Bank of America Merrill Lynch Global Technology Conference

Company Participants

- Colette Kress, EVP and CFO

Other Participants

- Unidentified Participant, Analyst, Unknown
- Vivek Arya, Analyst, BofA Merrill Lynch

Presentation

Vivek Arya {BIO 6781604 <GO>}

Good morning, everyone. I'm Vivek Arya from the Bank of America Merrill Lynch semiconductor team. I'm absolutely delighted to welcome everyone to our technology conference.

And especially delighted to have Colette Kress, CFO of NVIDIA, to kick off our semiconductor part of the session. And she is also joined by Arnab Chanda and Shawn Simmons from the investor relations team. What I thought we would do is I can start off the discussion with some Q&A. But then open it up to your questions.

So with that welcome, Colette. Thank you for joining us.

Colette Kress {BIO 18297352 <GO>}

Thank you. So much.

Vivek Arya {BIO 6781604 <GO>}

So maybe as a start, what I thought we could do is go through your different segments. And just this week, we have the Computex show, where you had already announced your Pascal and GTx products before that. But I think there were some other formal unveiling of products this week. There was some news from your competitors, AMD, also out.

So if you could just take a step back and give us a sense for the PC gaming market, what it has done the last four, five years, what Pascal means. And how does it shape what the next few years might look like for that business.

Colette Kress {BIO 18297352 <GO>}

Sure. Our representation in the gaming market is a very, very big part of NVIDIA. Our gaming business represents more than 50% -- 60% of our overall revenue size. Last couple of years, tremendous success from our existing architecture, Maxwell, in terms of driving up the overall market for high-end gaming. And we had seen growth rates probably more than 35% over the last couple of years in terms of a CAGR.

We just finished our Q1 of fiscal year 2017 and more continuation of the growth. Our business grew more than 17%. But as you mentioned, we also announced right at the end of our Q1 our newest architecture for Pascal.

Pascal, we announced two new cards, two high-end cards, our 1080 and 1070, which have begun selling and have received astounding reviews, both from the reviewers as well as for gamers who are extremely enthusiastic. And a lot of that has to do with the significant improvement in terms of performance from even some of our highest-end cards in our last generation as well as the price points being about the same as some of the things that we had in our prior architecture. So we are very excited to unveil those.

And our work in terms of Computex is continue to talk about those. And not just talk about the underlying hardware. But the work that we've been doing around the ecosystem. The ecosystem around gaming with overall design works, with VR works in terms of our SDKs. And our software platform that helps make gaming continue to even be better.

Vivek Arya {BIO 6781604 <GO>}

So yesterday on eBay, I saw that some of those cards were selling for like $1,200, $1,800, right? Two or three times -- I don't remember the last time semiconductor products were selling for two or three times the list price.

But the question is do you have enough of the supply for what customers need right now? Are there any supply hurdles or supply limitations?

Colette Kress {BIO 18297352 <GO>}

No. We are really excited about how people are very enthused in terms of our founders' additions. We are coming out first in the 1080s and 1070s. And as expected, those were extremely, extremely popular.

We'll have supply quite shortly with the AIC card market and those will be here quite shortly. But over the short period of time between the founders and the cards, we are seeing a lot of other unique price points. But no, we'll have that all ready for the AICs very shortly.

Vivek Arya {BIO 6781604 <GO>}

Got it. Then lastly, we saw AMD also announced their competing architecture with Polaris. And they have started the pricing of some cards as low as $199. So from what you have seen in the competitive landscape, has anything surprised you at all? Is this sort of what you had expected going in when you set the pricing of your products?

Colette Kress {BIO 18297352 <GO>}

Yes. There hasn't been any surprise in terms of what we have seen. We really started our path with overall Pascal, trying to create a arena where there is a card for essentially every part of the PC market. Enabling high-end gaming. But also making sure that we are enabling VR at every stage of there.

