#### **CES Conference**

# **Company Participants**

Colette Kress, EVP & CFO

# **Other Participants**

• Unidentified Participant, Analyst, Unknown

#### **Presentation**

### **Unidentified Participant**

Okay. Great. Why don't we go ahead and get started.

We are very pleased to have the team from NVIDIA with us today. I've got Colette Kress who is the Chief Financial Officer at NVIDIA.

NVIDIA held their CES press conference on Sunday and they announced a bunch of great products. So what I have asked Colette to do is to start us off with an overview of what NVIDIA launched on Sunday and then we'll go ahead and dive into the Q&A. So Colette, thank you very much for joining us today and let me turn it over to you.

### **Colette Kress** {BIO 18297352 <GO>}

So on Sunday night at our press conference we announced our next mobile supercomputer chip, the Tegra XI, which is the fastest supercomputer in the mobile space with double the performance of our last chip, which we announced about a year ago at CES, which was our Tegra KI. So it is very high-performance, really moving some of the key deep learning ability computer vision and the super graphics that we have with our Maxwell architecture right now for overall gaming into an overall mobile chip associated with those processors.

Secondly, we announced two different modules for the automotive space. We announced the overall Tegra Drive CX, which is a module for the overall digital cockpit, next-generation. But can be really looked at as a plug-and-play to help in the digital display as well as the overall infotainment system for the next-generation cars. This is a key piece of using some of the key features in the graphics that again you have with the Maxwell architecture, key shading, key ability to render materials that you have in the car exactly into those digital displays.

The second piece that we discussed was our overall Drive PX. And our Drive PX is our automated driving overall module. And that is really helping us in the deep

learning and the computer vision for the future inside of cars, the ability for it to detect 12 different cameras around your car and being able to recognize all different types of objects, not just recognize objects such as that is a pedestrian, or that is a car but really being able to differentiate between the different types of cars that are out on the road, the different types of pedestrians, the different types of signs.

So what we are doing is taking the needed learning that we have with the overall CUDA platform, the overall software that is necessary to start to teach the car to recognize everything that is around it for the future and the ability to have a self-driving overall car. So those were the key announcements that we announced at CES at our press release on Sunday night.

## **Unidentified Participant**

Great. I think what was surprising relative to prior CES events is that like for example the TK1 announcement last year was, here is the processor, here is the performance, here is the different applications, gaming and embedded and automotive. And this year with the rollout of an Tegra X1, which is what twice the performance of TK1 and twice the efficiency, almost all of the focus was centered around automotive.

So is NVIDIA -- and then you know you had Drive CX and Drive PX and so the entire event was focused around automotive. So is there a strategy shift at NVIDIA as it relates to Tegra and the focus now more towards automotive and maybe solely focused on automotive on a go-forward basis? Or is gaming, portable gaming and other embedded segments of the market going to continue to be a part of your market for the Tegra platform?

### **Colette Kress** {BIO 18297352 <GO>}

Absolutely. We are still using the best of technology from the graphics in types of embedded types of devices that you will both need the deep learning, the ability to have the computer vision but also being able to find any type of device that needs that key graphics.

And overall mobile gaming is definitely an industry that we will continue to focus on. So taking our understanding of the platform that we know so well for gaming on a PC and moving that to all different types of mobile devices. So it's really a best of both worlds. Those embedded devices for computer vision, deep learning but also the ability to show the best display and graphics that people are becoming accustomed to on no matter what type of display or digital view that they see.

# **Unidentified Participant**

So help us understand. So Tegra in the most recent quarter was about 15% of your total revenues. Can you just help us quantify what percentage of that mix is automotive? And I know automotive leadtimes are very long and you've got a pretty solid pipeline of design wins. So help us understand -- give us a snapshot today of automotive mix within Tegra and then kind of give us a sense for your pipeline and

how that pipeline unfolds from a revenue perspective as we look out, one, two, three years as TK1 and Tegra X1 starts to become a bigger part of the mix in automotive?

#### **Colette Kress** {BIO 18297352 <GO>}

I'll try. So in Q3 are automotive business again had a tremendous quarter. In Q3 our overall automobile business almost doubled within the overall Tegra business.

