24th Annual Needham Growth Conference

Company Participants

- Colette Kress, Executive Vice President and Chief Financial Officer

Other Participants

- Rajvindra Gill, Needham & Company

Presentation

Rajvindra Gill {BIO 16383656 <GO>}

: Needham & Company:} Good afternoon, everybody. Welcome. My name is Raji Gill, I'm the Managing Director of Global Semiconductor and Automotive Technology Research here in Needham & Company. Welcome to our 24th Annual Growth Conference here at Needham. Wish we could be in person, but it is what it is. But we're happy for everyone that's joining.

We're very pleased to have Colette Kress from NVIDIA Chief Financial Officer as well as the IR team as well Stewart and Simona Jankowski. This will be a fireside chat about 40 minutes for folks that have questions that are listening on the webcast, feel free to text -- write them in the textbox message and then I will relay those messages.

So with that, Colette, welcome.

Colette Kress {BIO 18297352 <GO>}

Thank you. Thank you for having us.

Questions And Answers

Q - Rajvindra Gill {BIO 16383656 <GO>}

(Question And Answer)

: Needham & Company:} My pleasure. So Colette, if we could maybe first start with the gaming segment. The gaming segment has had a tremendous amount of growth in 2021, is the most recent quarter was up about 42% year-over-year. And the demand was pretty much strong across the board, desktop and laptop computers. On the most recent call, you mentioned that only about 25% of your 250 million GeForce installed base is on the latest Ampere GPU architecture.

So that implies a kind of a significant upgrade cycle that's underway over the next couple of years. So I wanted to get a sense of what percentage of your consumers upgrade their cards every generation? And are there generation skips that are common? Do you -- are you seeing kind of the opposite and more people are upgrading to this architecture faster than the Pascal architecture?

A - Colette Kress {BIO 18297352 <GO>}

Yes, great. So let me first start with a reminder. Remember this discussion presentation, we may contain forward-looking statements and investors are advised to read our reports filed with the SEC for information related to risks and uncertainties facing our business.

But let's get into your question regarding gaming, and our 25% of our installed base that is on RTX. When we indicate that RTX is 25% of our installed base, we're referring to two architectures with that. Ampere is our second generation, Turing was our first and we've reached 25% of them, we believe in our estimates are now able to play Ray Trace games on the platforms that they have.

Adoption of a specific generation of an architecture generally tops out at approximately 50% of the installed base. But again, that can vary from architecture-to-architecture. So a portion of our installed base will purchase the current architecture, but some may await new generation before upgrading. And this is particularly common, for example, in the lower end of our portfolio. When we transition to new architecture, it's common that we are both selling the new architecture and the prior architecture at the same time.

Q - Rajvindra Gill {BIO 16383656 <GO>}

Got it. You're seeing what -- I think what's differentiated with this architectures is the RTX capabilities that are coming to the titles, such as in Marvel's Guardians of Galaxy or EA's Battlefield 2042. So can you give us a sense of how Ray Tracing has really changed the dynamic of gaming and how that's been spurring more adoption of the Ampere architecture?

A - Colette Kress {BIO 18297352 <GO>}

Sure. Ray Tracing when we began with the Turing architecture really fueled not only the availability of the compute, but fueled the entire ecosystem to be focusing on probably something that they were not expecting for probably a decade going forward. So our results have started the ecosystem as a whole. Ray tracing is now really the next technology movement that we're seeing with the games that are being built. Games that were in process or new games that are being built, really take advantage of Ray Tracing. But it's more than that, because Ray Tracing can be helpful and useful for industries even outside of gaming.

It's important for those that are broadcasting games, those that are training others in terms of on the use of GeForce for their games, but more importantly, it's also moving to enterprise. Enterprise applications using Ray Tracing can also really assess both the production of products, that overall true visible view in real-time has been

helpful. So Ray Tracing is an important piece today. But again, we'll see more and more applications of even outside of gaming as we work forward.