So performance of our cards so far have been just extremely well received, particularly at the price points. And we'll continue to see Pascal come out as being some of the most power-efficient cards out there and will probably enable performance at almost every single level with our Pascal as it continues.

Vivek Arya {BIO 6781604 <GO>}

Got it. On the upgrade opportunity, I think a lot of times, we try to simplify the discussion of growth in terms of units and content. And what I remember from your analyst day is you had said that the last five years you had 20% or so compounded growth rate in PC gaming. So sort of in 9% from units, 11% from content.

As you look out the next three, four years, how do you see these two trends being shaped individually? So on the unit side, I understand there's probably an upgrade opportunity. Is that stronger now with Pascal?

And on then on the ASP side, are there things that you're doing in the card, right? Of course, the pricing of your new product is better than what you had before. So if you could just talk about the units and the ASP trends, I think that would be very helpful.

Colette Kress {BIO 18297352 <GO>}

Sure. Referring to what we had discussed at our investor day back in the early part of the spring, the results that we've seen there's been a lot of discussion of with 35% growth, what are the largest drivers of our business? And the overall TAM improvement or the TAM growth that we've seen over this period of time is continuing to be a benefit for us.

I believe we've been a big part of expanding those overall TAMs in terms of bringing gamers to the market. Gamers come to the market based on both the games that are available, the better the production value of those games. The better accessibility to broadband around the world has brought them on board. But also what we've seen is the expansion of eSports.

The expansion of eSports has literally put gaming in the same arena of any other form of entertainment: a social platform that people are online together. So expanding those overall users has been a big part of our overall growth as we've seen units continue to increase in this market, aside from people looking at the overall PCs that have not exactly grown.

But also, we've seen the increase in terms of ASPs. Not necessarily from us pricing at different levels. But gamers coming in and experiencing gaming at much higher production in terms of the cards that they can buy. So we've seen a continued move up of those buying higher and higher end cards for the games that become available.

Our Pascal architecture is now again another opportunity for them to realize higher end gaming, look at this opportunity to upgrade. When we think about our installed base, there's probably more than 100 million gamers out there. We can see about 80 million of those, as those are ones that are with our GeForce experience, downloading the things that they need for games in terms of the drivers and the configurations.

Of those 80 million, there is still a very small percentage of them that are currently on our current architecture, on Maxwell. So moving that to Pascal is definitely an opportunity for an upgrade. Then we'll see what they think in terms of higher higher-end cards. But we expect that to probably continue going forward as well.

Vivek Arya {BIO 6781604 <GO>}

Is it fair to think that if somebody who was buying, let's say, a $99 card before and your content as part of a $99 card -- I don't know whether it's $20 or $25, something in that range. If that gamer is now buying a $299 or a $399 card, that your content of as part of the card is much greater percentagewise than it used to be before.

Colette Kress {BIO 18297352 <GO>}

The references regarding our add-in card market. So the add-in card, what we consider to be the jewels inside of that add-in card representing the chip and the memory are some of those key things that we supply, which is revenue to us.

Working with the add-in card market, they will supply all the rest of the different components that may be incorporated in those cards. We still have the majority of the contents no matter what the price point is inside of those cards and that will probably be a continuation.

As you've seen with some of the additions that are coming out with founders, there is also unique components to really bring that at a higher level. High-end components in addition to the regular AIC markets in terms of those founders' additions. So again, the goal is really to provide that right card for the right type of gamer. But you can expect us to earn about the same that we've had historically.

Vivek Arya {BIO 6781604 <GO>}

And what role will VR play in this? Are you already seeing some of the direct or indirect benefits of that? Or is that still to come, you think?

Colette Kress {BIO 18297352 <GO>}

I think we are in the early phases of VR. But I do believe we think VR is that next generation of high-end gaming absolutely that we'll see going forward. Our goal is to enable VR across a wide spectrum of individuals. And individuals in terms of mainstream VR players, high-end enthusiast types of gamers, as well as also VR as it moves into professional.