In the prior two quarters again we had talked about it being near up 60% or 70% year-over-year. So it doesn't have a perfect exact growth rate each quarter but what is key is we had also announced key design wins within the -- in  $\Omega$ 3.

We announced Honda in Europe with many of the different model numbers that you would recognize for an everyday car. And that was a very important when as it talked about what we announced again a year ago at CES with overall Android and Android in the car and the overall coalition of a group of people working on Android for the overall cars.

So it was an important win. Now keep in mind, we don't get to announce the actual rollouts of where Tegra X1 will be used in the future as that is where car companies are the ones that actually announce their cars. So we will have to stay tuned in terms of when we see the next design wins associated with Tegra X1.

But the automobile business, our overall pipeline of design wins, we have designs from multiple years of multiple different forms of Tegra as cars are still being shipped and manufactured with that. As well we expect the new Tegra X1 to also play a place in that. So it is a wide range and it is a very very strong pipeline going into the future as well.

# **Unidentified Participant**

Can you give us a sense of maybe when you expect automotive -- because it does feel like the pipeline is pretty full and you've got numerous design wins. So any sense as to when we could expect the automotive subsegment within Tegra to cross over the rest of the Tegra business?

## **Colette Kress** {BIO 18297352 <GO>}

You know, I think there is still tremendous opportunities in the rest of the Tegra business as well. And we see growth in those businesses as well on many of the embedded portions associated with gaming, gaming tablets, a very specific tablet with the key horsepower of that application processor. So we will just have to see in terms of when we may break that out and whether or not we will going forward.

# **Unidentified Participant**

Okay. Given that we are at the beginning of the year and as you think about your product and design win pipeline in 2015, Colette, give us your view on what you believe will be the drivers of your business this year in your computing and graphics segments and data center and cloud and mobile. We talked about automotive but give us your view on the different segments and the growth trajectories that we can anticipate here in 2015.

#### **Colette Kress** {BIO 18297352 <GO>}

So when we think about our entire portfolio, we talk about our overall GPU business, which is really focused on several key platforms. The number one platform is our overall gaming platform, probably the one that people know the most of our success of the past.

A very very strong year this year in terms of our overall gaming results and our gaming platform. We just released at the middle of Q3 our overall Maxwell architecture and our high-end GPUs for that gaming business.

So that makes up a good portion of our overall GeForce GPUs in that business. So where now we are looking at gaming representing about 75% of our overall GeForce business and extremely healthy. In the Q3 for example, our gaming business for GPU grew more than 30%, about 32% year-over-year. So very very strong and healthy, largely influenced by the key innovations that we continue to bring forth.

People continuing to advance their experience and buying higher-end GPUs for their gaming experience as well as our ability to really capture a good portion of that share associated with the gaming market. So it's a very very important market for us, a market that we think is tremendously healthy, also one that is continuing to grow going forward.

Second key market or key platform for us is the overall data center in cloud. That data center and cloud business is now not taking the overall graphics ability of the GPU but the overall acceleration ability as it is dealing with data center workloads and overall virtualization.

So for example, in the data center what you are seeing is an emergence of an industry focused on deep learning, machine learning and overall computer analytics. So what you see is people looking for image tagging, voice recognition, voice translation abilities using the accelerator and the GPU as key in helping that workload. Research in terms of high-end education is really bringing this forth and we are seeing large Internet service providers build extremely large projects associated with this GPU.

This is our overall Tesla business. We experienced record levels of Tesla both in Q3 and Q2 associated with the emergence of machine learning and deep analytics.

Secondly, in our cloud and data center business is our overall GRID and our virtualized GPU. Now we are taking a platform where you have normally had a GPU associated with a one-to-one relationship, either one to the overall computer to the user and now we are using a one-to-many where we have one GPU and we are able to serve that up to many different types of users in a streaming overall environment.

We are just in the early stages of this business. We have been in market a little bit over a year with key partners such as Citrix and VMware, who have truly adopted this technology as a key leading indicator for virtualization of the future, really improving that user experience on the end of many of the applications that are being streamed down from an overall cloud experience. So those are also two key areas in the data center and cloud which will drive overall growth going forward.

