IBM Marketing Services Center

Ciena Corp

Moderator: We're going to start until everyone joins us. This is the first presentation for the day. I hear some noise behind us, but that's okay. The first presentation of the day and today we're going to talk about networking and the network. Thank you. It's okay. Today I'm pleased to host Ciena. I'm hosing Scott McFeely, SVP of Global Product and Services and Patti Trautwein -- I pronounce it properly -- Director of Investor Relations is also joining us.

And I want to start – the first thing we want to discuss is basically the current environment. That's the one question – the funny thing was, I sent my questions to the companies and the most common edit I got back was can you ask me a question about the environment? They asked me a question about the spending environment. I'll ask it proactively.

How do you see the current environment, the sensitivity of spending to what's happening to the economy?

Scott: Well, first of all, Al(?), let me start by just thanking you for hosting us. And it's great to do these things in person again. It's great for my own personal employee satisfaction to be able to get out and see people again. Zoom is great, but it's nice to see people in three dimensions.

The environment for us is people can probably tell by the gray hair and the bags under my eyes, I've been at this industry for a long time. And from a demand perspective, on the demand side drivers ____ unprecedented is the word that comes to mind. It's driven by a couple of key dynamic in the industry. One is as we are all living our lives and working, more movement of data and processing through the cloud.

And for what we do, the fundamental underpinning of our business is bandwidth. If there's more bandwidth, that's fantastic for our business. So that's number one driver that's been consistent over the years. But it certainly has accelerated, based on how we all adopted to living our lives.

The second one is, as we look at these applications that are living in the cloud, people trying to unlock access and performance to those applications, whether it be capacity or latency, the answer to that as an industry, as you push more fiber out deeper into the network, this fiber is the most effective way to carry that traffic.

A number of people have said a 5G network is basically just a fiber network with antennas on the end of it. So again, that drives demand on the access part of the network, or what we call the access part of the network. The demand drivers have been unprecedented.

And then maybe underneath your question was what do we see going on from a macroeconomic perspective and the impact on that. I guess there's still a bit of wait to see there. But our perspective on it is, those demand drivers I just mentioned are less exposed, I'd say, to recessionary times than some of the other industries that you may be interested in follow.

I think that's been true historically; but I think it will be especially true this time, just given, again, the critical nature of that underlying infrastructure for how we live our lives.

Moderator: I'm sure that we're all going to use Netflix the same way, whether there is a recession or not. And maybe even more because we don't go out; we don't spend money on going out, perhaps. But the question is, can the carriers milk their infrastructure more or the cloud companies increase the utilization of their infrastructure more?

Because I think that's what we've seen in previous cycles, that the demand was there, but demand from a – the underlying demand was there, but then the utilization of the network – networks became [hotter] hotter.

Scott: Yeah, it's a good question. I think for a period of time the answer to that is yes; and we've proven, as you've said, over a period of time. But if you look back over the last two decades and you just look at cross-sectional bandwidth growth in a service provider network or a cable network, you can draw a pretty consistent line where that bandwidth growth is growing 25 to 30% a year, regardless of what's going on in the world around us.

Now you'll take separations off that curve at a given point in time; but basically the curve is a pretty straight line of 25 to 30% a year. We saw that dynamic, by the way, when we first went into recession. People began -- two things happened. I think people became conservative on their capex spend, not knowing where this was going in the world.

But also, if you were running a network at that time, the number one priority for you was just keep the lights on. Make sure the network is still up and running, as opposed to doing a bunch of new projects that may have driven new architectures, etcetera. We saw that running the network hot for call it the first 12 to 15 months when we were in the pandemic.

But ultimately when you demand coming at you is growing at 25 to 30% a year, ultimately you've got a open up the path.

Moderator: Got it. In the first quarter revenues grew 12% year over year, very solid growth. What drives the growth? What are the projects or can you take us through kind of

an overview of sectors and verticals and projects and products kind of what drives the growth?

Scott: Sure, yep. Quarter one, as you said, up 12%; quarter two up 14%. So a good first half. The growth is actually limited by supply chain, which I'm sure we'll get to eventually, as well. But the key drivers for the growth, again, that fundamental is the bandwidth demand.

How does that hit us from a Ciena perspective? We divide our business largely into three categories. One is, we call it sort of core transport. This is connecting national backbones, regional backbones, city-to-city type transport networks. Or on the extreme case, summary networks. Those are largely driven by large optical buildouts; and they're the fundamental and bandwidth and the core is being driven by connecting datacenters around the world.

