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<<Paul Silverstein, Analyst, Cowen and Company>>

So I'm Paul Silverstein, senior analyst Networking and Communications Equipment at Cowen. I want to thank you all. You guys of the marine, The Few, The Proud I think I bust that but on a serious note, we thank you for coming to our 45th Annual Tech Conference and sticking it out.

I hope it's been a great two days, it has for me. I want to thank Roger Shannon, CFO of ADTRAN for joining us. And certainly a leader in the broadband accessory and you guys have come a long way over the last several years. Roger you've been here for now over the last 18 months to 24 months…

<<Roger D. Shannon, Senior Vice President of Finance, Chief Financial Officer, Secretary and Treasurer>>

Gone on a year and a half.

<<Paul Silverstein, Analyst, Cowen and Company>>

Gone on a year and a half, so I got that right. I want to thank you for coming. Before I ask you get into specific little fireside chat. As I do with all my conference, why don't you give a brief overview of ADTRAN, yeah. Hopefully, you won't answer all of the questions, so ...

<<Roger D. Shannon, Senior Vice President of Finance, Chief Financial Officer, Secretary and Treasurer>>

Now I'd be happy to, and again thanks again for having us. We've had a excellent day and have enjoyed meeting investors as usual, we have a fantastic group. And it shows that we enjoy getting to meet face to face. So ADTRAN as I'm sure most know is a global top three provider of broadband access infrastructure. And really over the past couple of years, we've made a transformative pivot from legacy HDSL to being on the forefront of software and services solutions and really pushing open networking SDN and being able to help the carriers move forward at whatever stage of technology infrastructure they are.

So, I'm sure some of you may have seen very recently we were awarded the SDN Product of the Year by Light Reading as the eighth such award for our Mosaic product, since it was recently rolled out. And we are kind of at the forefront now and are aiming to be the dominant player in access infrastructure. And we think we're well positioned not only across the services that I mentioned which have grown exponentially over the past couple

of years, but the transformation into software particularly enabling software defined networking across optical copper as well as moving into the MSO space.

So we can get into that some obviously the acquisition of some RFoG and EPON products from CommScope last year, it has accelerated our development into MSO space. We're working across copper carriers of all types to help them maximize their investment and infrastructure and obviously our leadership in 10G PON.

<<Paul Silverstein, Analyst, Cowen and Company>>

So Roger, to comes at the intersections some very interesting trends on you've got and service providers under pressure their economic models, you've got the ongoing need for increasing throughput, increasing bandwidth. You've got 5G coming not here, its still a little bit down the road, but it's coming and that could be a good thing or it could be a bad thing will soon it competes, so it's a negative to the extent that it actually drives the need for greater connectivity and throughout it is a positive, there's some other trends as well that intersect was bags the question given your position, can you remind us of where service providers are in the U.S. and abroad in this journey obviously is far from uniform, but what are you saying in terms of pace of builds, what's the degree of CapEx constraint?

<<Roger D. Shannon, Senior Vice President of Finance, Chief Financial Officer, Secretary and Treasurer>>

Like I mentioned in my opening statements, we believe we're very well positioned as the carriers move forward at the different places that they are as you alluded to. On one-end you know I referred to a couple of the large domestic Tier 1s, where we've been shortlisted on their NG-PON2 initiative. That's going very well. And we continue to be very pleased with that product and with the development of that product. And just the versatility that NG-PON2 is going to be able to bring with the low latency, the flexibility of essentially taking a 40-gig optical fiber line and splitting it into 14-gig through Lightwave focusing, will help them move toward their goal of one network that would be able to handle things like ideally suited for 5G backhaul, front haul, and mid haul as well as their residential and their enterprise.

And you think about the demand for speed and access, we don't really see any end to that any time soon. The statistic show that the vast majority of usage in the U.S. broadband is driven by video, Netflix accounts for a large percentage of that, you see that growing and then coming at it you have IoT, virtual reality, augmented reality, driverless trucks, all of these things that are going to require very low latency, high bandwidth applications.

Then you go across to other carriers that are maybe not quite at the forefront of the optical in the case of Verizon or SDN and CORD in the case of AT&T who are also doing very well.

But they're looking to optimize their existing copper plant through things like G.fast, which is receiving tremendous traction and Tier 1 that we're working with in the U.S. that has a very aggressive rollout of the 100-meg vectoring across the country. And then may be we should go across the spectrum, of course you have the tailwind of CAF, then we'll talk more about that's going to continue to be supportive for the next several years as it reaches the role carriers.

