Company Name: ADTRAN, Inc. (ADTN)
Event: MKM Entertainment, Travel and Technology Conference
Date: November 16, 2017

<<Michael Genovese, Analyst, MKM Partners LLC>>

Hey, I'm Mike Genovese with MKM. And I am extremely happy to have the CFO of ADTRAN, Roger Shannon, joining us today. The telecom equipment has – obviously is a cyclical industry. I think before he joined ADTRAN or a few tough years what you guys do wasn't really in favor, but the last couple of years as broadband access has comeback as a spending priority area. And I think that's been continuing. So I want to get your perspective on some of these things.

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

Sure.

<<Michael Genovese, Analyst, MKM Partners LLC>>

We begin that by talking the secular context for broadband access. And how much of the kind of growth that you're seeing now, do you think is driven by sort of pre-5G investments? There is not a lot of wireless access going out, so there's more wire line access, there's backhaul, there's fronthaul. How do you think about 2018-2019 for your industry and how it fits in with carrier spending priority areas?

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

Certainly, thank you for having us. It's a pleasure to be at the conference. And to your point, you can look back at kind of a cycle or a period between 2011, 2012 up for 2015, where there was a downturn investment. You didn't really have a whole lot of innovation or acceleration in fixed broadband speeds. That has started to change in as we approached 2015 Google Fiber announcing FiberCity initiative and all that hasn't an execution play out as well as they wanted to if there is a great [indiscernible] (0:01:45) you've seen that talks about the first Google Fiber in 2013 and second one in here just been explosion of fiber initiatives and broadband initiatives across the country, across the world.

We used to keep count and we start count at about 400 smaller non-carriers what we call gigabit communities that we've enabled as of earlier this year. So we think that that cycle is – or that super tran has been driven by a consumer that has really changed the way it expects and demands its access and its entertainment. When you think about things like over-the-top cord-cutting, which is the tablets, the smartphones, demand for access, anywhere, all the time and very quick.

So, what you're seeing is a response by the industry to keep up and catch up with that. At ADTRAN where we are delivering value is kind of meeting the customer demands all across the spectrum. So you've got – obviously you have – still have a large installed base of copper twister there. The carriers are obviously very interested in leaping – extending the life of it and getting value from.

On the other hand, you've got the coming 5G in growth and fiber to on-prem and next generation fiber networks. And then you put in between that the MSO space, where we had not been as large a player until recently. We're accelerating our growth there through a recent acquisition of Vectoring GPON, and RF over Glass products. So we like the cycle we are in the copper side, as you know we have been chosen by AT&T for their G.fast initiative.

It's huge speeds over copper over short distance. We have been working with other tier ones in the U.S. and the Vectoring rollout, your Meg rollout. In Europe, with our largest tier one in Europe, finishing up the Vectoring program, is going to start rolling into super vectoring next year. And they are looking at G.fast further out. So they all those things just kind of play into the thesis that you mentioned, that investment to accelerate the speed and access.

We mentioned the other initiatives, where you are working with is a fabulous time in NGPON2 and you mentioned 5G we have put some press releases and white papers and talk about that being product we believe is ideally suited for becoming 5G back haul environment. Obviously, if you are going from hundreds of thousand of marco drivers to arguably millions of like small sales that going to require determination back off.

<<Michael Genovese, Analyst, MKM Partners LLC>>

Yeah, one of the follow-up one NGPON2. Obviously we are following the Verizons. I think there is two finalists. Is there any sense, whether it goes with one and two vendors, will there any profitability in that particular contract but then I think beyond Verizon, I mean the real opportunity is I think back offer, the 5G, I think NGPON2 is going to be the key technology there.

How quickly after Verizon should we expect other carriers make decisions. Is it important that you win Verizon to get other accounts, or will you win others whether Verizon considering or not? How do you see this playing out?

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

We and our competitor as you mentioned down to two finalists are in lap with Verizon, that's progressing well. I believe they think is progressing well also. And we expect we go into field trial soon. Verizon has indicated to us that I'm sure to the other side that they really want both providers to be in their network. And that's what our expectations are and the assumption moving forward and we are very focused on.

As you mentioned for us it is more a function of being focused on NG-PON2, obviously Verizon is very important and we expect to play a meaningful role there. But at the same time, it is bigger than that. It's hard to say exactly what the timing is. These are still – the standards haven't quite been set for 5G yet. The timing is, while it's coming it's not entirely defined to either side say 2018 for some trials, the 2020 Tokyo Olympics, I remember talking about some deadlines there.