Q - Rajvindra Gill {BIO 16383656 <GO>}

With gaming continuing to perform well, what is the latest you're seeing in terms of product availability for gamers? And if we could maybe split that between the Cerium and the crypto miner demand, maybe an update there in terms of what you're seeing with respect to your low hash rates GPU that you specifically sent out for Ethereum. And just wanted to get a sense in terms of how you're balancing the supply for gamers?

A - Colette Kress {BIO 18297352 <GO>}

Sure. So even throughout all of calendar 2021, we have seen strong demand for GeForce. And it continues to remain strong and stronger than our overall supply that we have. The holiday demand, for example, was quite strong, particularly in laptops. And we're still finishing out our quarter. But we'll look at the end of the quarter in terms of what we've seen in terms of channel levels. We had seen channel levels be quite lean, and we are working with our supply chain partners to increase the availability of supply. And we feel better about our supply situation as we move into the second half of the calendar year '22.

Some of the other record breaking things that we've seen is gaming demand is quite strong. We're seeing record concurrent users, for example, on Steam, 28 million concurrent users breaking a prior record quite easily. Also, we're seeing momentum build -- momentum building for creative and/or Metaverse like type of applications that are addressed with our Studio offerings, but also Omniverse.

Now when we focus in terms of cryptocurrency, the contribution of cryptocurrency to our gaming revenue continues and will be difficult for us to quantify. We believe that our process on light hash rate cards for GeForce, also with our CMP product, has been an effective strategy to steer GeForce to the supply within the gamers. However, new crypto hash rate has stemmed and we're seeing several different sources of that. That can be our GeForce GPUs, it could be AMD GPUs, custom ASICs, and our CMP product, all of these are contributing, but again, it's just very difficult for us to quantify.

Q - Rajvindra Gill {BIO 16383656 <GO>}

So just kind of sticking with that, I appreciate the fact that the company has implemented a low hash rate, GeForce GPU and also a CMP specific processor for crypto in order to somehow distinguish between gamers and crypto. That's been in place for the last, say, several months. What have you seen as a result of those kind of new two initiatives? Have you been able to better distinguish between the demand, between the gamers and the crypto? And have you also been able to take advantage of that understanding to allocate supply a bit more efficiently as we go into 2022?

A - Colette Kress {BIO 18297352 <GO>}

Yeah, so let's first start with our first part of our process, the CMP product, which stands for Crypto Mining Processor. This is specifically enabling the ability to do hash rates on a product that does not have overall video capabilities, or another way of saying that, it can't be used for overall gaming. We geared that toward our crypto miners, and sold into professional miners on that, strong quarters. So we felt that was contributing to what we are seeing in terms of the hash rate increases.

Now our light hash rate, we've pretty much for all of our upcoming Ampere products as they reach market, incorporate that light hash rate. What that can do is that can decrease the overall hash efficiency by up to 50%. And so that's a deterrent in terms of those that are trying to buy a GeForce cards and looking to do that for crypto. It may be very difficult for them to be effective in terms of their work with crypto. It's unclear we can't get quite quantitative in terms of how successful all of these, but we do know that these two overall strategies have been helpful in the market as we're seeing more moved statements at this time.

Q - Rajvindra Gill {BIO 16383656 <GO>}

Got it. If we could switch gears to the data center business, data center business, another significant revenue contributor, the most recent quarter was up 55% year-over-year. And it grew about 24% sequentially, third quarter, calendar third quarter. One of the interesting things that we spoke talked about on the earnings call and recent conferences is you're pushing to Inference. So only 10% of your servers are accelerated. Wondering how you're thinking about Inference going into this year. You had mentioned that roughly 25,000 companies use your Inference tools and the new Triton server. So thoughts about how Inference is going to track, say, this year versus last year? And what are the some of the drivers of Inference adoption on GPUs?