We are nowhere at the stage where I'd say VR is already good enough by any means. There's a significant amount of work that will be done to improve that. Our focus has been providing cards at all levels. But also working up the software components that can engineer the VR experience to continue to be better. So I think we are in the very, very early stages. But it's a bonus on top of what we see in terms of high-end gaming on how we look at VR.

Vivek Arya {BIO 6781604 <GO>}

So not to ask you to quantify everything to the nth detail. But if you look at all these trends, whether it's the rise in the number of gamers, the increased attention from eSports. And whether you look at all the content game opportunities and your competitive position, is it fair to think this is still a midteens kind of growth opportunity for NVIDIA for the next two, three years?

Or because I think there is a perception that we had a very strong cycle, we are now sort of at the peak rate of that cycle. And now that consoles are getting to the later part side of their growth, that it will also slow down PC gaming. Do you see anything that slows down PC gaming over the next two or three years?

Colette Kress {BIO 18297352 <GO>}

PC gaming is a extremely healthy entertainment market here. It differs quite a bit from existing console types of businesses. Consoles has been a relatively long cycle, not necessarily one that changes as you go. It's a buy a console and it stays for many, many, many years. And it's not up at the level of the current production value games right now that a lot of the high-end gamers are doing.

So we will see that continue to expand in terms of more and more people coming online to game, which really feeds the types of games the game developers are building for this overall market. So for what we can see, it's a continuation of what we've seen, which is a great position.

Our Pascal architecture even allows more to come on board and experience the great parts of PC gaming with all of their friends in the eSports type of thing. So I don't see it changing. I think it's a very healthy position. And I think we're in a very good space right now with the new Pascal architecture.

Vivek Arya {BIO 6781604 <GO>}

Got it. And the last question then on gaming is one other trend that I remember from your investor day was the discussion that emerging markets are still a big part where there is the penetration is not obviously what it is in developed markets. So are you doing anything special in emerging markets to expand penetration levels?

Colette Kress {BIO 18297352 <GO>}

It's a good question. People tend to look at just the US or some of the European countries to understand key trends. But in the Asia PAC area, it has been very unique to see the expansion of PC gaming.

But you are correct that there's many parts of the world where they just do not have the broadband access that we have in terms of the Western world. So they've come on at a much faster pace and they have really surrounded themselves against PCs -- or excuse me, with PCs versus in the US you have a division sometimes in other types of form factors.

Our focus has been enabling all different levels of the Asia PAC area. They may seed in some of the initial things that have taken place in the Western world many years ago. So we are in those same different markets that you see in Asia PAC and we will continue to fuel exactly what we've done already in our existing markets in those.

Vivek Arya {BIO 6781604 <GO>}

Got it. And one last question on competition, because it comes up very frequently with investors is that there is a perception that there is a new AMD now: that they are doing things that are different, that they have a better architecture, they have also adopted the new 14 nanometer, 16 nanometer FinFET technology.

From what you see in the marketplace, is there any difference whether in terms of pricing or them being any different competitively? Because you have a very dominant share of this market, right? And they are making the case that it's easier for us to take share from NVIDIA right at this point right much better than what we had at any other point. So have you seen anything different in the competitive landscape?

Colette Kress {BIO 18297352 <GO>}

So if I had to say who was different over the last several years, I think that's NVIDIA. I think in the way that we've chosen to approach the strategic aspects of selling into the gaming market and how we really transformed to a platform type of approach.

It's not about a chip. It's not about a bigger and better chip. We have the resources, we have the engineering horsepower to absolutely build some of the best technology that's there. But we've surrounded that with a working across the entire ecosystem, from the software developers to the overall gamers, giving the ability to be involved in the community of other gamers and continuing to expand that.