But regardless we do think NG-PON2 is ideally suited for 5G backhaul and fronthaul. As Verizon and others move toward their goal of one network to where they are separate managed networks. Now, I think what they're thinking through as we speak is exactly what applications do they want to deploy NG-PON2 for. And obviously, there are different areas of the business that oversee things like mobile, basckhaul, residential of the business and that just needs to come together on new side.

<<Michael Genovese, Analyst, MKM Partners LLC>>

Yeah, I've just following this industry for a long time. I have this impression with Verizon, a big carrier like that. And they're leading – and they are the first just like the new technology like this that they end up being particularly tough on pricing. So sort of the true profit – true profit in the market comes later as the second, third, fourth, fifth set and then dozens more carriers get into that market. Is that a reasonable sort of assumption that they're – it will be tough on pricing here and the profit will come from other carriers? Or do you think the margins for a deal like this will be…

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

Well, you know, I'm not going to get into specific profitability on a customer. We expect to be – we expect to make money on all of our projects, but we do think this is a very important technology and something we are very focused on. They actually are good negotiators. But, again, I won't get into any expectations of exact profitability other than you expect to be profitable on our initiatives and our projects – they are the key and what they've said publicly is, they are striving for GPON pricing for NGPON2 tunable optics. So that's where the interim work is this is technology, new technology hasn't fully been developed yet so you are getting these tunable optics into the customers side ONT into price point what they are looking for. So really that's where the efforts focused and outside ADTRAN has demonstrated a track record and be able to give products to market and kind of continue to get the price points down.

<<Michael Genovese, Analyst, MKM Partners LLC>>

Great. And then just – I mean just – you mentioned this but I just want to really flush out this point. I mean you've seems like you feel fairly good at – I think you said they said they want – that they want to have both vendors and they are not looking necessarily just one or the other you probably think they both looking in?

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

That's our expectation.

<<Michael Genovese, Analyst, MKM Partners LLC>>

Okay, great. I want to talk about CenturyLink a little bit I believe your largest customer that does vectoring, did they do anything else, G.Fast or?

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

I believe they are looking at different technologies, we have had conservations around G.Fast but they've primarily – this year had significant growth in the vectoring and also all sorts of CAF.

<<Michael Genovese, Analyst, MKM Partners LLC>>

So I want to talk about the visibility in the CAF that the deals was closed and you obviously have a good year with them, you didn't see any merger related negative impacts really in their demand. But I understand there is some questions about when the 2018 budget…

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

Right.

<<Michael Genovese, Analyst, MKM Partners LLC>>

It will be February, March, April later what are the current thoughts on spending at CenturyLink in 2018, do you think CapEx year-over-year what that will look like and when will they start to spend in the year do you think?

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

I think we would agree with the assessment that we've heard from others they said probably would be a little longer for the budget to come out. So that were kind of a – we can taken a latency approach. There are some of the same individuals that we work with CenturyLink and there are new management team coming in from Level 3 or so where we are taking more of a latency approach like everybody is – something like to see what the timing we keep on.

<<Michael Genovese, Analyst, MKM Partners LLC>>

I think just generally at account, post-merger versus pre-merger, do you expect them to be a smoothing out any kind of quarter-to-quarter variations? And do you expect them to be a similar sized customer or maybe a stronger customer or a bigger customer or maybe a percentage of revenue for you, some of the award they've been running in the last few years, what's your expectation there?

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

Yes, I get it, but there's still to be seen based on how they identify their priorities for budget. We have talked in some recent calls and disclosures about GPON award within as well, which would play in well to their business side Internet. But really I think it's – to be seen once they identify their priorities when the budget comes out. So really I can't get into much more detail. As I'm sure other customers there would say the same. So can't see what their priorities are.

<<Michael Genovese, Analyst, MKM Partners LLC>>

Can you talk more about the MSO market and your opportunities there? It seems like it's a more important vertical with more opportunities than before for you guys? And is this a correct statement? And why? And what products? What timing there?

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

Absolutely, it is a priority for us. So you think about the MSO proportion of broadband in the U.S. it's roughly 60%, to the carriers 40%. We've traditionally been very strong with carriers. And like we just discussed, had a number of initiatives and innovations and awards from different carriers. But that said, we think broadband strategy with MSOs aligns very well, with what we are doing, we're working on a number of projects particularly are EV-DO, LTE, along with the products we acquired last year in EPON and RF over Glass.

So we do think that's important for us to play in – sector for us to play in. We're doing business with some of the larger MSOs already. On the CPE side have a very good relationship with them. These products have certainly got us a better seat at the table. And so if you think about it over a more of a medium term, we do believe that VoIP with the carriers in the MSO space is moving toward in all IP network, fiber network, but again like the carriers with copper they have a tremendous installed base of coax. The larger MSO as Veri publicly talked about their upgrade to DOCSIS 3.1. It is kind of an interim step for the – you can go to all-IP, they said they are doing certainly IP field trials as well, also other carriers are going more directly to EPON and all-IP.

