



CIENA CORPORATION AT  
CITI 2017 GLOBAL  
TECHNOLOGY  
CONFERENCE

GARY SMITH, CIENA PRESIDENT AND CEO

SEPTEMBER 7, 2017  
Stanley Kovler, Citi analyst

Stan: ...everyone. Welcome to Citi 2017 Technology Conference. This is the Ciena Corporation session. We're pleased to have CEO Gary Smith with us today. So longtime CEO of Ciena. I'm Stan Kovler, I cover the small and mid-cap Comm Equipment space for Citi. And I have some disclosures here if you care to look at that.

I think Gary's going to open up with a few opening remarks and then we'll go into Q&A and I'll leave plenty of room for questions here in the room.

Gary: Great. Thanks, Stan, and I appreciate the opportunity to chat with you this afternoon. I thought I'd run through just a couple of things first. First of all the health warning about forward-looking comments. And really, just to talk a little bit about the company and at its highest level. I think fundamentally the company is the best in the world at moving optical bits. And the opportunity for us is to continue to do that in an area that's very valued. But also to then automate some of those bits from a software perspective with some of our customers as well, at a very simplistic description.

The company today has a very diversified customer base, has global scale at two important dimensions. One is the amount of velocity it can bring to bear on its R&D and the second one is the deep distribution channels and relationships that it has globally. And really, when you think about it, we've pursued a best-of-breed strategy, this is what we focus on, really, this optical transport space. We are number one or number two in the world, depending on how you cut the markets between us and Huawei.

And if you look at the particular segments in there, things that I would highlight, particularly are things like the DCI market, the datacenter interconnect market, we're number one, really, in all different aspects of that. Also on the submarine market as well, we were zero about four years ago. We've now got number one market share.

So the point I would make is that we continue to look at new markets for our existing and core technology, and how do we get greater velocity out of that technology? So we have a much more diversified customer base than we've ever had and that gives us the ability to continue to take market share. We think about the overall market and this year our view is the market is about 2 to 3% growth on a global basis. Lots of regional variance, etc.

And how we think about the business is that we can continue to take share. So think about a market that even continues to grow sort of 2 to 3%, we should be able to take a couple of percentage points in addition to that. And that's how we've been able to grow when the rest of the market really isn't growing at a lot of the competitors.

This is translated into a strong financial performance, however you want to look at the metrics, be it top-line revenue growth – in fact, our revenue growth over the last five years has been about 9% CAGR. You think about the operating leverage we've delivered on the bottom-line, that's about 20% compound aggregate growth rate increase in EPS, even in a challenging industry and marketplace. And you can see from this, the obvious operating leverage that we've delivered in the business. And we're generating cash and have a strong balance sheet.

Sustained profitability, really, how we think about running the businesses for the long term, we're very focused now on EPS and EPS growth in the future, and really focusing on long-term shareholders. And that obviously is a testament to the fact that we've been able to deliver on the bottom-line.

So with that as a few prepared remarks and context to the business, I would just mention our business outlook. And really, I'd highlight one thing in particular here, again, consistent with this theme of bottom-line growth. And really, our next milestone is getting to a 15% operating margin for the business on an annualized basis. And I would say if you want sort of proof of testament of our progress there, obviously, you can just look at the last few years in our steady growth. In fact, last quarter we were actually 14% operating margin that we delivered as well. So I think there's plenty of evidence on what we've seen in the past and where we are in the marketplace that we can deliver on that.

We've given some guidance for our Q4 for a quarter and we are seeing a little bit of softness in certain elements of the North American market. We highlighted federal and we do think that that will last for a couple of quarters, into our Q1 as well, which is generally not a strong quarter for us. It's normally about 20 to 22% of our total revenue for the year. So we expect that to play into Q1 as well. With that, Stan.

Stan: Sure. So thanks for that backdrop. I think where I wanted to start was just in terms of the growth that you kind of laid out for the industry and your CAGR that you referenced. Typically it would seem to me that the market's been a bit better, maybe closer to mid-single digit growth I would say is the average that you've been growing at that 9% CAGR. As you think about this year and characterize that in the context of maybe some cyclical, would you think that 2018 has enough market drivers to reaccelerate industry growth?

