Company Name: Broadcom Ltd
Company Ticker: AVGO US
Date: 2017-08-24
Event Description: Q3 2017 Earnings Call

Market Cap: 103,701.45
Current PX: 255.05
YTD Change($): +78.28
YTD Change(%): +44.284

Bloomberg Estimates - EPS
Current Quarter: 4.412
Current Year: 15.836
Bloomberg Estimates - Sales
Current Quarter: 4780.111
Current Year: 17597.875

Q3 2017 Earnings Call

Company Participants

- Ashish Saran
- Hock E. Tan
- Thomas Krause

Other Participants

- Ross C. Seymore
- Toshiya Hari
- Craig M. Hettenbach
- Vivek Arya
- Romit Jitendra Shah
- John W. Pitzer
- Harlan Sur
- Blayne Curtis
- Amit Daryanani

MANAGEMENT DISCUSSION SECTION

Ashish Saran

GAAP and Non-GAAP Financial Measures

In addition to U.S. GAAP reporting, Broadcom reports certain financial measures on a non-GAAP basis

A reconciliation between GAAP and non-GAAP measures is included in the tables attached to today's press release

Comments made during today's call will primarily refer to our non-GAAP financial results

Hock E. Tan

Business Highlights

Revenue, Gross Margin, EPS and Acquisition

- I'm very pleased actually with our performance for the third fiscal quarter with solid contributions from all our segments
- We delivered strong financial results with revenue, gross margin and EPS all above the midpoint of our guidance
- Third quarter revenue of $4.47B grew 6% sequentially and 17% year-on-year, with all segments delivering year-on-year growth
- On the income front, EPS were $4.10, growing by 11% sequentially and 42% year-on-year

- We are also looking forward to completing the acquisition of Brocade and subject to the satisfaction of the remaining closing conditions, we presently expect to close this transaction within our fourth fiscal quarter 2017
- However, please note that our guidance and commentary today for Q4 does not include any contribution from Brocade

Segment Results

Wired

- Let me now turn to a discussion of our segment results
- Starting with wired, our largest segment in Q3, wired revenue was $2.2B, growing 5% sequentially, 7% year-on-year
- The wired segment represented 50% of our total revenue
- Overall, this was a very good quarter for the segment, driven by seasonal strength in set-top boxes and robust demand from data centers for both our merchant and custom silicon products
- However, we did start to see softness in demand arising from Chinese operators for our optical and broadband access products
- Turning to Q4, we do expect wired segment revenues to decline sequentially arising from the seasonal weakness in demand for our broadband access products industry-wide
  - Notwithstanding this softness, we foresee the wired segment to continue to trend up very well on a year-on-year basis

Wireless Segment

Revenues

- Moving onto the wireless segment, in Q3, wireless revenue was $1.3B, growing 12% sequentially and 27% year-on-year
- The wireless segment represented 29% of our total revenues
- Third quarter wireless growth was driven by the start of the ramp from our large North American smartphone customer as they started transitioning to their next-generation platform
- Revenue growth for us was further augmented by a large increase in Broadcom’s total dollar content in this new platform
  - Ramp of this new platform is now in full strike as we begin Q4 FY2017
  - We expect this to drive very strong sequential growth in wireless revenue for our fourth quarter, and year-on-year, we project strong growth in this segment as a result of our content gains
- As we also mentioned in our previous earnings call, our product shipment to support the ramp this year of this North American smartphone maker were pushed out compared to prior years as we look to Q1 accordingly of FY2018 unlike what occurred in the last two years, we presently expect wireless revenue to hold up sequentially

Enterprise Storage

Revenues

- Turning to enterprise storage, in Q3, enterprise storage revenue was $735mm and represented 16% of our total revenue
- This segment grew 3% sequentially, 39% year-on-year
- Growth in the quarter was primarily from our HDD products, while our server and storage connectivity business continue to hold up well
- However, as noted in our last earnings call, we do not believe this strength to be sustainable in hard disk drive, and sure enough, we expect a sharp decline in demand for our hard disk drive products in Q4, driven by the start of an anticipated correction in the hard disk drive market

Server and Storage Connectivity Business

- On the other hand, we expect our server and storage connectivity business to start to benefit from the early launch as it starts to ramp during the quarter
- So, despite this anticipated sharp correction in hard disk drive, year-on-year, we expect this enterprise storage segment to show double-digit growth

Industrial

- Finally, our last segment, industrial
- In Q3, industrial segment revenue was $238mm and represented 5% of our total revenue
- Revenue share grew by 6% sequentially, 18% year-on-year
- The strong year-on-year growth, however, included the impact from a large increase in our IP licensing revenue, which as you know tends to be quite lumpy in nature
- Notwithstanding, the industrial resales continued to trend up very firmly with high-single-digit sequential growth and over 10% year-on-year growth, and we expect industrial resales to continue to trend up strongly in Q4