We do quite a bit of business, as you know, _____ direct with the global webscalers, the big ones. It's 35 to 40% of our business now. Where 10 years ago we didn't do any business with them. But an even bigger proportion of the business is impacted by them because they're still value managed services in those core networks from other operators of the world. That's one piece, the core network. So we've been historically very strong there; and we continue to show strength there.

Moderator: The second big category is what we call metro and edge. A lot of the spend and a lot of the architecture changes and decisions that are being made in networks around the world are around this metro and edge piece. And as you think about, again, how we're living our lives and more compute, more data, that data and compute needs to get pushed up to the edge of these networks in order to get the performance that we need. And that's driving a lot of change in those networks

That comes at us, again, from building out the metro infrastructures and the service provider network, from building up what we would call access network. But other people would call it infrastructure. But basically connecting from say a wireless cell tower back into that network infrastructure. Or connecting from an enterprise business back into that infrastructure.

Or even more recently we've had some good success on connecting all fiber, all next-generation fiber-based residential builds back into that infrastructure. That's two. The third one that I had mentioned, there was three, there was a little bit more embryonic for us, which is automation software play, largely focused on the service providers around those dynamic.

Moderator: Got it. You expect also strong second half. We'll get to supply chain in a second. But why do you expect a recovering growth or not recovery, acceleration of growth in the second half?

Scott: Yeah, I mean the same dynamics are continuing; and we think there's secular demand there that's going to last for some time. And one evidence of that is the backlog(?) in our order book. Just to put it in perspective, last year we were about a $3.6 billion US a year company. We entered this year with about $2 billion of backlog and our calendar year start November.

We just finished our second quarter. At the end of our second quarter, that backlog had grown to over $4 billion. Even though we, as you said, we had grown the business first _____ 13% a year. You can see that accelerating demand play itself out in our backlog.

That gives us – I run the supply chain for the company, so on one hand it's a supply chain dream because you have perfect visibility. On the other hand, of course, that's challenges from a supply chain perspective. That's what gives us confidence the second half is we've got great visibility on the demand.

Moderator: And what happens to margins in the second half? I'm just asking because in an initial project, there's always like a lot of basic chassis and lower margin solutions. I think you also said that margin will be lower now versus what we've seen before, looking your leverage.

Scott: Yeah. In our business, those of you who aren't as close to it, typically, as you said, when we're early in lifecycle in a project, we will fill that out with photonic infrastructure, a lot of common equipment, a lot of costs around integration into a network. And then over time with that network, you go to your margins because the channel infills are a much higher margin rate.

There's also a couple other dynamics, in terms of mix, as our business is getting more diverse. But that's the fundamental driver.

If you go back in time, we said the normalized runrate for the margins in our business at gross margin level was 45%. There's price erosion and there's cost reduction, but that's sort of where we're – that's where we were sitting, call it two years ago.

When we went into the pandemic, as I said, a lot of people stopped building those new infrastructure networks. They just were keeping the lights on. So that had an inflationary effect on a percentage basis on our margin, because we were doing more channel infills than new projects. So you saw our margins rise up to the high 40s in some cases.

But we said coming back into this year, we expected that mix to more normalize the new projects and infill and you'd see our margins come back into the 43 to 46% range more normal to our business. What we've been hit with is exceptional costs on two fronts. One is logistics, so just the cost of freight and logistics around the world, unknown to you folks.

And the second one though is given the supply chain environment, the cost of actually getting your hands on semiconductors and other components to satisfy your customers has gone up substantially as well. That's put some pressure on our margins and last quarter we reported just over 43%. Second half of the year is going to be in that low 40s as well.

Moderator: We touched on supply chain. And I want to ask, every company sees supply chain constraints a little bit different. What does it mean for Ciena?

Scott: Yeah, there's a couple of things I think, Number one is, and this is not news, it's not really unique to Ciena. But the lead times obviously on the scarcer components have extended out. And that's been the case probably now for call it 18 months, 15 to 18 months. We used to be able to pick up components on a lead time basis anywhere from 14 weeks to 26 weeks. Now that's upwards of 70, 72 weeks in some cases. So that's extended.

For us, the dynamic that that means is if you think about the shape of our business two years ago, we would go into any given quarter with about half of our business in backlog that we were going to fulfill and half of our business in what we call book-to-build. ____ if it was fast flow kind of stuff. So we had lead times on products that were 4 to 8 weeks; and we had inventory, so we could react.