Gary: I think there are a number of basic fundamentals from a demand characteristic that are very positive. I think basically folks are getting fiber closer to the customer. You look at preplanning for sort of 5G, etc. So all of those dynamics generally are, I think, very positive. And I think one of the things that is a bit of a misconception around the optical space is I constantly hear that it's very cyclical.

It's based around 100 gig upgrades or 40 gig upgrades back in the day. I actually don't subscribe to that. I don't think it's cyclical. So I mean sort of go there first.

If I look at the actual demand for optical capacity, and I go back to 2001, outside of the 2001 timeframe, where clearly we're all building capacity that nobody wanted, if I sort of look through that, you've got a very steady year-on-year demand growth for optical capacity, which makes a lot of sense when you think about what's happened in the broader network and Internet context. I don't see that dynamic changing. So I think the fundamental demand drivers are pretty healthy.

Now from an industry structure point of view, if you overlay that on, you've actually got less competitors than we've had on a historical basis. The likes of Marconi, Nortel, Lucent, etc, are no longer with us, as they've moved from the best-of-breed kinds of players in the marketplace. But I do think the dynamics that are weighing on the industry still are that we continue through technology to drive prices down sort of faster than Moore's Law and I think that's sort of underappreciated. And we do that to ourselves. That's part of what we do and we draw the rust to it to ourselves and other people. And we have a technology roadmap to continue to do – so that does weigh on the industry.

And then you've got the overall pricing environment, which is not new. You've got a number of smaller players, frankly, who are getting pretty desperate and that does influence the pricing environment. So long answer to a short question – and that's not a new dynamic. But I do think my own view of the market right now is I think you're in that 2 to 3% kind of growth overall. Now I think we can continue to grow a couple of percentage points above that and continue to take share.

Stan: Thanks. On that point about sort of pricing, and you alluded to the fact that wave length growth has been pretty strong, it's just the pricing dynamics have impacted that. But on top of that, as far as your reference to smaller competitors, you've actually gained share at some new accounts from smaller competitors. What do you think happens in terms of the industry structure and how long can they hang on if you continue to gain share, which you're demonstrating over the past several years?

Gary: Yeah, I mean I think if you think about the industry structure, it's really us and Huawei are number one or number two in most of the global markets, depending how you cut it. Then you've got Nokia at number three; and then I think you go a long way down to the smaller players and really, I think it's not – they aren't really sustainable in that structure, for two reasons. One, the amount of R&D that you need to drive development – and if you think – and you basically need to own your own ASIC development here as well. That's what we're talking about. And Ciena spends about \$400 million on R&D. And a large part of that is focused on

absolutely this optical space. And these players cannot keep up with the velocity of that R&D. They just can't. And you're seeing that in the marketplace.

So I think there is opportunity to continue to take share there. And there's about \$2 billion of that, of the total revenue, still in those smaller players. And I do think that that structure will continue to push down on them.

Stan: I guess one thing that's been happening since maybe several years ago is that we have suppliers of both DSPs and photonics that are enabling more nontraditional competition and also providing products that are sold direct to, for example, cloud providers for shorter lengths in those types of applications. How do you address those opportunities and maybe unlock some of that value, to a greater extent than you have even now?

Gary: You saw our announcement earlier this year where we're actually going to make available our modem technology and specifically, our WaveLogic Ai, through a number of partners into the marketplace. And I think that allows us to address that segment of the market, should that mature. It's not clear how that's going to play out, but it's the hedge on that bet. And also, specifically, to get into some markets, particularly China, where we do not address right now and we're not structured to address. And frankly, these folks can address it was better than we can.

So again, I think it talks to two things. One, how do we increase the velocity of our core technology and get into markets that we're not already in? And secondly, it's to encourage choice and also to talk to different consumption models. So we've got the leading technology; we're very open to different consumption models and however they want to consume it.

Stan: One thing that you've also been developing, both internally and via acquisition, has been focus on software. As you go to market with some of these customers that typically have an appetite to do things themselves, can you speak to the software that you're able to provide for some of those markets? And then also, in your traditional telco space, as we move into network function, virtualization and those types of developments.