<<Paul Silverstein, Analyst, Cowen and Company>>

Roger, just for the benefit of the audience, I know you can't say, but if I'm not mistaken the G.fast that Roger is referring to is the AT&T roll out. Which I think was either announced or it was referenced over a year ago. And then on the NG-PON2 there was an announcement by Verizon – was Verizon press release [indiscernible] (0:06:24) and Calix was sited in the press release at trials adding, I'm going to follow press release it's not my knowledge in terms of Verizon going forward but they put out a press release announcement last summer that there was a trial here in Verizon that's great.

As always no offences if I'm asking, anything that you can't answer, don't want to answer, but I'll ask the questions anyway. So with that said, if you just for context if I've got, if I recall the numbers correctly in the U.S., you're coming of a challenging 20% plus year-over-year growth comp in the year ago period, Europe 2.5% in U.S. in the first quarter. Europe 10% in the fourth quarter, Europe 7% in the third quarter. And then non-U.S. conversely growth has been on fire albeit off very easy you had a long period, unfortunately where I think you'd see a large measure of virtue and you were talking about negative 40% and a negative 50%, I'll certainly say the 40% or 50% declines in the year ago periods.

Now that's in this past quarter, you had almost a 100% growth in your non-U.S. and you had almost 50% growth in fourth quarter. So early signs not that two quarters trend makes, but it looks like that's set in the right direction. Is growth being impacted with respect to the U.S. is growth being impacted adversely to some degree by that challenging year ago comp. And conversely in the non-U.S. is it just a function of these easy comps and I know you all have comment on this publicly so, but can you remind us in terms of what you are seeing at DT and Telmex in the other certain non-U.S. drivers.

<<Roger D. Shannon, Senior Vice President of Finance, Chief Financial Officer, Secretary and Treasurer>>

Sure. So I'll touch on the non-U.S. first and you're correct, about our large European Tier 1. We had a very strong first half of 2015. And that related to their vectoring rollout which they speak quite often about. Some inventory overhang over the back half of that year and we knew over the course of 2016 that their vectoring rollout was focused outside of our footprint. We did. We're pleasantly surprised in third quarter, when they came back to us for additional vectoring cards as their customer uptake exceeded their expectations. And we announced at that time a new greenfield award that we expected to

start shipping in the first quarter, which it did and you saw that shipping very aggressively.

We also by the way announced that that would impact our margins and I know you want to talk about margins a little bit later, but that the – as I'm sure you're aware of the starter kits, the chassis the system level vectoring cards didn't have lower margin and as it fills out with line cards the margin…

<<Paul Silverstein, Analyst, Cowen and Company>>

Significant disparity …

<<Roger D. Shannon, Senior Vice President of Finance, Chief Financial Officer, Secretary and Treasurer>>

It is. So we certainly saw that in Q1 and that was totally as expected. We – the nice thing about our large Tier 1s we have a very good relationship and very good visibility into that business. In addition to the green – the new greenfield that was awarded that did ship in Q1 and continues to ship in the first half. We have good visibility into really out for the next couple years as they transition into super vectoring. They are having a very active conversations around G.fast, which is technology that's as you can imagine very well suited for against European cities where in many cases the digging up in the trenching getting fiber all the way into the premise would be more difficult.

So we did have as you pointed out some weakness in 2016, you can start coming back at the end of the year and we feel good about how we're positioned with that large European Tier 1, not only in the existing awards and the super vectoring rollout, but expectations of new awards there as well.

Thinking about LATAM, we had expectations for revenue in 2016 from LATAM and quite frankly we expected our 2016 international revenue to be sort of flattish for 2015, although we knew DT would be weaker, we expect it to have some offsets from LATAM.

That clearly didn't happen and we discussed that towards the second half of 2016 and I think you can look at any provider and they are talking about LATAM just absolutely nothing going on there now. We do not have anything projected in our model for this year for that region. And as I'm sure everyone knows due to regulatory issues and they're working with the regulators on how they're able to provide access to competitors. We feel good that that will happen. There's a number of initiatives that that have been in discussion or in the lab and in conversations with them and we expect that will happen in due course.

There are also opportunities that have resurfaced in Asia-Pac region. In Australia, there's been an award that we talked about in optical not too long back in from a press release.

And also from a larger carrier who has shown a very strong interest in our Mosaic cloud platform as well as the G.fast platform. So that's not…

<<Paul Silverstein, Analyst, Cowen and Company>>

They've shown interest or they have committed?