So what you get with NVIDIA in terms of that sale is a platform, a community. And an overall understanding of gaming as a whole. You don't get a chip. So I haven't seen that in terms of the strategy anywhere else other than NVIDIA. So I'd say the changes are primarily in NVIDIA than I would say that there is anywhere else.

The high-end gamers pretty much stay with NVIDIA just based on the commitment that we have to continue to test the boundaries of both performance and efficiency with our cards that we provide. And I think that's what we see.

Vivek Arya {BIO 6781604 <GO>}

Got it. Then moving onto the data center business, that was one of the stars of your recent earnings call. Could you maybe take a step back and help us understand how do you segment that business? Whether it's hyperscale versus high-performance computing versus enterprise. What are the key applications you address? So just sort of a quick intro to that business.

Colette Kress {BIO 18297352 <GO>}

Sure. Our data center business is a little bit different than what you are seeing on the gaming side. The gaming takes place really trying to enable the high-end graphics that we need to do.

When we're talking about data center, we've used to using the GPU to accelerate computing as a key component in the computing platform as we move forward. We've been a part of the data center business for more than eight years. Eight years in terms of high-performance computing and using a GPU to accelerate many of the applications and high-performance computing and several of the large supercomputers that we have across the world. So that is one part and one segment of our data center business.

A second piece has also been the focus of the last two GTCs. We have discussed in terms of the continued rise of deep learning and the deep learning framework for artificial intelligence. This is a new era of using deep neuronets to actually help artificial intelligence and a framework using deep learning to build more artificial intelligence with many key applications, primarily right now with a lot of the hyperscales and the breadth and depth that the hyperscales are using deep learning in many of their different types of applications.

Then number three, that is also our place where we have our cloud computing. So our position where we have a GPU in the cloud that can be leveraged in a streaming

environment or a partitioned things so we can have one to many using the overall GPU.

All three of those businesses underneath data center are growing quite nicely. We continue to have both the scale, the understanding of the use of a GPU. Its performance, its programmability, its power efficiency makes it probably the only form factor that people are using for deep learning and deep learning training.

We're going to continue to focus on expanding to enterprises, other industries. Real industries where data is essential. And understanding more and more about that data that they can serve up to the end customer is the key focus. And that's been the driver of our underlying data center business. And we expect that to continue.

Vivek Arya {BIO 6781604 <GO>}

Now, the revenues that you reported for that business I think surprised everyone. Was there any impact from one or two large customers? Or do you think this is a new baseline and this business can actually be sustainable and even grow from these levels?

Colette Kress {BIO 18297352 <GO>}

Yes. If you've actually watched our discussions over the last couple of years and the rollout of deep learning. And it was really started in a lot of the research institution and higher ed, as they really focused on this new framework. And so you see every single hyperscale across the globe focused on deep learning.

And so it's really a situation of the breadth and the depth of the projects together which is overall driving our growth. And you know, there will be continue to be project rollouts across those hyperscales and also movement into enterprises as well that will take that.

How big this market is, how fast will grow? What is that size? That's not something, because I think we are in some of the early stages right now of deep learning for us to really understand the scope and how fast it could overall move.

But we are excited with the progress and really being there with the right platform. And not just the right hardware. But the right development platform which has enabled a lot of this deep learning as well.

Vivek Arya {BIO 6781604 <GO>}

How is your visibility just conceptually in this kind of a business? I understand there are a lot of trial, a lot of things going on. But do you already have a somewhat good sense of what the next one, two, three quarters might look like for this business?

Colette Kress {BIO 18297352 <GO>}

It's a different business than selling gaming cards, right? Gaming cards is a one-by-one type of sale here, one by one to each type of gamer. In the case of our data center business, we will definitely start out understanding the problems that they are trying to solve, understanding their architecture that they have in the data center. And then how we can assist into there.

So we have long relationships and relationships still yet to go and build across this industry. But most of it has really been about a long relationship cycle and seeing them continue to roll out across many different workloads or many different projects.