Gary: So we acquired Cyan principally a couple years ago now, with the Blue Planet technology, to really get our nose under the tent of the whole sort of SDN/NFV market. And I think we've learned a lot over the last couple of years. And I think one of the learnings is that we knew that was a nascent market and we absolutely think that will continue to develop and become a reality. But the truth is, it's going to take longer than everybody thinks, just because there's an ecosystem required to develop there, to truly be able to deliver virtualized service at scale. A lot of carriers are delivering sort of certain services right now and they're doing I

would say beta type services and things like that, but not at scale. And I do think that market will happen, but it'll take longer.

Now what we've learned along the way is that a lot of carriers have come to us and said listen, that's great, but could you actually just focus on automating what we're doing today? So a great example of this is sort of it takes us six months to provision a circuit still. And we don't want to change out all our OSS/BSS, but can Blue Planet actually automate that? And it's very well suited to doing that.

So part of our learning over the last couple of years is, let's hone down the applications and really prepackage some of those into the marketplace, which we're going to start to do in 2018. And to say, hey, we can solve these very specific problems for you by automating basically what you do right now. And I think that should help A, get more and more Blue Planet out there, and also increase the value that we can deliver, and increase the revenue streams for Blue Planet, whilst the whole ecosystem continues to develop.

Stan: Another big theme as we think about various – in market developments is 5G. And there's a different architecture for 5G. First of all you have denser cell sites and things like that. And one thing that is becoming prevalent is discussion around the front haul type of applications. I know when you go back to the central office is more of a CRAN type of architecture. How much will that impact your business in 2018 or is that more of like a 2019/2020 opportunity?

Gary: I don't think there's a bright line on the 5G piece for us and let me tell you why. We're already seeing carriers start to think about putting capacity – whichever way the architecture plays out and there's a lot of sort of frontal discussion around how that small cell stuff actually sort of plays out. But regardless of that, what is clear is that you'll need a lot more capacity closer to the customer. That's just fact. And so that's good for us and that's optical.

What we are seeing even now is a number of customers trying to think through the availability of that capacity and getting it out there in advance to it. A lot of the metro builds that we're dealing with right now are very thoughtful and mindful of that. Probably the most publicly highest profile of that in the US is the Verizon build on their Metro, trying to think through that availability for 5G in advance as they put their converged Metro out there as well. So we're starting to see some dynamics around that now.

Stan: And then one thing that's also developed in the industry is routing ports have always been incredibly expensive and so one of the developments of the DCI market has been around using optical and more lengths, etc. So as we grow in that area, are we seeing that move beyond just the hyper-scale deployments into more

the telco world? Help us understand how much of your revenue pie is linked to that type of business and how do you see that going forward?

Gary: So if you look at the DCI market, writ large, it is probably – and this is difficult first to discern exactly, because we don't know exactly where all of our stuff goes – but I think it's about 20 to 25% of our total market right now, in the various kinds of interconnect. Now directly, it's probably closer to about 10% where we actually see it and we're connecting the datacenters. And to some extent, Waveserver is a simpler proxy for that. It is specifically designed for the datacenter. To your point, Stan, we're seeing a lot more applicability of this, frankly, than we thought. Waveserver's revenues this year when we first launched it, we thought 50 to 70 million, now looks like it's going to be over 100 million.

And some of the – half of the customers we have there – we've got 50 to 60 customers – half of them are new customers to Ciena. And a lot of those customers are smaller datacenter players, smaller content players that, frankly, we would not have addressed if we'd gone in there with our traditional telco type platforms, 6500. We wouldn't have seen that market.

Stan: From a competitive standpoint in DCI, I mean it seems like it's potentially even more price competitive than some of your other markets. But you've taken share from a number of players actually. So how sticky is that in this type of market where you've won some design wins or architectures? How long do customers actually stay with your solution until they decide that they need something new either from you or someone else?

Gary: Until they throw it away each year you mean? Is that what you mean? I think it's maturing for a couple of reasons. One, first of all, the key elements here – two key elements. One is really optical performance. This really hones down to pure optical performance is what they're looking for. And frankly, that plays into our strong suit. When you think about the market share that we've taken, and that's with our existing WaveLogic technology, we're just about to ship our next-generation technology, WaveLogic Ai. And so that, again, leapfrogs the competition and gives them all kinds of spectral efficiency and optimizes optical performance in its various forms.