A - Colette Kress {BIO 18297352 <GO>}

Great question. So we've had great success with our Ampere architecture in the data center. Our A100 has been very strong since the launch. And the key thing to keep in mind about our A100 architecture is that it is allowing both hyperscales and the vertical industries to address the demand needs that they have. But more importantly, A100 has the ability to address deep learning, training, and inferencing at the same time. We do have inferencing-focused GPUs. And this has also been quite a success in terms of revenue growth of these GPUs has outpaced what we saw in terms of overall data center growth in Q3, as inferencing has outgrown the CPU and AI has been an increasingly important component of how they are doing inferencing.

Now going forward, it will be difficult for us to understand that mix in terms of how much it would be training and how much is inferencing, because A100 architectures do allow both, meaning you can redeploy A100 many ways, all for training, training plus inferencing, at the same time. So we just won't have that perfect understanding. But our work with customers, helping them with their inferencing solutions, helping them in terms of training, training models, as well as all of the different software that we have enabled for these industries, really speak to the growth that we're going to see in terms of the industry going forward.

Q - Rajvindra Gill {BIO 16383656 <GO>}

When you mentioned based on your estimate that 10%, only 10% of the servers are actually accelerated, that means 90% are CPU-based. When you are penetrating into this market, are you seeing customers go directly to the A100, to do both training and inference? Are you seeing kind of more inference-based specific GPUs? Does it vary by application? Is there any trend lines that you can kind of maybe talk about, as you kind of penetrate further into the inference market, and try to capitalize on that growth?

A - Colette Kress {BIO 18297352 <GO>}

Yeah, so great question. When we focused on what type of metric do you want to look at. And we first started indicating that we're still in the early stage of penetrating the server market with acceleration. More than just saying it's only 10%, it really indicates that there is 90% opportunity still going forward, as people really see the importance of acceleration going forward, as Moore's Law becomes at an end for many of these applications.

Now what we see in terms of how they're purchasing, it depends in terms of where they are going to do that type of computing. It could be in the cloud. It could be on premise, it could be with a colo, there's many different opportunities. The A100 has enabled both setting up in the cloud and that easy adoption to have multi-tenancy. But there aren't times when people are also going to the cloud to just have inference-specific GPU that they could be on. Now whether or not they stay in the cloud, take that to on-premise, as we move forward, we'll see more of it.

What we were really fueling was easy adoption, easy adoption to focus solely in the cloud. Do you want it on premise? Do you want to work with an overall colo? So these are many different options that we have, not only in terms of the hardware and system infrastructure, but also the software stacks that we have enabling that.

Q - Rajvindra Gill {BIO 16383656 <GO>}

That's really helpful to understand that process. You also broke out the data center revenue, 50% cloud, 50% enterprise, 1% supercomputing or 49%, that equals to 100%. So you saw vertical industries, particularly led by consumer Internet and cloud providers, really seeing a lot of growth. Wondering Colette, if you can maybe talk about, what are some of the adoption trends that you're seeing across the different verticals, the different hyperscalers? Any kind of interesting use cases that are really -- highlight the importance of your A100 and your whole AI GPU suite?

A - Colette Kress {BIO 18297352 <GO>}

Yeah. So when we think about our data center revenue and our customer profile, we split it about 50/50. 50% is focused on those hyper scales, 50% is our enterprise industry verticals that we're seeing. Keep in mind the hyperscale, some of that can be used for their internal use, in terms of building applications that they monetize. But the other portion of it is setting up cloud instances. Those cloud instances are an important area for us to bring on developers, researchers, higher education, but also

some of the first places where the enterprise industry has gone to also test those places. They may be there permanently.