Then of course our focus on mobile. Everything that we see is moving to more and more mobile types of devices. We are in the early stages of seeing the embedded nature of the graphics associated with gaming tablets or high-end tablets really necessary for the displays for the workloads that they want to complete.

Our embedded business and then of course our automotive business is a tremendous growth opportunity for us. Again, I want to mostly talk about one key aspect as well, which is our overall IP business. As you know we have some of the largest amount of GPU technology and IP technology from a significant amount of engineers that this is their life work.

We have an overall patent portfolio of more than 7,000 patents issued and pending associated with the GPU technology. So there is really talking about an emergence of not only using that technology in some of the products that we've gone forth. But also the ability to license this in terms in the future with many different companies that see this great technology and would like to either build their own devices, or just have a license to that overall technology.

# **Unidentified Participant**

When we think about the licensing strategy I can envision several different routes for the Company where you can license your patents. Obviously you can license your circuit building blocks and certain other aspects of IP associated with the design. Is there any one strategy that the team is more focused on, or less focused on as it relates to the different aspects of the IP portfolio?

## **Colette Kress** {BIO 18297352 <GO>}

I wouldn't say we are focused on more than one in particular. I think they are all viable options. What we find is it's not necessarily us driving but really the companies coming forth and what they are interested in.

What you find in this new world is many different ways to solve a lot of their desires and problems that they want in terms of this IP technology. So we are focused both on protecting our IP and our IP being used without our approval and then we are

also focused on helping companies bring this great technology into their devices. Whether they want to license the core and be able to build their own devices, or whether or not they just want patents, we are here to help them in any way.

### **Unidentified Participant**

And I'll just ask the question. But any updates on the ongoing litigation with Samsung and Qualcomm?

#### **Colette Kress** {BIO 18297352 <GO>}

So we are progressing. As you know the ITC shortly after we filed had agreed to move towards an investigation. Then when that happens we actually get a hearing date, which is now scheduled for June for both parties to actually represent their overall case.

So we are pleased with the efficiency of the ITC. It's one of the main reasons why we went through with the ITC as we will get to a point where we will be able to discuss this case with a third party and hopefully get a ruling on the infringement.

## **Unidentified Participant**

Great. Are there any questions from the audience?

#### **Questions And Answers**

# **Q** - Unidentified Participant

A couple of questions. Have you given any indication of the ASPs for the automotive business?

And the second question is kind of more longer-term, if you think of a car as a phone, what we've seen is a move to towards integrated components. So you have a display processor, goes into the application processor with a conductivity component on it and the RF and everything else. Do you think auto manufacturers will take a different thought, which is they do prefer a standalone GPU and a standalone conductivity module and they find the best of all worlds to put them together, how is the world is evolving?

## **A - Colette Kress** {BIO 18297352 <GO>}

So let me first start with your first part of your question, which was really talking about what type of ASPs are we talking about. I think the key thing to help understand what we are bringing to the automotive world is not bringing just a chip, as many of our other overall competitors may do. We are actually bringing a key aspect of software and key software that has been programmed truly for the car and really taking advantage of our overall CUDA development platform.

We have more software engineers at NVIDIA than we actually do hardware engineers, really focused on building out the complex algorithms that are going to be necessary for the cars of the future. So that's one aspect that we are looking at, which is the software as being a key component of why the automotive industry is buying these key modules for the car. B

But the second thing to keep in mind is its multiple aspects inside of a car. Now we're talking about not only the cockpit, the infotainment system, the rear seat type of infotainment system and now something that may sit in the trunk, which is really helping the driver actually drive the car and auto assist. So we are now talking about multiple chips and if you go to the booth actually today or tomorrow you will actually see that we have a car there that has multiple chips inside of the car all doing different things.

So to kind of lead to the second part of your question, how will this work, how will car manufacturers and OEMs? It depends.

They all want to do it differently in terms of do they want to standardize on a single module that is running all of that? Do they want to keep those modules separated? The answer is, yes.

Depending on how they have put that together, those different things will occur. So right now our ASPs are very different, of course because we are selling into market many different type of form factors for what is going through. But you will soon see that software is being the key driver of the overall ASPs of what they are buying going forward.