Fast forward to today, obviously the lead times for the components are much longer. Our backlog is basically almost a year's worth of backlog there. So the shape of our business is quite different. That's one of the impacts.

The second thing is, is we've had to make significant bets on the balance sheet to play by these new rules, in terms of lead times. So back actually a little bit more than a year ago, we started making very, very significant bets at the component level on what our year was going to look like. And now we're carrying commitments that stretch out 18 plus months in order to fulfill.

Now the good news is, I think that's going to be a competitive differentiator, because folks that we compete with, some of them you would say don't have the balance sheet that we have. So that's a little bit more riskier play. And we're mostly driving our revenue off of next-generation advanced technology, which has got long legs to it. So the risk of it being stale inventory is very, very low.

Moderator: Got it. Any light at the end of the tunnel, or are you in the same kind of darkness today as you were a year ago?

Scott: I don't see, again, on the lead time dimension, I don't see any changes in the near future. Nor have we planned for any changes in the future. As I said, we're making those bets a long way out. What we need to see as a first step improvement is just stability. People meeting their commitments that they've made against those lead times, as opposed to getting surprises after surprise. We tracked that very, very carefully in terms of inbound components.

And last quarter, I would have said three quarters ago that it was getting more stable. Last quarter was probably the worst performance that we've seen in time on inbound reliability of components showing up when they were committed to show up. Now we do all kinds of things to mitigate that, but that's the first step of improvement is just stability. It was like you're starting to see things show up when they were promised; and you can depend on that to build out your commitments to all the downstream people that depend on you.

Now obviously not a surprise to people that last quarter we were sitting in the middle of a China COVID lockdown. So that was the primary driver of that spike in instability last quarter.

Moderator: When you look at the core problem of supply chain constraints, demand is elevated, supply is limited. Do you see any actions taken by your providers to aid(?) capacity, to improve production? What are the – the demand is going to be there. It's going to be high as you noted because we have new projects on the market. But what about the supply side?

Scott: Yep. I mean talk about it _____ in three layers of the supply and what are we doing. Two is we have a number of partners in their industry that largely on the optical side of components that deliver finished goods, there's so many finished goods to us. And then we have component suppliers. So I think the story is a little bit different in each of those three layers.

First of all, what are we doing? I mentioned, again, making early and making big bets on commitments to purchases. That's one. Two is – and I should make this point – we are absolutely not capacity constrained from a manufacturing perspective. I could do a quarter of this 50% bigger than what we posted right now, from a straight capacity perspective. It's simply a matter of how much component and input we can get into that machine. We've made those investments to be able to get up the curve very quickly from a manufacturing capacity perspective, once the components are there.

The third thing is, we've actually taken quite a bit of our design capability off the field, if you want to call it that, and pointed them at opening up the aperture, in terms of supply choices for us. Kind of making sure that we've got multiple sources in the constrained areas so that the possible outcome could get in. So that's what we're doing at our layer.

On the optical side, absolutely every one of our key optical providers is adding capacity as we speak. And you can go to their public earnings announcement and they talk about it there. They see this demand that's coming out from us onto them as a durable demand. And they're making the capital investments to make sure that they can get up that curve.

On the component side, there are better people in the world. I just can repeat what they tell me. And you've probably heard it from the. But a number of them are making significant – and these are very significant investments, in terms of fab and the ecosystems around the fab capacity, to diversify the portfolio. If you look at the lengths of Intel or Texas Instruments have been very public, in terms of those investments that they're making.

And those are long-lead time investments and they start to come on board some of them in '23, but most of them in '24. So that's kind of the capacity piece of that.

It's interesting. People when they hear this, they immediately go to the really bleeding edge technology, like the 7 nanometer CMOS and some of that. That's not where they're – for us, that's not where the constraints is. It's actually more in the if you want to call it legacy technology, but the 16 nanometer and above type technologies. Which is where the likes of Intel and TI are making their investments, mostly domestic, maybe US, to add that kind of capacity.

But it's not just the fabs, it's all the ecosystems around the fabs that have to come with it. But that's coming online as well. And then the crystal ball is, as an industry, if you think of the telecom piece, all of those constraints at the component level are shared with other industries. And what happens to those other industries if we have a bit of a recessionary period?

I think the consumer electronics industry probably takes a bit of a hit and maybe the automotive industry takes a hit. And does that alleviate some capacity from the likes of telecom? That's the hypothesis that some people are starting to develop.