Secondly, I think the networks are getting more and more complicated and large, and that also plays into our ability to help these players, particularly outside of North America, where they can't necessarily own all the fiber themselves, etc, and we are uniquely positioned in that we can help them on submarine and we can help them pretty much every country they want to go into in the world, where we've already got most of the major service providers. So the relationship, really, is getting deeper at multiple levels and also, frankly, I think there's concern about them dealing with smaller players that aren't going to be around.

Stan: You brought up Europe. One thing that you've done over the past year, is also staged a recovery in your European business. It was a challenging business for you a year ago or so. But on top of that now, there's some new potential opportunities in Europe, particularly in the UK, with some dark fiber. Can you just help us understand how you envision that progressing, both in terms of timing and your relationship with customers that might be able to grab a piece of that business?

Gary: Well, we've got a big share of the UK market, principally between Vodafone and through some of the old cable and wireless and Vodafone and obviously British Telecom, they're a big, big customer, and then some of the smaller players in there. So you're really talking about deregulating the access market there. Not clear how that regulatory stuff is truly going to finalize. We thought we had a good view of it, but then there's been some potential changes to that on appeal.

So it's not clear how that's really going to play out, but notwithstanding any of that, I think you are seeing a lot of fiber build out in the UK, for some of the other carriers, as well as BT. And I think that's a great opportunity for us. We're very well-positioned with all of those carriers there. So I think that is a good opportunity for us. I'm a little hesitant around the uncertainties around the regulatory environment that has still seemed to be hanging over that.

Stan: Let's see if there are any questions. Otherwise we'll keep going. There's one in the back. Let's wait for the microphone for our questions.

Q: Hi, with the Verizon that I know you have this large deployment, what inning are we in in terms of how the deployment for this large product launch of you guys is on the Metro side?

Gary: Are we talking from a cricket point of view or from a baseball point of view or...?

Q: Baseball.

Gary: Five-day cricket game, right? I think we're still in the first or second innings. This is a very long-term deployment. Things are on track. I think it's a multiyear – another three to five year-type program. It's going to be nice steady rollout. Our business is up with Verizon for this year. And I think what's underappreciated with carriers like Verizon is we're doing multiple things for – everybody's focused on the Metro piece because that's really talked about sort of publicly. But we currently are pretty much the de facto standard for them on their long-haul markets. We actually provide a lot of their wireless backhaul as well into the Verizon wireless, and we're also beginning to build the relationship with them on Ethernet and packet as well, which is new to us.

So with a lot of these major carriers, we have multiple applications with them and we are pretty diversified in the different applications. Obviously the Metro one is a nice win for us and I think we have a good runway in front of us.

Q: Gary, congratulations on the continuous share gain over the last couple of years, as well as the margin improvement. I want to ask you about the growth part of the entire optical industry, which is within the datacenter. How much is your DCI or datacenter as a whole growth year-over-year? And I have a follow-up question.

Gary: Yeah, again, I'd clarify that a little bit around it's difficult to really look at – understand exactly how big that is because of we don't see where everything goes from a platform point of view. But I would say that market is in the high single-digit growth. In capacity terms it's more than that, but I think with the pricing technology that we're bringing into market, that keeps a hat on it.

Q: Okay. Now what's interesting is if you look at within the datacenter how much you guys are spending on their transceivers, I mean that growth is well into the 20, 30, 40% year-over-year. So why is within the DCI market, the overall market is only growing, like you said, in the high-single digits.

Gary: Because I think you've got two – and principally, it's around the continued sort of faster than Moore's Law pricing, really driven by the technology. So the technology that we're bringing out constantly takes step functions down in price. And I think that limits the growth of the market. So you're continually looking at – the pure capacity demand's very, very strong. But the actual size of the market is constantly being limited by your – you need to constantly take down the delivered price-per-bit from a technology point of view. That's really weighing it down.

Stan: I guess another way to ask that question is if you look at other – let's call it simpler markets, like mobile, for example, cell phones where you have the systems companies that have a lot of competition and you have a lot of the semiconductor players that have actually extracted more margin in that space. But at the heart of the question, I think you also have optics that go into applications like switches and routers that you don't really sell into as well. And so when you get into 400 gig and other applications, can you actually drive volume down into the shorter lengths and maybe try to accelerate your unit growth or wavelength growth?