And then yes, we have a small percentage that is also on supercomputing. But our work in terms of AI as a whole has driven a strong presence with both the hyperscalers and the industries piece of that. Now what we see in terms of the type of work that they're doing, what's changed over the last three to four years, if I can be very honest that, we were seeing computer vision or looking at pictures, classifying pictures. And some of the early days of AI, where we have is some of the big models and the focus has been on natural language understanding, natural language processing, through all of the same work that they have been doing, whether that be search types of commands or in the case of consumer Internet companies, they are working on recommendative, recommendative engines that help them monetize all of the Internet marketing and focus that they're doing. So it's a big area to using AI to determine how to reach these overall customer sets.

Those are some of the first areas that we focused on with the overall hyperscale consumer Internet. But keep in mind, our software applications are focused, meaning our software development kits tying into so many of the enterprise applications has been also a big area of focus. Financial industries, for example, use AI to avoid fraud and work on AI solutions so that they could detect that. Retail focus in terms of AI to improve their overall forecasting of supply and demand. But also thinking about how to better stock what they have in the actual stores that are checkouts as well. So many different options there are.

High performance computing continues to be accelerated in many, many areas. That's been an area that we've focused on for more than 10 to 15 years. And then the ability to infuse AI into that process to again, move a lot faster in the work that they are doing. So many different areas, our work in software, and a full stack to help them rethink their applications and focus on AI. Post the pandemic we think more of this will flow as people really understand the use of AI will be a competitive need for their industries.

Q - Rajvindra Gill {BIO 16383656 <GO>}

Thanks for that, Colette. If we could switch gears to the capacity situation, you had made pre-payments of about $1.6 billion that were dispersed thus far to a major foundry partner, with the future expected to be a total of $3.4 billion. This should ensure that NVIDIA has ample capacity on relevant nodes to meet your targets. But wanted to get a sense of, can you discuss what kind of products, what kind of nodes that this prepayment capacity that is being targeted at and how has that process been so far as you move into the account in 2022?

A - Colette Kress {BIO 18297352 <GO>}

So when we look at our process right now of securing supply, I don't think there is anybody in the semiconductor industry and/or the systems that is not focused on long-term supply, long-term supply, as well as what we need every single quarter for. So if you've watched our overall focus in terms of supply even over this last year, yes, we continue to try and get more supply for the latest and greatest quarter. But at the

same time we are procuring supply commitments for longer-term. Many cases they can be for a year out, some of the times they may be for multiple years out.

Now when we indicate that we're securing supply, given that we are a full systems company, in many cases, it is everything from foundries, everything to components, things in terms of packaging, focused in terms of testing capabilities or just sheer capacity to complete the building out of our overall system. So there's a wide range of different capacity agreements we've done. And yes, some of them have been helpful that we have prepaid in advance for some of those. But our focus, again, is to be helping the ecosystem, helping our suppliers, understand where we think demand may go, so that we can secure this and help them as they go about this capacity going forward.

Q - Rajvindra Gill {BIO 16383656 <GO>}

The shift to come to longer-term supply agreements, based on your experience in the industry, is this up -- is this a first, that -- is this a new dynamic that's been happening in the industry in general?

A - Colette Kress {BIO 18297352 <GO>}

I believe it has existed in a smaller amount in history. But the sheer volume of what we're seeing of folks needing to procure for the longer time is essential. Not everybody has all that perfect visibility on what may be needed. And we're just going to run short, if we are not sharing information, helping all of our suppliers in the ecosystem understand. We do this every day right now making up the quarter. It's not just about what we can provide in terms of a GPU. We have to think through the entire system, the system of building a laptop, or workstation, or for example, the DGX, will all of those components and pieces be available? How do we help fuel the full ecosystem? So yes, I think we are turning into a new wave that I believe will be helpful in terms of the overall working together.

Q - Rajvindra Gill {BIO 16383656 <GO>}

Just to follow-up on the supply, this is really a question from investors. So on the supply, is it fair to assume that you feel confident that you'll have enough supply to meet the data center demand as well as on the graphic demand? Any kind of details or more insights in terms of how the supply is being allocated for each of the main end markets?