## **Q** - Unidentified Participant

(inaudible) are you selling to the module providers or to the OEMs?

## **A - Colette Kress** {BIO 18297352 <GO>}

So what we work with is in both. So we have definitely deep relationships actually with the car manufacturers because that's where the key engineering and new technology is going through. We may be providing directly to them or we may be providing through the Tier 1s, Tier 2s for the actual completion and manufacturing within the car. So the answer is, it is a complicated group but we have deep relationships over 8, 10 years of working with both the manufacturers as well as the Tier 1s.

## **Q** - Unidentified Participant

Let's focus on the GeForce gaming segment of your business. I remember when I first started covering NVIDIA five years ago and any time our hardware analyst would change his PC forecast we would either raise or cut numbers on NVIDIA.

But over the years it has become quite a different business now. And in fact that relationship has decoupled to a point where NVIDIA's GeForce gaming business, or

the GeForce business overall, is being more driven by the trends within the PC gaming segment of the market, which has been growing significantly faster than the overall PC market. And so if I just take a look at that part of your business, which is still tied to the PC/OEM channel, as you mentioned, it is about 25% of your overall GeForce business.

It's 25% of revenues but I am assuming that it's a much less percentage of your total operating profits. Can you help us quantify what percentage of the operating profits is the PC/OEM channel?

### **A - Colette Kress** {BIO 18297352 <GO>}

So our GeForce business is broken down into two major pieces, which is that gaming portfolio where people are generally purchasing a high-end or midrange GPU to conduct overall gaming. We don't have perfect insights in terms of exactly if they are a casual gamer or a full-fledged enthusiast types of gamer. But we can definitely tell by the price points of the GPUs that they are purchasing.

We see them coming back for more and more innovation, which is necessary for the gaming experience for the high-end games that continue to come out year on year. We spent a good portion of our time not working on building the hardware but really working with the overall software development in gaming to make sure that that GPU is well configured at the point that those games come out so that the experience of that end consumer is really concentrated on gaming.

So this is a significant part of our overall revenue. It doesn't represent a majority or even near a majority of the overall PC market. The PC market is much much larger as it is associated with just enterprise and consumer types of PCs.

And in many cases you are buying a discrete GPU you may not be upgrading your overall PC. You may just be going in, opening up the back and inserting your latest and greatest high-end GPU for your overall gaming experience. So there is still a significant amount of volume with overall general PC shipments, what I would consider to be a general-purpose PC whether that be for the enterprise and the consumer.

It is still a part of our business, it's still important to us. There are many different options for a consumer. They have different options in terms of discrete offerings or they have offerings in terms of an integrated.

We will continue to play in there. Keep in mind it's a very cost competitive type of business. When you have cost competitive what you are dealing with is probably not our highest margins of our business and what we have.

So there is a low percentage of our overall revenue. We have indicated it is less than 25% of our GeForce business and it's even a lesser % as you think about overall profitability or gross margin associated with that business. But again we will still play

in that business as we do still see it as an important part to make sure we have our share of across all of PCs.

#### **Q** - Unidentified Participant

Then in that 75% of your GeForce business, which is tied to gaming, that business as you mentioned was up 36% year-over-year in the most recent quarter. You have obviously got your next-generation Maxwell architecture ramping. But at the same time this is October -- I've got a 15-year-old son so I know all this -- October, November is when the blockbuster games get launched.

You had Assassin's Creed, you have Call of Duty Advanced Warfare and a whole bunch of other games. And so of the growth that you are seeing right now I don't know if you guys have ever studied this. But what percentage of that growth is driven by blockbuster game introductions versus just the traction that you're getting with the new Maxwell architecture?

#### **A - Colette Kress** {BIO 18297352 <GO>}

I think it's hard to differentiate where and what happens because it's both of them are important. There's many times that you will buy a GPU to make your existing games that you have even work better. So it's not always waiting for the new games that are coming out but it can be both.

You made buy the GPU knowing that you are going to buy a new set of games going forward. You may be buying it for whatever you have purchased in the past.

And that is the key thing about our architecture it is configured so that it works across all. It is not just what is coming out going forward.