Vivek Arya {BIO 6781604 <GO>}

So it's good visibility?

Colette Kress {BIO 18297352 <GO>}

I'd say we have a good list of people that we are working with, yes.

Vivek Arya {BIO 6781604 <GO>}

Okay. Who provide good visibility?

Colette Kress {BIO 18297352 <GO>}

We have a good list of people that we are working with.

Vivek Arya {BIO 6781604 <GO>}

I thought I would try. Google recently announced their TensorFlow product, which they said can replace CPUs and GPUs. There were a lot of headlines around that. First, is that sort of claim true, that can somebody like Google going design a product which eliminates the need for stand-alone GPUs to do this kind of thing?

Colette Kress {BIO 18297352 <GO>}

It's good to get a good understanding of the technology surrounding deep learning and the different parts of deep learning. So deep learning training is really taking the data and working with throwing it at deep neural networks in a very powerful performance that's necessary, requiring what we see today is the only form factor would be GPUs actually in those training environments.

What we see is there's also use of seeing that from an inference standpoint as well. So taking exactly those algorithms that have been developed in the deep learning framework and using it for any new data that is also entering into the overall network. That inference has been primarily used with CPUs and other easier forms of configuration of maybe ASICs or FPGAs in those manners. But we're also starting to see GPUs being leveraged in that piece.

So the overall ability to use a TPU for deep learning training is probably not what their overall intention was. It was mainly for the overall inference market. We're continuing to work on building with our Pascal architecture that we came out not only training. But also GPUs for inference as well.

So it doesn't surprise me that someone would have self-built. But our focus is going to be on the complete deep learning process, both from the training side through to the inference.

Vivek Arya {BIO 6781604 <GO>}

So do you see them sort of as a one-off or do you see this as a widespread industry phenomenon? Because I think what we are seeing in a very different market in smartphones, for example, when Apple was able to design their own processor, right? They were able to design a very good processor and that did hurt the market for merchant silicon in smartphone processors.

Now, I understand this is a very different market. But if Google can do this, what's to prevent Facebook or Baidu or somebody else from doing it?

Colette Kress {BIO 18297352 <GO>}

The overall deep learning or even the acceleration market has been using many different form factors for quite a while. So this isn't anything new. The use of custom-built ASIC could easily be done.

The question is the performance and how well they can master the overall performance through there. And that's something that we've been able to continue to excel at just based on our overall resources and development that we see.

So it is unlikely that there is that much custom ASIC design that can be done. Because it's actually very challenging and the amount of investment that's necessary to build that. So we've seen this; we've continued to outperform with coming with new performance, new power efficiency going forward and I think that's what you can expect.

So I think it's a very, very different market than a single use of what you may have in terms of mobile. There's many ways to solve this. But lots of investment that is necessary that would really preclude a lot of people from really starting this part of that business.

Vivek Arya {BIO 6781604 <GO>}

So I know it is harder to pinpoint exact growth rates because these are new markets that are starting to develop. But if, let's say, somebody were to say that over the next three or four years, CapEx by the cloud guys would grow, let's say, 10% or 15% a year

than this market opportunity, is it fair to think it could grow at or above that kind of rate?

And I'm not asking for a forecast. I'm just trying to say that how should investors think about quantifying this opportunity? Should it grow faster than the growth of CapEx by all these cloud players?

Colette Kress {BIO 18297352 <GO>}

Yes, I think each of the cloud players are very, very focused on their data center throughput and focused on improving the workloads that they have serving consumers. So this could be, if we looked at their CapEx, a very, very important part of their future CapEx investment.

We're one component of that piece. But if you really break down the overall computing architecture, we can be a material part of improving that throughput as I think about that architecture going forward.

We tend to look at where those markets are, where the data is. What types of workloads would be best suited for deep learning as a focus of where we are. So we look at it as following the data. You've seen a lot of research of Big Data firms also looking for deep learning in those possibilities. So I don't think it's a bad way to look at. But you'd have to break down their CapEx in terms of where they are looking to invest in within there.