<<Roger D. Shannon, Senior Vice President of Finance, Chief Financial Officer, Secretary and Treasurer>>

It has not been announced yet, but

<<Paul Silverstein, Analyst, Cowen and Company>>

They have committed. You just have the ...

<<Roger D. Shannon, Senior Vice President of Finance, Chief Financial Officer, Secretary and Treasurer>>

We feel very good about it.

<<Paul Silverstein, Analyst, Cowen and Company>>

As you said that was not the Australian carrier, there's a different large service…

<<Roger D. Shannon, Senior Vice President of Finance, Chief Financial Officer, Secretary and Treasurer>>

It is in Australia.

<<Paul Silverstein, Analyst, Cowen and Company>>

…which is not, are there two different carriers also…

<<Roger D. Shannon, Senior Vice President of Finance, Chief Financial Officer, Secretary and Treasurer>>

We announced Vocus in a press release. So this is a larger win.

<<Paul Silverstein, Analyst, Cowen and Company>>

Larger win, okay.

<<Roger D. Shannon, Senior Vice President of Finance, Chief Financial Officer, Secretary and Treasurer>>

So then to transition to the U.S.,

<<Paul Silverstein, Analyst, Cowen and Company>>

Hey Roger, before you go – I apologies the interruption, but just to be clear, when you talk about LATAM, you're really talking about Mexico, where you've got a very nice, it's been from a quarterly perspective, unfortunately it's been very lumpy, but when the good ones lumps come there are really good lumps, but that's what we're referring to be clear.

<<Roger D. Shannon, Senior Vice President of Finance, Chief Financial Officer, Secretary and Treasurer>>

That's exactly right. And it's sort of the opposite scenario with our large European Tier 1 where we tend to have very good visibility. The – in Mexico we have less visibility and it tends to be a little more volatile, but when it's good, it's good.

<<Paul Silverstein, Analyst, Cowen and Company>>

And giving pauses one more time, when you are best against U.S. I want you to go there but going back to your comment about good visibility into Europe and we can think anytime primarily about DT. Visibilities never perfect for anybody and there is also it's a things that come up and expect delay, anytime a good visibility in the context of what we're seeing over the last two, three years, and you're saying, I don't think we are postponing in ADTRAN things happened, but how much visibility do you have, how confident are you? And then we're talking about or maybe its not perfectively linear and consistent, but you are not expecting anything of the nature what we saw last year to in terms of that dramatic pullback.

<<Roger D. Shannon, Senior Vice President of Finance, Chief Financial Officer, Secretary and Treasurer>>

So I'm not going to get into too much specifics on anyone customer. What I can tell you in thinking about DT, they recently and may put out a management presentation that was prepared for their shareholders and they were very transparent about their planned investment in technology and innovation. They focused on things like fiber to the curb, their vectoring, super vectoring 5G and wireless. And what I can tell you is that we feel very good about that visibility. We feel very good about how we're positioned there. So while 2016 was certainly down, we did have sometimes visibility is not the visibility that you want to have, we knew that there was focus out of our footprint in 2016. We don't expect that same scenario going forward.

<<Paul Silverstein, Analyst, Cowen and Company>>

I'm curious I didn't hear you mention [indiscernible] (0:15:01) everyone you also have roles I think was awarded a while ago when you were finally certainly see the rollout on

what used to be the old in advance of piece of the Nevada business now, I making that up?

<<Roger D. Shannon, Senior Vice President of Finance, Chief Financial Officer, Secretary and Treasurer>>

So I think you're talking about the B&G, and we do we are expecting that to rollout this year.

<<Paul Silverstein, Analyst, Cowen and Company>>

And can you give us sense for how big that will be?

<<Roger D. Shannon, Senior Vice President of Finance, Chief Financial Officer, Secretary and Treasurer>>

I'm not in a position to really give any further color on that at this time, then we've talked about on the call that we expect that CPE side business to start shipping. And we feel very confident about that in the second half.

<<Paul Silverstein, Analyst, Cowen and Company>>

All right. With that I'll let you get to the U.S. My apologies right.

<<Roger D. Shannon, Senior Vice President of Finance, Chief Financial Officer, Secretary and Treasurer>>

So the question is around growth in the U.S. and you're correctly pointing out that starting in towards the end of 2015, we see our side as a beginning of the cycle. There've been a down cycle and investment in broadband arguably since 2011, 2012. CAF1 was a little bit at the start of that CAF2 has been a good tailwind of that, but there's a lot of factors that, I think everyone is aware of that has driven this increase in investment driven by the way the consumers demand their entertainment now, faster anywhere all the time, from the cord cutters, the over the top entertainment as well as the movement toward IoT and other types of usage some carriers who announced gig initiatives certainly pushed that along, created a lot of buzz around that.