So like I just mentioned we do have some development going on EV-DO, LTE side, we have the suite of products on EPON and RF over Glass. In other initiatives internally to kind of accelerate that penetration, but this is in the rare quite of response.

<<Michael Genovese, Analyst, MKM Partners LLC>>

Well. I want to take a step back conceptually and technically here. The idea here you guys talk about SDN and a lot Mosaic is obviously a very important platform. Can you guess help me understand, how the concept of SDN plays into the fixed access market, I mean you guys sell hardware, you're always going to sell hardware, you need an actual copper fiber connection, you need signals over there. What is the play – what is the purpose of SDN in this market and why it is so important, right?

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

The goal of the carriers as it relates to SDN is to on one hand, provide more self service, vaster services to their customer. So if you think about, conceptually think about your smartphone, if you have some need, if you access your internet, it would be ideal of you are going to your smartphone, looking to other applications turn new service, turn it down, change it, where yesterday either much more truck roles involved and more efforts its required by the carrier themselves.

So they have a kind of plays together from the customer service and then the impact that has on the OpEx, so some of the large carriers have been vocal and talking about that kind of moving more toward a commoditize white box approach on the hardware where the risk that are interoperability where you are not tied to one vendors technology. And we not only see that actually coming we're embracing anywhere pushing that. We feel like we can – the very well position to be at disruptor in that space and in that opportunity.

Our Mosaic Cloud Platform and our Mosaic OS as you probably you've seen is the most awarded SDN platform in the industry and now having again just one in another one, Broadband World Forum few weeks ago. So we're spending a lot of cycles, lot of our effort development internally is software based. That said there will be hardware – continue to be hardware, we don't know exactly at what point in time that four transition will happen to more white box approach. And again, like I spend a theme that I've talk about is relation to the technology the different carriers are going to progress in different times. And they have an interest in extending the life of their installed plant.

So where our SDN is particularly relevant and we're seeing this some adoption now, it's compatible both with the existing equipment and the future equipment. So as they move more and more to disaggregation, modernization, that's going to take time and that our equipment will be fit into their network. They still have to keep referring to running on our existing platform.

So through the some – you can aggregation layer and together it is maybe backwards compatibility little bit to work across all of different platforms delivering that service level and then they're trying to get new customers. So and you're aware, we're embracing it, we see it is disruptive and it's – we've been very pleased with the reception that our SDN was a product is gotten market.

<<Michael Genovese, Analyst, MKM Partners LLC>>

Great. If you talk about the dependent environment of the – so many other companies I follow. I think you guys pretty well position and that you don't have a ton of competitors, I mean, there's Calix, there's Nokia, there's probably well way in some international markets. Are there my missing anybody there and what kind of competitive trends are you seeing versus these specific players?

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

You're right and you laid out. And so it is a limited set of competitors, the two that you mentioned in the U.S. is the Chinese competitors is not really competing in the U.S. We've talked about some recent words in Australia that we've gotten in there or not in Australia, but we do compete against in Europe and in Latin America. And typically compete well there. I don't know that you necessarily seeing others coming in when Nokia acquired Alcatel-Lucent, I think they've been pleased with that this is I don't know that was the reason they acquired ALU as you know we acquired Nokia Siemens fixed access network in 2012, well for this transaction.

Different set of competitors in the MSO space and then at the same time what you're seeing is different technologies in offering that are kind of coming in environment niche spaces. Fixed wireless present all that will be part of 5G you hear more and more about SD-WAN and kind of what's going to happen there. So I think that competitive environment is what it is, I think we performed well against our competitors and I think our customers know us for quality and responsiveness and now I think we've been successful in this space.

<<Michael Genovese, Analyst, MKM Partners LLC>>

I've been following your company for a long time and if you go back five, ten years, I think the impression of ADTRAN was kind of a not necessarily innovating the technology from the beginning but getting in on a market that was becoming big and engineering low cost really good solutions, you guys had a really high margins.

Now, I'm hearing your next-generation PON2, your initiatives became the MSO space, the SDN with Mosaic only seems like you are out to be technology leader now as much forward. But as an innovator and the margins are quite as high as before, I want to talk more about margins as a follow-up. So talking about that – that much have been a

conscious decision the company made to really try to move to cutting edge of technology rather than the previous strategy.