Vivek Arya {BIO 6781604 <GO>}

Let me pause there and see if there are any questions from the audience on gaming. We will talk about automotive and some of the other businesses. Okay, I'll keep on going then.

On automotive, which has been another very strong area of growth for NVIDIA, how much of what you're doing is infotainment? And how much of it is like putting the seeds in place for autonomous driving, advanced driver assist systems. And so forth?

Colette Kress {BIO 18297352 <GO>}

I think that's a question to say of our time and dedication and research. So when we think about our infotainment business, we've been in our infotainment business for more than 8 to 10 years working with automotive, premium car manufacturers, on the high-end infotainment systems that you see. We have more than 10 million cars on the road with our infotainment systems in there and there's more cars that will overall hit the road.

Our strategic focus has been to build upon those relationships, as we saw a very key need of taking exactly what we understood from the data center to solve a very difficult challenge with automotive companies. They are looking for a way to do

autonomous driving or self-driving. But that's a significant amount of computational power that's going to be necessary to understand everything that surrounds a car and serve out the set of instructions. Many form factors have been through ADASes continuing to advanced ADAS through handwritten man years' worth of algorithms written in order to address that market.

Our focus has been using deep learning, using a center computing platform that is both open and scalable to build toward autonomous driving. So our -- most of our focus right now absolutely is on autonomous driving and building that with the many car manufacturers and Tier 1s that we are working with. Probably 80 different examples of Tier 1 startups and research that is happening in terms of autonomous driving.

But the majority of our revenue today of course is still from the infotainment world that we have right now. We are starting in terms of development contracts and will likely in the next 12 months or so have our platform, our DRIVE PX platform, for autonomous driving in production in a set of cars.

Vivek Arya {BIO 6781604 <GO>}

When I look at the competitive landscape -- so automotive and automotive semiconductors is on top of mind. That's been one of the few growth areas which people thought would grow and is actually growing.

And what I see, though, in competitive landscape is you have, there's like NXP, who bring a very diverse set of products to that: safety and microcontrollers and whatnot, right? So very broad set of products. Then you have the typical smart -- the traditional smartphone companies, like Qualcomm, Intel, who are approaching that market from a more smartphone mindset that let me not just worry about the processor. Let me also think about touchscreen controllers and power management, putting an LTE baseband in there.

How -- when you look at this automotive opportunity, where do you see NVIDIA being in that spectrum? Or is it just that there is enough growth as a stand-alone high-performance computing part of the car that should drive growth for you for the next few years?

Colette Kress {BIO 18297352 <GO>}

It's hard to look historically at this space and say here is where we'll be. Because we are really talking about a space that has not been developed in terms of yet. The cars in terms of their digitalization is a key important part as we move forward. Right now, if you look at an average car, more than 50 different microprocessors within the car. So all of the competition has a place to overall play and they may be single function types of thing.

Our focus is to say that overall compute power, that central repository is absolutely necessary. And it's going to take some time for that to build and scale for the highest

level of autonomous driving over the next future. But that transformation is in front of us and it is necessary.

Focusing on just a single microprocessor or a single function is not the evolution that we see and are going to be focused. It's more about creating the connectivity of a central platform inside of there that can connect with all of the different cameras, sensors, radar, lidar that may come into the car going forward of algorithms and how to deal with that using a deep learning framework.

And we have everything from training that data outside of the car, taking the information, the data that we receive from cars to better create the information that you are going to need moving forward. The other players, again, all different form factors of things that may be incremental from where we are today. But we are looking more at about what's going to be necessary for a full autonomous driving car in the future.

Vivek Arya {BIO 6781604 <GO>}

Got it. Then maybe in the few minutes we have left to talk about financials. So we have seen very strong expansion in gross margins over the last few years. So how much of that is that your business is moving away from the legacy more competitive PC market to more of these high-end products?