And we continue to see strong growth in that area going forward, even though I think it's around this time last year, we made an announcement that ADTRAN had enabled I believe 350-gig communities, quite frankly we stopped counting at this point. So there on one hand there is that growth in optical and fiber and in the gig rollout and we don't really don't see that stopping. But I guess related and benefiting from that is a halo effect that supports 100-meg vectoring in areas kind of around those more densely populated areas that are pushing the gig rollout are there the gig demand.

So I mentioned the 100-meg vectoring we see that is – it continues to see that as a tailwind this year. And then I would just kind of top it off by the initiative that you mentioned the NG-PON2, which we're not projecting any revenues from this year. But again we see that as an area of leadership for us and we feel very good about how that's progressing.

<<Paul Silverstein, Analyst, Cowen and Company>>

Can I ask, again I know we're trading over, Brown you've already visited on earnings calls time again. But can I ask you to rehash where the U.S. is out with respect to CAF2?

<<Roger D. Shannon, Senior Vice President of Finance, Chief Financial Officer, Secretary and Treasurer>>

Sure. So, there's two divisions if you will or two segments of CAF2. The first one that started at the beginning of 2016 was CAF2 for the price cap carriers. The Tier 1s and Tier 2s, where the carriers signed up for passing a certain number of homes in unserved, underserved areas with commitment to deliver tin down one-ups megabit speed. That commitment or the funds accepted was $9 billion over a five-year period. And again all the major Tier 1 and Tier 2 players accepted funding and we are the dominant provider in all of those except one, except for AT&T who's using a different type of technology.

<<Unidentified Company Representative>>

So the commitment on that is that beginning in 2017, they have to show that they've reached 40% of the number of homes they committed to and then it grows, it increments 20% until 2020 when that final build out is to be completed. And that is public record of how each Tier 1 and Tier 2 adds-up to that $9 billion. What was just recently settled and defined was the CAF2 for the Tier 3s was commonly referred to as the rate of return carriers.

There was a lot of debate and discussion over the past year or so about is this incremental or is it a substitute. We'd always contended as you know that the price cap carrier CAF that started last year was incremental. They would not have built out and reach these homes had this funding not been provided. You could, I guess at the time of argued that for the Tier 3s that there would be some substitution of the old USF going into CAF2. But what actually happened over the past few months and was finalized in the last quarter is the FCC promoted the Tier 3s to adopt this model approach much like the Tier 1s and Tier 2s.

Over 200 Tier 3 carriers signed up for the model approach committing to a certain number of homes. There is – the number is $20 billion over 10 years that's going to be allocated to the Tier 3 carriers. And in fact because these 200 plus that signed up for the model approach oversubscribed the FCC is actually added some additional funding to that. So in the regard that these carriers are signed up for a certain number of homes

passed, like the Tier 1 and Tier 2s we also see that is incremental and supported to broadband.

<<Paul Silverstein, Analyst, Cowen and Company>>

Okay. Moving on – got a lot of ground here. And then ask you to rehash some stuff, can you just remind us and you've touched on quite a bit in your previous comments. But in terms of prominent new wins beyond new footprint at T2 et cetera, but prominent new wins reference the Australian situation. Anything else you can share with us that you're excited about as it translates into the model over the next year or two?

<<Roger D. Shannon, Senior Vice President of Finance, Chief Financial Officer, Secretary and Treasurer>>

There's absolutely nothing I can talk about that has not been…

<<Paul Silverstein, Analyst, Cowen and Company>>

Feel free to make an announcement now…

<<Roger D. Shannon, Senior Vice President of Finance, Chief Financial Officer, Secretary and Treasurer>>

We are excited about the rollout of G.fast with Bezeq in Israel. That has been launched and that's ramping up. And we are very excited about the traction the momentum that we're getting from our Mosaic cloud platform. What we believe to be the only true Cloud Edge to Subscriber Edge, fully modular SDN platform and is evidenced by these eight awards the industry agrees with this on that.

There's – we discussed quite often the 106 trials of G.fast on six different continents. We expect to see more announcements coming out of that in the not too distant future. And to just kind of circle back to NG-PON2 and the Verizon – talked about we see that is ideally suited for the needs of 5G backhaul and the carriers moving to unified software defined network.