A - Colette Kress {BIO 18297352 <GO>}

Yeah. So today, if we look our demand exceeds supply in some of our businesses. We've indicated that demand exceeds supply, for example, in gaming and there's parts of our data center business, in the focused networking, that has also been constrained. We are working, as we've mentioned, in terms of longer-term, getting that supply. In the second half of calendar '22, we believe we'll be in a great position with our overall supply in terms of our estimations of what we will need going forward. So still some time to be assured that we can work through supply. We do still have a plan to grow, of course, through these quarters going forward. But in the second half of fiscal year '22 -- in the second half of calendar '22.

Q - Rajvindra Gill {BIO 16383656 <GO>}
You'll be in a "great position with respect to supply".

A - Colette Kress {BIO 18297352 <GO>}
We hope to be. That is correct.

Q - Rajvindra Gill {BIO 16383656 <GO>}
You hope to be.

A - Colette Kress {BIO 18297352 <GO>}
Well, demand has surprised us and strong demand. But right now, we do believe we will be in a good position.

Q - Rajvindra Gill {BIO 16383656 <GO>}
Got it. And just on the networking demand, it has outpaced your ability to supply as you mentioned. Can you explain, why this is happening and which of your products up here are in particularly high demand with? And any particular customers that you can talk about on the networking side?

A - Colette Kress {BIO 18297352 <GO>}
Yeah, our networking solutions are world class. And they -- just as we are building out the data center for AI, they are an important integral part in terms of data center build out. So it's actually not one specific product. But the products keep in mind are full systems and putting together those systems with components. Sometimes certain areas have fallen short. So we are working on it feverishly. And we do hope it to improve as well in the second half of the calendar year.

Q - Rajvindra Gill {BIO 16383656 <GO>}
Got it. So just shifting to Omniverse, and the 3D world, so this is a huge opportunity. I think it came as a bit of a surprise to investors in the middle of last year, is another kind of leg to your growth story that wasn't necessarily anticipated. So your Omniverse enterprise is a platform that for simulating physically accurate 3D worlds, and you make it easier to integrate computer vision, speech recognition, natural language, understanding and processing, facial animation, all the different constructs of data and you can kind of run this in real time.

So wanted to get your thoughts in terms of who are you seeing as the early adopters of this Omniverse platform, the Avatar platform? Are there any undergoing testing deployment at this time? And I'll just stop there, and we can kind of maybe delve a little bit deeper into that. I just want to get a sense.

A - Colette Kress {BIO 18297352 <GO>}

Sure. Let's talk about the Omniverse products that we have available. It is a both software and hardware offering with services as well. So the Omniverse software opportunity can be looked at in two main ways that we will plan to directly monetize. First, in terms of design collaboration. We're talking about collaboration of building products, anything from building a coke bottle, to building a skyscraper, or next airplane type.

The key thing in terms of that collaboration is looking at it in terms of the productivity docs, documents that are necessary for that 3D. It addresses the 40 million different designers and possible users that are out there. We will monetize it, what we refer to it as Omniverse enterprise. We'll look at a pricing of about $1,000 per seat per year. And that is currently available in general availability. So we see enterprises, one of key enterprises that we started to showcase that was quite far along in our journey, and have been working with us with many years, someone like BMW, really thinking of manufacturing floor and how they can improve the overall collaboration.

But digital BOTs is another way, another way to assist for customer support, call centers, in car systems, a also large opportunity. The Omniverse avatar, for example, can be priced at something similar to $1,000 per Avatar per year. And this is overall in beta.

Now our software revenues will have a multiple level, will have a multiple systems and chips revenue that will come with that, whether that be workstations and/or building out 3D virtual world models in the data center. We believe this will be a meaningful revenue contributor over the next few years. Already starting to see some of these Metaverses get started. Content creators, cloud gaming, infrastructure is another example. And enterprises are quite interested in the digital twin environment.