Moderator: Got it. I want to go back to cloud. You spoke about cloud; and I want to talk about your position in the cloud. And if you can give us – there's the historical perspective, you didn't have dedicated platform for the cloud. Then you launched it. But at the same time we're seeing Cisco making investments in their platform

for the cloud. We're seeing companies who are more routing and switching companies trying to embed optics.

And so talk about more holistically, talk about kind of top-down on what do you bring to the cloud that makes Ciena unique? And how do you see playing out? What are the areas where you're going to see more competition in the cloud and areas where you think you can win easily?

Scott: The differentiated aspects for our relationship with the cloud providers is all around our ability to bend the cost of power per bit, per transported chunk of data. And that's the economic aspect of it. The incumbency aspect of it is about a decade now of learning how to do business with them, in terms of their operational environment and what does it mean to be part of their ecosystem?

And don't trivialize that in terms of getting intimate, because they are unique. If we had more time I'd share some anecdotes with you. But our relationship with them goes back to the days when they first really started participating in building out WAN, intra-datacenter connectivity networks. We don't play today inside the datacenter at all. Our play is when you leave the four walls of the datacenter, you've got to get to another datacenter. That's where we play.

And we started that relationship with them historically, as you say, with the classic service provider transport platform. And it was largely in submarine networks. But if you go back almost a decade ago now, that was the play. We still participate very much with them on the submarine networks. In fact, our market share there is I'm allowed to say dominate. But if I was allowed to say it, I'd probably use that word.

Next, backing off from that, a large number of the North American big names that you would all know started to build up their domestic national backbone networks. And that was a natural evolution for us from that submarine networks to the optical performance, is really important there. Optical performance is really important in the national backbone network to move the relationship to there.

As that grow over time, we started not only selling them boxes, if you like, but started selling them services and getting ingrained in that relationship. Some place in that transition _____ we started to build optimized products for how they think about building out their networks. The product went from looking like a service provider product to looking like a datacenter IT product with -- both physically and the software programming interfaces that were on it.

And then as time went on, we then started to build out the – and they would have campus networks, basically, in a metro or in a certain geography. We started to build out their metro campus datacenter as well.

That's where we kind of are up 'til the beginning of this year. We're in all of the top six webscalers around the world, _____ be North America, one of them being China, with our latest technology, all driven by we're the most cost effective optical transport solution for them once they leave their datacenter to get to the next datacenter.

The dynamic that you referred to as possibly being a change in how they use optical technology really focused on that last use case that campus metro intra-datacenter. And the reason why its unique is there's no sophisticated between the buildings. It's just one fiber less than 80 kilometers, straight shot.

From an optical perspective, it's a relatively easy application to do. The challenge is to do it in a power footprint that's acceptable to them. That's what people started to talk about using plugs, the ZR topic come in. And when you get to that form factor, the possibility of illuminating a separate transport platform, just for that application, and plugging it right into the router that sits at the edge of that building, becomes a viable deployment scenario.

And I think that will be the deployment scenario that most of them will use for that application. Now it's important to know thought that application for us is the smallest of the relationships that we have with those webscalers. So for us, it's actually more of an opportunity then a cannibalization. Long answer.

Moderator: Got it. No, that's actually what I wanted to discuss. And you also play – talk about your participation in the pluggable area, in this small plug that you talked about that you can put inside a router.

Scott: We introduced our next-generation platform of optics – we call WaveLogic 5 – and we intentionally built two branches of WaveLogic 5. One that we call Extreme, which is for the long optically challenged type networking, where you're not willing necessarily to sacrifice power in the optics because the cost of the fiber and the performance you need to get on that fiber rules the day.

That WaveLogic Extreme was introduced I think two years ago now, going on two years now if I'm not _____ -- two years ago now. The second branch of that technology we introduced was called WaveLogic 5 Nano, which was sharing some of the same technology, but really optimized around power and footprint. So it literally fits 400 gig in the size of one of my fingers, and a plug format.

And really critical that it gets down to a power footprint. Because if it doesn't, you can't fully fill the router. That technology has been available now from us, generally available since early this year I guess. Was it last year, early this year? Time flies when you're having fun. And we do believe that from a power

footprint perspective and from an optical performance perspective, it's best-in-class in that form factor. And we fully expect to participate over time in that market for that metro campus datacenter piece.

Moderator: Are you concerned about white box phenomenon? We see it routers. We see it in switches first, then we see it in routers. In optical we haven't seen it; but tis there a risk that cloud companies will embrace a white box solution for optics?

Scott: Yeah, there's – I mean if I look at the cloud companies, without naming names, a number of them have actually launched and tried white boxes historically. And one that was public I can talk about that, was Facebook's championing of Tip. And they had – Tip is multidimensional and a number of the activities had a lot of take-up.