And if that mix shift has been the key trend, is gross margin expansion sustainable? Can we continue to see -- is there more room for growth from there on gross margins?

Colette Kress {BIO 18297352 <GO>}

If you think about our focus on the output of being gross margin and what is the underlying driver there, mix is a key component. Whether or not you are higher priced I think it is more it is a platform sale to where the value that we are delivering often is in the development platform layer. The development tools, the development libraries. And the software that comes with so much of our overall products. And we have those platforms for each one of the specialized markets that we go after.

So continuing to work that has allowed us to achieve higher gross margins. The mix of our products continue to move closer to those higher-value products. And that mix has driven higher margins.

It's still going to be our focus as we go forward to see our enterprise, our data center businesses, have higher gross margins than the Company average. And our gaming being more than 50% has a big influence definitely in terms of our gross margins. It's still going to be our concentration, we just don't know what that perfect mix will be and how fast those gross margins may grow.

Vivek Arya {BIO 6781604 <GO>}

All right. Now, I understand next year, there will be a reset because of the rolloff on the royalties. I think that's known and been understood. But let's say two or three years from now, would it shock you to see NVIDIA get to 60% gross margins?

Colette Kress {BIO 18297352 <GO>}

So what we are referring here is our Intel licensing agreement is -- we are in the final stages of the existing agreement. We don't have any knowledge in terms of which way that will go. It's fine to assume that it may be zero and there would be an impact if it did not renew to our overall gross margins.

So aside from that, as our focus in some of these key areas where large TAMs are, whether that be data center, whether that be gaming, there's absolutely an opportunity for gross margins to go higher. Will that be 60%? I'm not sure I have a good exact number that I would sit here and commit to on that.

Vivek Arya {BIO 6781604 <GO>}

But is there anything in the business to prevent NVIDIA to getting to 60%?

Colette Kress {BIO 18297352 <GO>}

There's always factors that can come in.

Vivek Arya {BIO 6781604 <GO>}

Conservatism.

Colette Kress {BIO 18297352 <GO>}

Yes. There is not everything in our portfolio that is above the Company average. And then we could be at a higher amount. But there are some things that we still have to work out in terms of getting there. But that is our focus.

Vivek Arya {BIO 6781604 <GO>}

Right. Because I know automotive, for example, is typically industry-wide is a lower gross margin business. Is there something you can do there to expand the gross margin?

Colette Kress {BIO 18297352 <GO>}

It's the exact same process. It's not about selling the chip inside. It's about selling a lot of the development platform and the development services that we've been working on for DriveWorks in terms of autonomous driving. The value of that is a huge opportunity for us in both our revenue as well as in terms of our gross margin expansion.

Questions And Answers

Q - Unidentified Participant

Could you comment on the Intel agreement? And what is the breadth and depth of that agreement in terms of their access to your IP and patents? Does it extend to all IP and patents through 2017 and how -- and do they carry those rights beyond 2017?

A - Colette Kress {BIO 18297352 <GO>}

There's a cross-license in both directions in terms of license to theirs and they have license to our portfolio through what we refer to as the capture period. The capture period ends in the First Quarter of our next fiscal year. And they will still have access to those even after the capture period. But they won't have access to anything new past that capture period.

Q - Unidentified Participant

Is it a point of leverage as you develop and file new -- is the capture period finding anything filed as a patent during the period or anything developed from there?

A - Colette Kress {BIO 18297352 <GO>}

In terms of that fine clarity, there is some line in terms of the details. But I think it's easy to just say after Q1, anything new that's put into a true patent would not be captured.

Q - Vivek Arya {BIO 6781604 <GO>}

In terms of the cost structure, that's also been I think one very important aspect: you've had very strong control over the cost. And last year, there were some litigation expenses because of the litigation against Samsung and Qualcomm. Some of those have been settled now.

