmann {BIO 1522582 <GO>}

Yes. And OEMs that have made that decision include Intel, Apple, Samsung, just to give you a sense that they've made that decision to make their own SOC's. And they license graphics technology from ARM or Imagination, right?

So any questions on Tegra, before I go into another topic? Okay.

So Chris, Moore's Law slowing down. You're using TSMC. There's a transition going on at TSMC to kind of go to FinFET. So we're going from 28-nanometer to 20-nanometer to 16-nanometer FinFET. The road -- Intel's now offering foundry services.

So lots of issues going on there. How committed are you to TSMC? Would you consider going to Intel, now that Intel has basically said, we'll talk to anybody, including competitors?

A - Chris Evenden {BIO 18934997 <GO>}

So TSMC is the best at what they do is the short answer of that. We -- we'd be fools not to think about looking at other suppliers. And we do. And we send -- we send test chips through other foundries every now and again. And if we find a point at which the technology and the business terms are right, then I think we would put a chip or more through other foundries.

But the reality is that, to date, TSMC is extremely good at what it does. And there isn't anyone that can match it. So right now we're committed.

Q - Hans Mosesmann {BIO 1522582 <GO>}

Anything I left out? I think I left out automotive. I'm going to go to that. Was there anything specific that you think we should --?

A - Chris Evenden {BIO 18934997 <GO>}

Well we didn't talk about Tesla. I'm excited about Tesla.

Q - Hans Mosesmann {BIO 1522582 <GO>}

All right, let's talk about Tesla.

A - Chris Evenden {BIO 18934997 <GO>}

I like to talk about Tesla. Tesla's an interesting business. So Tesla is using a GPU. But for compute. And it was frustrating as an IR guy, because there was clearly so much excitement around Tesla. And you'd see so many really interesting applications for it. But it stuck at sort of \$25 million a quarter for a couple years, actually.

And it's recently burst out of that limit. And I think there's a couple -- there's two reasons for that. I think one is that there are enough codes supported now. So these

are like numerical sub-routines that are common to many applications that are supported on Tesla now. And we have enough of a channel in terms of companies like Cray, IBM, NEC, Supermicro, to take it to market.

So whereas a year and a half ago, to sell Tesla into a company we would actually have to go into that company. We'd have to evangelize parallel programming through this company. We'd have to help them with their code porting. And then we'd make the sale.

Now you can conceive of a situation where a researcher at a drug company is looking into protein interactions, say, he knows that his molecular dynamics code is accelerated by Tesla. He knows that IBM sells a Tesla server. So he can just phone up his IBM salesman and get one delivered on Friday.

So that -- so, the business can now scale. And so, that's what we're now seeing. The business has scaled. It grew 37% year on year last year. And there's reasons for more optimism, because now we're looking at additional markets like consumer Internet -- big data analytics for consumer Internet companies. And that's proving to be quite a rich seam to mine, as well.

So that's -- so, Tesla is still a relatively small part of revenues. But as you hinted earlier, it's extremely profitable. So a lot of that falls to the bottom line. And I think people underestimate the impact on EPS of that business.

Q - Hans Mosesmann {BIO 1522582 <GO>}

Ted?

Q - Unidentified Participant

Just a quick one. Have you seen any uptick on the hyperscale Web 2.0 companies adopting Tesla?

A - Chris Evenden {BIO 18934997 <GO>}

Have we seen any uptick on the hyperscale Web 2.0 companies --?

Q - Unidentified Participant

(inaudible).

A - Chris Evenden {BIO 18934997 <GO>}

So Amazon uses Tesla at AWS. It's a fairly focused application right now. But there are other companies, like I say, other consumer Internet companies that are making some pretty interesting use of Tesla, on both a smaller and a larger scale.

So there are a bunch of examples. I was just about to steal some of them from the Analyst Day. But I won't. There's a bunch there.

Q - Hans Mosesmann {BIO 1522582 <GO>}

Okay, we have about a minute. How is it that a graphics company gets into a very sticky relationship with a European car company or series of car companies, when you have incumbents that have been doing that for decades?

A - Chris Evenden {BIO 18934997 <GO>}

That's really interesting, actually. And I think it's the growth -- I keep going back to visual computing, like a PR automaton. But it is visual computing. And as you look at what makes a difference to the car experience now, it is the quality of the net. We got in originally for nav and DVD playback. But the quality of that varies a lot.

I was in Barcelona last week. And the cabs there are all Priuses. And so, they have one version of a digital dashboard. And I was actually -- I was lucky enough to drive a friend's Tesla Motors car a couple of weeks ago. And that has another version of a digital dashboard. But the quality of those pixels is quite startlingly different.

And if the Tesla had the Honda dashboard, you couldn't dream of charging \$100,000 for it, right? And that -- and increasingly, your experience with the car is metered through the in-car electronics. So the quality of the graphics, the speed of update on the nav, the resolution of the displays, the realism of the dials -- because increasingly you're seeing all-digital cockpits now, no more physical needles and dials.

That's one element. And the other element that's going to be really interesting going forward is just as a GPU is good at taking data and turning it into an image, a GPU is also very good at taking an image and pulling data out of it. So doing image recognition, for example.

And that's going to be very important as these car companies move towards ADAS, advanced driver automation systems. So we have a -- we can show you Tegra K1 taking a real-time video feed from the front of a car, recognizing where the white lines are, even reading road signs, speed limit signs at the side of the road, figuring out how far in front the car is. And so, as the car companies move towards ADAS systems, which they all are doing, then this will be very powerful for us.

And Audi did announce they were using Tegra K1 in their ADAS system. And they've shown some really interesting demos, for example, of a car that can -- that manages itself in stop-start traffic. So it moves up to the car in front and stops, moves up to the car in front and stops, keeps pulling forward. And also stays between the white lines. And so it just steers for you, as well.

And features like that Audi thinks are going to be in cars before the end of the decade. And that's really, again, where the power of a GPU, a real, quote, real GPU, can really help us.

Q - Hans Mosesmann {BIO 1522582 <GO>}

Chris, thank you very much. Thank you, everybody.

A - Chris Evenden {BIO 18934997 <GO>}

Thank you.

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