Gary: That's an opportunity for us. That is an opportunity for us. And I think the reason that we put our modem technology out there, particularly, is that exposes us to that market opportunity at the 400-gig level. And if that short reach, a datacenter

market does transpire like that as sort of pluggables, then that gives us an entree into that marketplace. Yes, absolutely.

Stan: Let's stay on 400 gig for a second. There's some trials going on. I think one of your largest customer has some trials going on and there's some unique players that are going after some different opportunities, whether it's the optical side of it or the routing side of it, that really just getting going in the market. Are there opportunities for you to actually partner with new entrants and kind of differentiate and, again, take some of the optical capabilities, but then start to encroach more and more, as you've done in the past, on areas like routing?

Gary: Yes. I mean I think there's the potential for that. I think there's a number of carriers who are moving to 400 gig now and I think the Ai chipset and technology around it is perfectly timed for that. And I think there's an opportunity to partner with a broader ecosystem around this kind of – these kinds of applications. Yes.

Stan: And then from a supply chain standpoint, one thing I go back to my cell phone reference, just to complete that question. There's been a lot of consolidation on the component side in a lot of different industries that have allowed the OEM to extract more margin. To what extent can you guys get to that point with your suppliers, but also some of the internal stuff that you've developed and used?

Gary: What's unique about Ciena is that we are vertically integrated now across all of the elements. We are the only player in the world that has yet to be re-revenued with a component business. And we develop our own ASICs, and not just DSP, but we are integrated around some of the elements around that as well. We have obviously our systems business, which is number one in the world. And we have services and software as well that complement that. And I think that our opportunity to leverage that vertical integration with things like Blue Planet, for example, with the new Ai chipset, will actually be able to look at much great set of analytics when you combine the two, and actually look at driving the amount of bandwidth you use on any given link. And it can do that automatically. So sort of it really is the start of sort of this concept of self-driving networks.

But we're able to do that because we're vertically integrated across. So from a financial community point of play, it really is a pure play across the whole optical space. And I think it's best of breed, which I think is not just showing up in optical, but as you think about the other industries, it really – the world is moving generally to best of breed, because that gives it global scale and the ability to deliver the absolute best technology on ongoing basis.

Stan: You touched on Verizon to some extent, and the multiple opportunities you have there. Last quarter it was a 10% customer, the quarter before it was below 10%, and the quarter before that I believe it was also 10%. How much of this saw-tooth

kind of ebb and flow in this business can we expect from them, especially given the fact that you're in these multiple opportunities? Are they all ramping in different cadence, or is Metro driving a lot of what's happening at the fringes?

Gary: The question – and the answer is, absolutely. You've got a very broad set of tier one carriers and I know that AT&T and Verizon are the ones that sort of make it in consistently. Let me tell you, within any given quarter, there are an awful lot of tier one carriers that are just below that, that are 8 or 9%. In fact, Reliance Jio the other quarter was about 9%; didn't quite make it at 10%. So you've got lots of the normal sort of ebbs and flows you'd expect there, and we view that, quite frankly, as a health diversified business, which enables us to grow, even in a challenging market.

Listen, there's no magical trick to this. We've just got a lot of customers, very diversified, both North America and globally, and we've got a lot of different applications in the customer. So that even within a single account, you're going to have ebbs and flows. When they're building out Metro, they might not be building out a long haul. When they're building out on their Ethernet business services or wireless backhaul, they might be down on something else. That's just the natural sort of ebb and flow of it and we've grown up with that as a business, and we've specifically designed Ciena to address that issue. We said very simply, we've got to go and get all of these tier one customers and we've got to get multiple applications. And that really drove our strategy to acquire the Nortel assets and do all the things we've done in the last sort of five or six years.

Stan: You brought up Jio as almost a 10% customer. That was essentially in the last – well, now with that customer and you have several more customers in India so now you've covered the majority of the telecom space and I think you also have a military application that you're selling into. Is that a difficult comp for you into 2018 or was that built out in early stages to where those – that geography will grow into next year?

Gary: We haven't sort of talked about sort of next year, but as we think about it, I think India can continue to grow. I think to the baseball or cricket analogy, we're in the earlier innings of this thing. It is a very large country with a very large population and they're just beginning. And it's ramping up quickly. We're in all the major carriers now in India and also, the other thing I'd say, we are uniquely positioned there. Not least of which, we've been there 12 years. We have a very big installed base, relative to everybody else. We have number one market share in India now. And we have about a thousand people on the street in India. So we're very well experienced in that marketplace. We have all of the major carriers, and including in the Department of Defense network, which we secured last year, which we'll roll out during '18 as well.