So what we're seeing in terms of those applications of the technology are wide ranging. But we've highlighted three use cases in the near term, for example, Project Tokkio for customer support. You'll see for example, NVIDIA DRIVE Concierge, this could be the AI assistant inside of the car you're driving. Tell me where the nearest Starbucks is, or the nearest gas station, or (inaudible) in terms of using for video conferencing in 3D world. So the interest is high. But as we continue, we'll be happy to update you on our progress in the upcoming quarters.

Q - Rajvindra Gill {BIO 16383656 <GO>}

Does this require kind of additional resources with respect to new software development or hardware development? Or is this something that you can essentially leverage your existing software framework, your existing hardware framework into this new opportunities?

A - Colette Kress {BIO 18297352 <GO>}

We've been working on Omniverse for several years, if you've watched our DTC, some of those early motion things that we had displayed was Omniverse coming to life. But one of the other things that we do, whether it be any software development kit or Omniverse, is we are here to connect with existing applications. There are

many applications that are used in the design world, from Adobe to Autodesk, to Blender, a huge host of them. And so part of the announcements of Omniverse was really our engagement with those different applications. So the end user is still using those applications, but it's connecting with Omniverse that takes their 2D world into a 3D or a virtual world.

Q - Rajvindra Gill {BIO 16383656 <GO>}

For the broader suite of Omniverse products, is there a way to estimate the market size? You mentioned some of the price points for the 3D designers. Any sense of how you're kind of roughly estimating the market potential?

A - Colette Kress {BIO 18297352 <GO>}

We are still -- give you some highlights in the near-term going forward in terms of maybe a little bit more information about what this opportunity is. But we know it is a multi-billion dollar opportunity in front of us. We have several new multi-billion dollar opportunities that have services to last time that we provided overall TAM. So stay tuned with our Investor Day. In March, we'll give you some more information.

Q - Rajvindra Gill {BIO 16383656 <GO>}

And just want to switch gears to the automotive segment. This is another massive growth opportunity for NVIDIA that has taken a bit of a while to ramp, but I think is going to be ramping the next couple of years. So you mentioned an $8 billion autonomous pipeline recently, which is expected to launch in the second half of calendar '22. And which products are being launched first, and for which applications?

A - Colette Kress {BIO 18297352 <GO>}

Sure. So we did announce an $8 billion pipeline to help folks understand that currently today in our automotive business, our automotive business focused on many years of working with the OEMs on infotainment systems, a graphic infotainment systems that are inside in cars, and that is still part of our business. But for over the last 5 to 10 years, we've been also focusing on that transformation of moving towards EV. And we've of course approached EV differently than many of our competitors. We believe that AI computing is really necessary. And most of the OEMs have also really understood the importance of that, that, that makes them fine tune exactly what they want to provide for those passenger cars experience, but also provides you experience that last over the length of owning the car.

We have an $8 billion pipeline that takes us out to 2027. That includes folks, such as passenger car OEMs, it also includes Robotaxis. It includes the trucking industry that is also very interested in using it.

So moving into the second half of this calendar year, we will start to begin working into that pipeline. That pipeline will focus a lot in terms of the new energy customers that are building cars, electric cars, and are starting with a platform from grounds up. They understand and truly appreciate what we can provide with DRIVE and provide with our high carrier platform that enables them to continue to build in a new way for

the cars going forward. So you'll see that and you will also see some of the starts of other types of companies advancing there.

Q - Rajvindra Gill {BIO 16383656 <GO>}

But it's fair to assume that towards the end of this year, and going into calendar '23, that we should start to see kind of a shift away from infotainment, or not a shift away, but in addition to infotainment, the more in some of these other applications that NVIDIA has been working on for quite some time. The markets seems to be kind of coming to fruition. Just a couple of questions on auto and then I kind of move to margin and then we'll wrap up.