<<Paul Silverstein, Analyst, Cowen and Company>>

Roger, I apologize, this is an obvious question that you just cannot answer, will not answer. But as we contemplate the prospects of Verizon making award and you guys have been part of it. And you all have a history with Tier 1, certainly AT&T and Tier 2. So you're not a stranger of the supply. The thought always arises at what price, we think about – if it's really about bottom line and cash flow and earnings. And you got a customer like Verizon with tremendous spinning power and always saying constraints to their business, but the number of lines the opportunity. It's going to come at a price to you and/or Calix, whichever one of you or both or maybe doesn't even go out to one of you all that was just announcement, I think you're probably aware of we forget. But

ALU, by the way Nokia still in the market they had a nice win, I think its either frontier or fair point, I think was frontier.

But the question again, what's the risk that you win the Verizon, is greater revenue, but it just comes out of severe stinging price. And that's sizing to the other question, which I'm going to try and I'm going to go ahead and asking now which is, there's been this movement over the last year or two for carriers increasingly maybe not surprisingly to shift services on to you and Calix and others. Because there's – their models are under duress and they're trying to share costs, where they can. And you really don't have a choice you got to take the business. I trust it's not something you do electively. What – if I could ask you to answer that questions, well how it impacts the model and you guys aren't strangers to this but…

<<Roger D. Shannon, Senior Vice President of Finance, Chief Financial Officer, Secretary and Treasurer>>

So let me touch on the second thing that you alluded to because that's a great point. I think it's a source of pride for us. And I suspect you're referring to the services business. And the services business, is the part of the business that we are very proud of, we – as you're aware we segmented our financials in early 2016 to a network solutions and services. Services has grown – had grown from basically no reportable revenue, it's about 70% of our revenue right now. And we think we do very well with it. We have created a deeper relationship and a stickiness with our customers through that services business that we think has served as well. And our plan is to continue to grow that. And we believe we know how to manage it well.

So while the services business, obviously when you look at that segment is below the corporate average at a gross margin level, because of its R&D and OpEx profile. It is accretive at the operating income level. And we continue to emphasize that point and focus on that business. To your first point talking about NG-PON2 and Verizon and their purchasing power, there's – certainly no secret that you can – you have to manage those costs very closely.

And they certainly do have a very strong purchasing power. We – in that regard, I mean that's why we're not single threaded on that particular opportunity, while we feel very good about that opportunity. As I mentioned we see that technology not just for that Tier 1, but other Tier 1 in the U.S. and around the world as there's a move to 5G and to facilitate that low latency high bandwidth utilization. The – not to get technical along the product, but the initiative really is focused on a cost effective, like tunable mechanism on both ends. It could have been done already just not at the price point that they're looking for and that's what we're working toward.

<<Paul Silverstein, Analyst, Cowen and Company>>

So, let's get segue. Roger what's been the rate of – the reasonable rate of price arose in the product segment. How does that – the price is always coming down in network my

only question is it accelerating, decelerating or stable in terms of rate of decline. What are you saying in that regard?

<<Roger D. Shannon, Senior Vice President of Finance, Chief Financial Officer, Secretary and Treasurer>>

Well, so our goal is to maintain our gross margins and to grow our gross margins.

<<Paul Silverstein, Analyst, Cowen and Company>>

Actually I hope that…

<<Roger D. Shannon, Senior Vice President of Finance, Chief Financial Officer, Secretary and Treasurer>>

It is and I can make that announcement today. It's hopefully no one surprise. It is – we will state will continue contend that, where Chinese vendors are involved, there's going to be greater pressure and there will be a margin differential between the business where the Chinese can be and where they don't.

For those that have followed ADTRAN for a long time, I think you'd agree that the company is managed very well as it pertains both to operating cost and to COGS and the equipment. So while the price may change, we're going to manage the cost of goods side of it and the OpEx side of it. And are begin to circle back to my comment, our goal is to increase our gross profit margins.

<<Paul Silverstein, Analyst, Cowen and Company>>

All right. I appreciate the response, but assume you just don't answer the pricing question in terms of just – if I just narrowly, because I'll try to deconstruct in the way I'm thinking about is you'd tell me the rate of price arose, my next questions are going to be what's your ability to drive costs out of the system just for edification. I was a little slow in the uptick, when I first started govern your company, but the sequence soft to ADTRAN one of the primary consultants you all looking Huntsville, Alabama.