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

It was during the same timeframe after 2002 kind of leading up to 2015, when you see that the DSO market that we had a very strong position and go away, when knew it was going away, we did make a pivot towards being thought leader and market leader and you can just look at the press releases, the white papers, the standards, organizations that we participate in and we do want to be upfront in that. It is – actually it is different margin profile and I think it is going to continue to evolve. I think especially software becomes more prominent overtime and we expect it will versus hardware and that transition, we just talked about will take some time to play out.

But we have made that pivot, we think we've done that, we think we're well positioned to go forward to be a disrupter both with carriers in the MSO space. So he's getting that message out, I think that is starting to be much more well received.

<<Michael Genovese, Analyst, MKM Partners LLC>>

So how do we think about your margins from here and how much – on a 12 month margins that go up from where they are and how much and what are going to be the main drivers of any improvement that we see from here?

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

So I think it's pretty well known that our U.S. margins tend to be higher than the European margins but there is the Chinese competition that we've talked about. So on any given quarter that mix and proposition of international business to U.S. business will have impact there. And certainly there is also product mix even within the international. The LATAM has been very quiet for the past year and half basically as large carrier in Mexico that was dealing with some regulatory matters. We're looking forward to their resuming those margins kind to tend to fall between the U.S. and European.

Again, we talked about our word in Australia. We do continue to like with the past, it will work with our suppliers and our engineers to drive the cost points down, as the expectation continue to push those price points down. We don't really give guidance other than on our quarterly basis. But we've said, fairly consistently, we expect margins to kind of be in the get to the 46% to 47% range consistently, we have leverage to scale at the operating income line. Company is very good at managing this OpEx. And we expect to grow our market share. We have talked about being in the range of low-teens – low to mid-teens on the operating income margin over time, and that the gross margin without switching.

<<Michael Genovese, Analyst, MKM Partners LLC>>

Right. I guess – so I'm not trying get scaled your guidance here. But I'm just trying to sink that is there are really changes in the next years, would that be more because of mix either because positively more software or maybe negatively more services. Or would there be because of sort of management of operational excellence and you're able to get a 100 basis points or two out of just running that tighter ship. I mean that the shipment is tighter already. But so you could make all those improvements?

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

No. We continually work on the cost points of products we engage, our expenses are very intelligently. It is – it's really a kind of region by region, customer by customer basis, we thought to talk about it. I won't talk many with the customers, but just say what the margins is going to be. Other that kind of I should say, we kind of have the expectations that just indicated. And we are going to continue to try and drag those from the cost point management and from the product management as well.

<<Michael Genovese, Analyst, MKM Partners LLC>>

So I want to ask, – with the couple minutes we have left about – about services. There has been a noticeably increase in percentage of revenues coming from services and, which I think is a great thing and I think its beneficial of the operating profit level. But I'm just trying to understand, what are customers asking ADTRAN to do more of. And as it all ties to your hardware business or some of the – externals to your hardware business and you're working with other peoples who quite mainly doing other services for customers?

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

And the answer to that is yes. We've been asking for is – service is something that the carriers are kind of forced on you – its your expectations that you take in and we consistently responded. That we like it, as we want it. I think we add value there. It creates a deep relationship, creates a stickiness more than just selling hardware moving on. And we have done work with customers for other providers hardware, where really need us to come in. I think its driven by the dynamic of growth in excess in these carriers, who are trying to further develop and accelerate their networks to complete better with the MSOs and fiber – fibers in the world. And they are not in the business of construction. So we are able to deliver that project management, engineering, all the way to turnkey service. And as you know some customers, some carries do that themselves and others who are looking to get their networks deploy more quickly and think about the vectoring projects in particular, leverage ourselves is quite good.

What really exciting area for us is the two or three Connect America Fund A-CAM really starts to flow, those carriers, smaller carriers much like the Tier 2s are not in the

construction business, they're looking to accelerate to get that I mean put those dollars to work to know the network, we are much more actively working with those to develop our services offering and you can making that low net that we can help in hit the ground ring through our services center on there.

<<Michael Genovese, Analyst, MKM Partners LLC>>

Yes, the services fund, my understanding was that, it's an equipment installation, but sounds like there are some aspect of – municipal, construction you maybe going to start. How close this net services business can see…

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

Not at all. I mean not so much of trenching, and really is just kind of site preparation, site engineering installing the hardware and equipment from the node and we don't compete with once your action play in fiber.

<<Michael Genovese, Analyst, MKM Partners LLC>>

Okay. That's complementary done. Great, Roger, I really appreciate you coming and showing your insight and it sounds like we look at least several more big years in the broadband access market. Copper is going to be around, fiber is going to grow, I think you guys did a really great job. I appreciate joining me today.

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

No. Glad be to here. Thank you.

<<Michael Genovese, Analyst, MKM Partners LLC>>

Thank you.