They had one that was an optical chapter of Tip, if you like, which never really got off the ground. And there were a couple other examples where people were doing internal white box development, again, that never really took off. And I have my own hypothesis of why that's the case. It's buried in a couple of things.

Number one is, this stuff is hard. It's not a digital experience where you're dealing with a box that's in a single location. This is an analog network, at the end of the day, that is spread out over many kilometers, in some cases many thousands of kilometers. And having the expertise in all of the dimensions that you have to have to be able to put that together is really hard. So not everybody can do it.

Two is, this one's a double-edged sword. But if you look at the margin profile in – a good way of playing in the optical space, it's not about the same margin profile of people that have been starting to play then they're running switch-based, unfortunately. But the straight economics of can I get enough scale in the required R&D investment in order to justify the white box and the economics I'm going to get back out of it.

And the answer is, if you look at it honestly, for most of these people, the answer is no. And even if you could do it in release 1, guess what? As soon as you're done with release 1, the next technology is coming and there's release 2 and release 3 and that's not as much fun. That's why I think they've failed in the past.

And yet, scale really matters in the optical space. And it's mattering more and more as each generation goes on because it's more and more expensive to get to that step function and the cost of bit power for bit drop as you have to move to new more expensive technologies to do it. If you don't have the scale, really difficult.

Moderator: Got it. You spoke about the cloud. I want to talk about service providers and also cable. Let's start with service providers. And just in general, is 5G is a big opportunity for you?

Scott: Yes in two fronts. One is on the demand side. Around the world and US is a good example, a number of people moving into 5G infrastructure. With that 5G infrastructure they're putting more fiber to the towers. More fiber, more bandwidth, in general is good for folks that do things like we do. That's dimension number one. And you can see it around the world in various different stages.

Dimension number two is if you think about when the world built out 3G or LTE, and you think about Ciena, or maybe you don't know the history; but we had a product portfolio that was very focused on obviously optics and optical transmission, but also layer 2 networking. And that played very well in the case of wireless where there was a wholesale network. And the wholesaler want to have a demarcation between their network and whoever was the M&O at the tower.

The way these architectures get built out, layer 2 network by the wholesale provider and then the wireless provider would have a cell side router sitting right there.

Our portfolio played very, very well with that layer 2 piece. We have nothing to address the layer 3. And I'm going back historically 7, 8, 9, 10 years. And you can see how that played out well. Half the towers in the US it's carried over Ciena layer 2 transport division, or layer 2 transport products in more of a wholesale type approach. And the same thing in India, by the way.

But where it was a converged layer 3 solution around the world and there was really no wholesale network, we had no play in wireless. Fast forward to today, we've been investing in an IP portfolio for well, quite a number of seasons now. And it's actually quite matured on the access and aggregation parts of those networks. And we're having really great early success in terms of the 5G wireless architecture decisions and buildouts that I've seen.

Two biggest 5G providers or two of the four, for sure, biggest 5G providers in the US. They're cell-site routers now are Ciena mix, so new opportunity plays(?) around the world.

Moderator: We see Juniper, for example, they have new access routers. Cisco has position. What is your value proposition in the space versus the existing routing companies?

Scott: Twofold, really is, number one is as you look at the bill of materials of these access routers, bandwidth is – when I say bandwidth is going up and fiber is becoming more dominate, well, that means that high performance optics are now more and more an important part of the overall bill of materials for these routers. And guess who happens to have – I'm biased, but the best high-performance optics in the world? That's one.

Number two is, we've put a lot of emphasis in when you bring those optics in, that brings an operational paradigm with the round optical networking. We put a lot of emphasis in the operational aspects, both on the network elements themselves, but off-box software applications that allow people to deploy these IP-routed solutions.

Moderator: Got it.

Scott: On optics, sorry.

Moderator: That takes me to the cable market. Cable are – these are big customers for you. What are they doing right now and what are the trends in the cable industry?

Scott: Just looking in the rearview mirror where have we played? We've done exceptionally well in, again, national backbone networking with cable operators, because of the optics performance that we talked about. One of the things that you may or may not know about the cable operators, but if you look at their backbone, they're reasonable fiber starved. Any advantage they can get from the performance optics giving them more bandwidth on that fiber, they're going to jump at.

So that's why we've done exceptionally well from that. From there we've pushed out into their metro networks. So this is basically connecting their various different CMTSs, That's cinema and metro on an optical backbone network. And we've done well with them on business services. Again, layer 2 business services historically. Now moving to layer 3 business services.