There are a lot of very talented and relatively inexpensive, there's not to say they're not good but these are folks who they're from the Southeast or they want to live in the Southeast, they're not interested in going to Silicon Valley or up to the Massachusetts Corridor and they're very fine engineers and it gives you – you're like the Huawei of North America for God's sake. Right, you're talented and low cost. So going back to my question, can you provide any insight, I love you to quantify the three decimals, but on a serious note, can you provide any insight in terms of what is the rate of price arose and how's that compare historically. And I recognize the various…

<<Roger D. Shannon, Senior Vice President of Finance, Chief Financial Officer, Secretary and Treasurer>>

Yeah, no I'm just not prepared to get into that. At this point in time, there – I will suffice it to say that there is a price pressure, there's always going to be price pressure the carriers expect higher performance at a lower cost. And that's the environment that we operate in. We are proud to be from Huntsville, Huntsville is I would contend one of the – certainly one of the top three spots in the U.S. for technological and engineering advancement and along with the West Coast in the Research Triangle.

So we're very fortunate to be where we are. We are also very fortunate to have the partners that we work with across our supply chain. So we have flexibility to produce a manufacturer in Huntsville, as well as in other locations that are best suited for the logistics of where we're selling into. So unfortunately I can't…

<<Paul Silverstein, Analyst, Cowen and Company>>

Fair enough, fair enough you said more in that. I appreciate that. I'm going to – I apologize, we don't have much time to ask questions, but I do want to give you all chance if you all have questions, I've got a couple more if you don't, but please feel free.

Q&A

<Q – Paul Silverstein>: All right. I'll keep asking. Competitive landscape, we all as Calix but again Nokia is still in the market. In fact they're the biggest player in the market dating back to when they were and when there are RBOX, when there are used to seven RBOX a million years ago. They all got together and did what cable [indiscernible] (0:31:18) and Alcatel at the time when it was generally company won that and ever since predominantly in North America, but you're a fine competitor. Let me ask the question, what are you seeing competitively in North America. What are you seeing outside of North America and where you've got Huawei, ZTE and others?

<A – Roger D. Shannon>: So as you said, they are a fine company. We feel good about our ability to compete wherever we're competing. So if you think about Europe or Asia Pacific or the LATAM region. We're going to – we know we're going to run into price pressure. But we think we've been able to differentiate ourselves and distinguish ourselves on the service, the relationship, the level of technology we bring, while meeting the pricing that's required for that. In the U.S., Nokia and Calix, again very good competitors, but I think our growth and our results and our wins speak for itself.

<Q – Paul Silverstein>: Fair enough. Getting back to margins, can you talk about what is potential peak gross margins in this new environment and what is potential peak operating margin. Let me point out, going back my Huntsville statement, you guys are on tight shift for a long time, your OpEx increases an absolute dollars less than any other company I've ever followed and that's a complement to you all. You're seemed to getting awful lot at your dollars. What is peak operating margin?

How much better – should we expect OpEx to continue to remain at such a constrain level, can you continue to run the business that way, you have quite some time, I don't know why you won't be able to but that is the questions or anything that's going to change in that regard. And again how did the real question has been, what are peak gross, what are peak operating and what's a reasonable timeframe we expect it to get there.

<A – Roger D. Shannon>: So on OpEx, we've seen higher OpEx numbers than we would like…

<Q – Paul Silverstein>: You're joking, right.

<A – Roger D. Shannon>: Kind of at the beginning of last year, we're going to call that out in Q4, particularly in Q1. And we talked about some project related expenses that were kind of time to fund related to the NG-PON2 project that drove OpEx a little higher in Q1. We guided the Q2 would be up slightly for the same reasons. And we expect that to kind of come back down into normalized levels, once we get through that project toward the end of the year.

So we are very much going to continue to focus on OpEx, we're going to hold our OpEx growth to less than our revenue growth. We've repeatedly said we believe we have leverage, if the operating income level and we continue to believe that. As far as gross margins what – I think what I'd rather focus on is kind of getting back to double-digit EBIT margins, operating margin. And while I'm not making any commitments or given any guidance, I think that's what investors want to see and what we want to see.

<Q>: Fair enough. With that note, we are right on the button, really appreciate you joining us. Really appreciate all of you all joining us and doing that, I hope it's been a good two days. Thanks so much.

<<Roger D. Shannon, Senior Vice President of Finance, Chief Financial Officer, Secretary and Treasurer>>

Thanks, Paul.

<<Paul Silverstein, Analyst, Cowen and Company>>

Thanks, Roger.

<<Roger D. Shannon, Senior Vice President of Finance, Chief Financial Officer, Secretary and Treasurer>>

Thank you, everybody.