So in automotive NVIDIA DRIVE and the related Concierge and Chauffeur they're gaining traction. Can you give us a rundown of what makes DRIVE beneficial to various parties, and with which adopters is it currently gaining the most traction?

A - Colette Kress {BIO 18297352 <GO>}

Sure, so DRIVE, so keep in mind is an end-to-end platform for creating these automated driving solutions. It can start with just the development of AI. We may provide them DGXs that are working with their engineers. The important piece of that is that comes with a software platform to assist them in terms of their work.

Another important part of automated driving is that simulation, that testing, that validation. This is again where Omniverse simulation is an important piece of that work. If you think about it, trying to travel the world in a car in all of the roads to make sure that autonomated driving solutions will work will be very difficult, because you're looking for that one time of a very special circumstance to see how it works. Well, you can simulate that back in your data centers with Omniverse. And that has been extremely helpful in pushing forward for the safety of being on the roads.

Additionally, we, of course, offer the in-car AI compute and sensor suite as well. This is a Hyperion product. Now, each of our customers choose and decide what parts of this that they want to support and different types of design that they want. And having them take advantage of all the different offerings that we have from an end-to-end component. When we think about who is interested, it can be current passenger car OEM builders, the Tier 1s are very interested, for example, on the Hyperion new platform that enables them to think about that platform over many years of the new cars. Robotaxis, startups, trucking, all of these types of cars have been interested.

But you're correct. We've also added new pieces of Omniverse, very specific for automotive, first, starting with DRIVE Concierge. DRIVE Concierge uses that drive technology, and an Omniverse Avatar. They work together with DRIVE Chauffeur, for example. The Concierge serves as everyone's digital system, as you're inside of the car, making recommendations, booking reservations, making phone calls and providing alerts. The key thing of the AI is it uses natural language understanding together for that solution.

DRIVE Chauffeur, the last piece of our Omniverse really helps with that burden of controlling the vehicle and monitoring the surrounding environment. It's that help that you have inside of the car of walking for all the stuff the driver should be aware about. So we have full stack available for the car companies, and we're really excited for this year (Technical Difficulty) some of these.

Q - Rajvindra Gill {BIO 16383656 <GO>}

Very interesting. We just have a couple of minutes left. So just want to hit gross margins. And then we'll wrap it up. So the margins have moved massively over the last several quarters -- several years. You've guided to about 67% gross margin for January. You have -- you're building a software platform for the Omniverse revenue stream that you want to monetize. There's a lot of software you're selling with respect to high-end GPUs and also on workstation. How do we think about -- how are you thinking about the margins, over the next couple of years with respect to revenue? Is there more drivers of margin? Or do you want to kind of maintain it at this level? It's a very fundamental question with respect to NVIDIA stock pricing and the valuation is how are you kind of thinking about that?

A - Colette Kress {BIO 18297352 <GO>}

Well, when we think about the history of the company, we probably got off the train that was focusing on chip sales many years ago. We are a company that is focused on systems and platforms and software is not new to us. Software is a large component in terms of the reason why people choose our platform, not necessarily software monetized separately, the software that enabled the ability for them to deploy these platforms.

Now when we think about gross margin and our successive gross margin, it really has been a focus on that mix. As folks move to our higher-end platforms, our platforms that enable so much development software work already, that has been beneficial to our gross margins. And going forward, software, software monetization will also be a driver of the market. We believe that we right now in terms of in the high 60s, are quite stable in terms of those and we'll see how software continues to take off if we monetize it separately and helping us as well [ph].

Q - Rajvindra Gill {BIO 16383656 <GO>}

Right, we'll leave it at that. Thank you so much, Colette, I really appreciate it. Thank you, everyone for joining us and best of luck for the rest of the year.

A - Colette Kress {BIO 18297352 <GO>}

So thank you so much for having us. Appreciate it.

Q - Rajvindra Gill {BIO 16383656 <GO>}

Anytime. Thank you.