Stan: There's a newer local player in the Indian market. They just actually went public recently. Kind of a lower cost competitor. Do you see them in some of these RFPs when you're going after...

Gary: Not really. I mean they're very niche-y, a very niche player. And no, we don't particularly. I think when you talk about the scale of networks that they're lifting up here with all of the complexity and the leading-edge technology that they require, it's basically us and people like Nokia are the primary vendors in there.

Stan: There's one in the back.

Q: As you were talking about Verizon and people building out Metro, with regards to 5G, I know this is far out, but while spending might not be cyclical, it certainly has waves to it. Long haul is a focus, Metro's a focus. And the CAPEX budgets are not growing substantially, right? So three years down the road, or whenever 5G becomes a spending priority, isn't that a net negative for Ciena? Because the Metro builds, as you referenced, are conscious of the 5G capacity that's needed closer to the customer. So since this is being contemplated, won't that Metro spending go down significantly and the priority of CAPEX will focus away from your products and towards different things?

Gary: I think that's an unlikely scenario because I think back to my earlier sort of point, it's not going to be a bright-line build out from an optical point of view. You're already seeing some provisioning and thinking around that for 5G and I think the bottom-line with 5G is, you're going to need a lot more capacity – just call it optical – closer to the customer. And it's not as if they're going to sort of build all of that out and then build out the wireless frontal infrastructure, which I think is used sort of it. I don't think it will be bright-lined like that. They won't build out all the capacity ready for it. So I think it'll be more gradual roll into it.

And then, of course, when you put 5G on it, you've got more traffic on the network. So from all the modeling that we've done, it's a pretty positive dynamic for us. Coupled with what we're seeing generally – and a good example of this is the cable space where you've heard in North America it's called fiber deep, where people like Comcast are really putting higher capacity closer to the customer and the head end. You've got all of that going on over the next two to three years as well.

So whilst the overall growth in the market for optical technology is weighed down by some elements, the demand characteristics I'm very confident around. I think they're extremely positive. And you've got all these other builds, particularly going on in Asia-Pacific. It's not just India. We're seeing good growth in Japan, which I think also talks to some of the industry structure stuff. I think some of the local carriers there are getting more concerned around their local vendors, because

they haven't got global scale and they're falling behind. Australia as well, big build out with Telstra, going on within that – multiple years. And again, they're starting to think about things like 5G. So I feel positive about the underlying dynamics from an optical demand point of view.

Stan: You've restructured some debt just going into the earnings report, and then also you have some debt coming due pretty soon that you'll be able to pay off. So once Jim helps you free up some cash, what do you want to do with it?

Gary: Well, you know, the first priority is to clean up these converts, which will drive – how we think about the business, I started out talking about it, we're very focused on EPS growth. And this is very EPS friendly. And as you point out, Stan, once we get through that, we'll have cleaned up a lot of our balance sheet, we'll be in a very strong position and then we'll still be generating cash. So there are lots of things you can do to drive EPS growth and free cash flow, additional free cash flow.

For example, we've got an NOL which is about a billion dollars. And so effectively, we will not be paying North American tax for the foreseeable future. And again, at some point, that gets brought onto the balance sheet as well. And I don't think that's fully appreciated as well.

Stan: Last question – oh, we have one in the back.

Q: I think it's about a quarter ago you announced that strategy change to partner and selling your DSPs with some multiple partners. Could you give us a little color on how that's going? Any initial feedback and traction with that?

Gary: Yeah. So this was the announcement with a number of partners, basically, to make our technology, our modem technology available. We are – and the lead time for this is quite long into the – in getting into the build in. We are putting our first alphas into the hands of those players, in this quarter. And so we expect to be looking at some – if we're successful here in some of the design wins, we should start to get that at the end of 2018. But the quick piece, we're on progress, we're on track with them. We feel pretty enthusiastic around what we're seeing. We're hopeful of being able to get some design wins as we get into the first part, probably by the time we get to mid 2018.

Stan: Thank you. Thanks for joining us.

Gary: Great, thanks very much, appreciate it.

END