That's where we've historically played. Those historical applications still exist and will continue to grow, I believe. But what's new opportunities for us is as they start to look at their fiber access plant, it starts to look an awful lot like just like a classic telco service provider, fiber access plant. And that whole IP optical access portfolio that we talked about is getting a lot of traction there.

The second one is, is that we've got some really great footprint there. Again, this is early days for us in terms of the investments there. But the whole back office automation. Software, we've got some really great relationships in there with our Blue Planet portfolio as well.

Moderator: Got it. By the way, we have about four or five minutes left. I just want to make sure that I leave enough time for questions from the audience. Is there any question from the audience? Anyone wants to ask a question? No? Okay, at any point you have a question, just raise your hand. I'll make sure that you get the microphone.

I want to continue and ask about Blue Planet. What is the software play of Ciena? And how important is the business to your overall – on two levels. Number one, in a standalone business contributing revenues and profit. And number two. As an add-on to the other businesses that you have.

Scott: First of all, the more general question is, what is the software play for Ciena? Think of the software and the intelligence that we deliver in three kind of layers, if you like. One is, there's a lot of software that's actually buried into the network itself with intelligence around layer 0, layer 2, layer 3 control planes. And that continues.

One thing that drives me nuts is when people refer to that part of our business as the hardware business. Because actually, it's probably 75% of the investment is actually in software and intelligence that goes on in the network. But that's a different conversation. That's one layer.

That basically, when you see it from a financial result perspective, this gets reported in – there are optional software components in there, but it gets reported in the systems business.

Moderator: But you don't – I understand it, but on the other hand, your margins are not resembling software company. So…

Scott: At that level, that's fair.

Moderator: Right. Even if it's like Jordy(?), software you still get paid at quote/unquote "hardware."

Scott: Yeah, not that level. Second level is off-box software in our domain controller that is so largely in conjunction with our network solutions. And we made a lot of investments in the next generation capability there, we call One Control. Runs across all of our solutions. It's a cloud-based architecture. It has optimize around programmable infrastructure for people that want to have an automated software stack on top of it.

It has done exceptionally well in the last couple years, both as sort of the ubiquitous platform that people put on top of our systems to integrate into their

broader software ecosystem. But also we've rolled out a bunch of value-added software applications specific to how we offer network solutions in the network. So that's the second layer.

Then the third layer is where you jumped into the question on, is our Blue Planet portfolio. Our Blue Planet portfolio intentionally multivendor. So it's not biased towards any Ciena networking solution. I like t think it works better with the Ciena networking solution, but it's not unnecessarily biased towards that. And that's all around helping our customers automate the flow of services in a network that has become much more dynamic underneath them.

If you look back at the networks 10 years ago, very static. Now they're virtual in many cases on the services side. All layers of the network have significant program ability and flexibility with them. The back office systems of our – particularly our service provider customers of 10 or 20 years ago, just can't deal with that.

So there's a great opportunity there to help our customers; to have a more sticky relationship with our customers; then we think it's a good business opportunity over time to drive incremental software revenue and should help the margins over time as well.

Moderator: Got it. We have less than a minute left. And I'll ask you just a simple question. Are you worried about Asia from Cisco? Is this something that should change the comparative landscape?

Scott: I got the question back when the acquisition was announced and I don't think my perspective has changed that much. We competed with Acacia; we competed in Cisco before the acquisition. And they were partners and they had some joint solutions in the marketplace. The solution set hasn't changed that much, by the way.

And there are a number of folks that would say in the optics space that you question whether or not they have a track record delivering. I'd say – I have respect for the Acacia _____. Where they've tried to focus their attention, they're largely delivered. It's not a comment on that.

I think we have different religions. Our view of the world is the best network for our customers, especially when you get beyond just a couple of kilometers down the road into a large infrastructure network, you've got to take advantage of all the tricks from the optical domain and an IP capability. And you have to have the software operations around that.

I think Cisco's view of the world is well, you just stick these plugs in a router and connect them point to point all over the world. Those are two different views. We happen obviously to believe ours. So I think you'll see that play out over the years. We believe in our view. That's what you've got to say.

Moderator: Excellent. Thank you Scott and thanks Patti for the presentation today. We ran out of time. If there's any questions from the audience, direct it to me and I'll try to get your answer. If I don't know it, Patti will help me.

Scott: Thanks everybody for your interest.

Moderator: Thank you.

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