So there are definitely pockets of gaming where a big amount of games come out but what we see is gaming is a yearly event that happens all the time. It doesn't necessarily just peek at any point in time. So we are seeing very good overall year-to-date results not just in terms of a single quarter.

## **Q** - Unidentified Participant

When I think about NVIDIA, I think about some of the most complicated chips in the world. I think you guys are probably driving about I billion transistors per chip right now. And so when I tend to think about NVIDIA I tend to think about Moore's law and then I tend to think about staying on the bleeding edge of manufacturing technology.

And so for the team I think ahead of you you still have either the migration to 20 nanometers or 16 nanometer and 14 nanometer FinFET technology. Help us understand the manufacturing roadmaps and when does NVIDIA feel it is the right time to be intercepting these new manufacturing process builds?

## A - Colette Kress (BIO 18297352 <GO>)

So manufacturing process is not a short-term decision. It is something that we've been working on for many years in terms of when is that right time to change to the next manufacturing node. So you will see us continue to come out with both process and changes to different nodes but then also continuing to evolve the overall innovation.

And so each one of them are different steps in our overall ability to provide the key products that we need to stay at the top and as you indicated the leading edge of the technology in terms of the GPU. But it is well thought through.

It is well thought through in terms of those manufacturing changes, really thinking about the volumes, the costs associated with any of that. So we don't have anything to announce but once the new products come out we will talk about the new manufacturing process nodes.

#### **Q** - Unidentified Participant

Okay. Let's focus on the financials. The team is going to drive 12% to 14% revenue growth in calendar year 2014 while at the same time obviously the team has done a great job in terms of the OpEx discipline.

I think your OpEx only grew about 4% in calendar 2014 and this has been obviously largely responsible for driving almost 450 basis points of up margin expansion. How should we think about the longer-term trends within OpEx relative to revenue growth? Should we continue to expect leverage on the OpEx, or is the team more focused on driving top-line growth and continuing to invest at a heavy pace in the business via R&D?

### **A - Colette Kress** {BIO 18297352 <GO>}

So far year-to-date in our fiscal 2015 through the end of Q3 overall top-line revenue growth, as you mentioned, is at 15%. We have also had Second Quarter and near Q3 record levels in terms of overall gross margin. So they are sitting around 55.5% to 56%. So also extremely strong performance on gross margin.

But what has been key is our overall operating profit. Keep in mind in fiscal year 2013 and fiscal year 2012 were key times we're moving to the platforms that we have today. The overall investments that was necessary for the overall data center in the cloud and really moving to the overall mobile infrastructure that we have today.

What that took was fiscal year 2015 is to tap out into the overall investment level. Our operating income so far year-to-date through the end of Q3 has grown 50%. So really a focus on profitability and really leveraging the investments that we had done over the last couple of years.

So moving into the new year we will talk about at the end of Q4 our overall investment strategy going into our fiscal year 2016. But what you can expect us to do is to make sure that A, we think about our overall investments necessary to continue

the success of some of our key growth platforms but we must continue to look for the overall efficiencies in the leverage across our overall portfolio as well.

So we will talk about this more as we go into fiscal year 2016. But it is a focus of ours thinking about that right balance from investment and profitability.

### **Q** - Unidentified Participant

So assuming that the revenue continues to grow at a healthy clip and the team continues to drive an OpEx growth that is lower than the revenue growth, obviously that still paints a picture of margin expansion. We have the team delivering low 20% operating margins this calendar year. Longer term where can the upper end of the operating margin spectrum be?

#### A - Colette Kress (BIO 18297352 <GO>)

So again I am not here to be able to really give forward-looking guidance. We will really talk about that as we move into fiscal year 2016. But as we've talked about, the really key growth platforms that we have -- the question is which of them and how fast will each one of them grow.

So we've got some tremendous opportunities both in gaming, in data center and cloud, in mobile, automobile and our IP portfolio. So I think these are extremely solid businesses where we have really shown the overall technology achievements and now the question is how fast can they grow going forward and what is that overall mix of them moving forward. So more to come later but that's where we sit right now.

# Q - Unidentified Participant

Great. Well we are just about out of time. Colette, thank you very much.

Appreciate you participating. Thank you.

### **A - Colette Kress** {BIO 18297352 <GO>}

Thank you. So much.

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