So is there an opportunity to take those and invest in some of these growth opportunities? Or do you think those sort of help to -- they can actually fall through to the bottom line from here?

A - Colette Kress {BIO 18297352 <GO>}

So our prior year did have a significant investment as we worked through the litigation with Samsung and Qualcomm. Our peak of that, though, was probably in the first half of last year as we were getting ready for the ITC cases at that time. So we've been continuing to wind down a lot of some of that high expenses.

So what we've seen is relatively consistent, flat overall expense base for quite some time. And what that really has been about is making the appropriate investments that we see necessary: one bringing Pascal to life as it is today. But also in terms of some of the go-to-market paths that we've been for data center and some of our new businesses as well.

But we continue to look at the efficiencies or things that are rolling off in order to manage the overall operating margin of the Company as a growth that we'd like to see. And that's really going to be our focus as we continue to go forward: operating margin expansion, making the right investments. But it being assured that we can continue to expand margins going forward.

Q - Vivek Arya {BIO 6781604 <GO>}

Got it. So if I look at some of the best-in-class fabless companies, they are able to achieve 30% operating margins. Is that a bad target to think of when we think of NVIDIA?

A - Colette Kress {BIO 18297352 <GO>}

I think focusing us as a platform company and having us focus on operating profitability is the right thing to think about. We're talking about some pretty big markets in front of us that our experience with our overall leveraged infrastructure has definitely enabled us to really attack these markets. We need to make sure that we make those investments and also so that we can really achieve the TAMs that are in front of us.

So it's a balance on how fast that can be. I think we are pleased right now that from a non-GAAP perspective right now, we are sitting at about 25%. And over the last year, that's grown more than 470 basis points. So it's moved quite well and we are very pleased with the output of our production, our engineering. And those investments that we've made. But we'll continue to focus on that and continue to focus on profitability.

Q - Vivek Arya {BIO 6781604 <GO>}

Last two very quick sort of rapidfire-type questions. Are some of your gaming products also being used as data center accelerators? Is there a classification thing or is that a small thing or we are fixating too much?

A - Colette Kress {BIO 18297352 <GO>}

It's a really small thing. Any type of researcher who is wanting to dabble in GPUs can easily go online and get one delivered. And that may be one of our high-end gaming cards. It may be one of our TITANs. They may start with a workstation or they may buy one of our Tesla-branded ones.

That's a good way to get started, because remember: each one of our GPUs is programmable and comes with a programmable set for them to get started. It's not something that you see in the data center in a mission-critical architectural design in terms of there. But sure, a researcher here or there that's gaming as well as researching deep learning using the GPU (multiple speakers).

Q - Vivek Arya {BIO 6781604 <GO>}

But you don't see some big cloud guy going to a Best Buy and buying a lot of (end products) from there.

A - Colette Kress {BIO 18297352 <GO>}

No. We do not . No. We do not.

Q - Vivek Arya {BIO 6781604 <GO>}

Okay. Then the last one is the PC OEM business. That's obviously come down to a very low level. Does it sort of just flatten out from there or it continues to go down? It's a very insignificant part of the business now, right?

A - Colette Kress {BIO 18297352 <GO>}

It's not a material part. It used to be a material part. We are looking at numbers less than 10% of our overall size of our revenue. We are in the business as a people need an overall discrete GPU and a general-purpose PC. We are not in the business to from an economic standpoint to lose money on there and that we'll go back for a design win to design win back and forth.

The overall PC market may not be a growth market in the near future either. And if that's the case, it will probably be at the level it is or follow in connection with the overall PC market. And we'll play in it if it's economic sense. And it will probably highly correlate with the overall PC market.

Q - Vivek Arya {BIO 6781604 <GO>}

Great. And we are right at the end of our time. Thank you, everyone. Thank you, Colette. Really appreciate your time.

A - Colette Kress {BIO 18297352 <GO>}

Thank you.