Summary

- So, in summary, for the third fiscal quarter, the demand from all our markets continued to be firm and we delivered mid-single-digit sequential revenue growth that was propelled by the start of the new platform ramp from a North American smartphone OEM
- The operating leverage in our model enable us to drive double-digit sequential growth in our EPS

Q4 Outlook

Revenue Growth

- Turning to Q4, even as we foresee sequential revenue declines in other segments, we project the strong wireless growth to accelerate our consolidated revenue growth sequentially by over 7%
- Our year-on-year revenue growth in 2017 has been very robust with double-digit second and third quarter results and projected fourth quarter results in a similar range

- Strong end markets, more than just wireless, have contributed to this growth, but it would not be prudent to expect this level of growth to sustain long term

- We operate in a relatively matured end markets that we assume are likely to grow over the long term close to GDP rates or in the low single digits
- Given our strong position for our product franchises, we do not assume market share changes to contribute to our long-term revenue growth
- However, we do expect our technology innovations to continue to drive content gains and enable us to push our revenue growth rate above those of end markets
    - And this leads to our assumption around a very sustainable long-term year-on-year target revenue growth of mid single-digits, as we have previously indicated

Thomas Krause

Financial Highlights

GAAP and Non-GAAP Results

- My comments today will focus primarily on our non-GAAP results from continuing operations unless otherwise specifically noted
- A reconciliation of our GAAP and our non-GAAP data is included with the earnings release issued today and is also available on our website at broadcom.com

Revenue and Gross Margin

- As Hock mentioned and went through, we did deliver very strong financial results for Q3, starting with revenue at $4.57B, which grew by 6.3% sequentially
- As he also just highlighted, year-on-year growth for Q3 again was quite substantial at 17.5%, which is well ahead of our sustainable long-term growth rate targets of mid single-digits
- Foxconn was the only greater than 10% direct customer in the third fiscal quarter
- Our third quarter gross margin from continuing operations was 63.3%, 30BPS above the midpoint of guidance

Operating Expenses and Income, Margin and Provision for Taxes

- Turning to operating expenses, R&D expenses were $652mm and SG&A expenses were $116mm, totaling $768mm or 17.2% of net revenue for Q3
- I'd highlight that this was $19mm below guidance primarily due to lower than projected – lower than forecasted project expenses and the tail-end of synergies that we're realizing from classic Broadcom integration activities
- Operating income from continuing operations for the quarter was $2.06B and represented 46.1% of net revenue
- I am pleased that we're able to achieve our long-term operating margin target of 45% this quarter
- Provision for taxes came in at $88mm, slightly above our guidance
    - This was primarily due to higher than expected net income

- Third quarter interest expense was $112mm and other income net was $12mm
- Third quarter net income was $1.87B and earnings per diluted share was $4.10
- Our share-based compensation expense in Q3 was $251mm

Balance Sheet

DSO, Inventory, Working Capital and Cash Flow

- Moving onto the balance sheet, our DSO were 49 days, an increase of four days from the prior quarter, primarily due to the ramp in wireless revenue late in the quarter
- Our inventory at the end of Q3 was $1.43B, an increase of $120mm from the beginning of the quarter, reflecting an inventory build to support the strong growth expected in wireless in Q4
- We generated $1.66B in operational cash flow, which includes the impact of an increase in working capital
- We also expended approximately $50mm in cash on classic Broadcom restructuring integration activities in Q3
- FCF in Q3 was $1.4B or 31% of net revenue

CapEx

- CapEx in Q3 was $255mm or 5.7% of net revenue
- I would highlight this includes approximately $90mm expended on campus construction projects
- As you may recall, our CapEx had been running at elevated levels over the last several quarters largely due to the construction of the partially built Irvine campus we had acquired as part of the classic Broadcom transaction
- I'm pleased to note that earlier this month at the start of our fiscal quarter, we completed a sale and leaseback arrangement for the Irvine campus and received approximately $443mm in sale proceeds
- We will continue to have CapEx expenditures at the Irvine campus as we complete improvements to the lease space throughout the balance of the year
- We expect overall CapEx to decline meaningfully starting in 2018 and we will provide more color on that topic on our next earnings call

Dividend and Partnership Distribution Payments

- Moving onto additional items on the cash flow statement, a total of $438mm in cash was spent on company dividend and partnership distribution payments in Q3
- We ended Q3 with a cash and short-term investment balance of $5.45B
- Our cash balance remains at an elevated level, which we expect will continue through Q4 in anticipation of closing the pending acquisition of Brocade

Guidance

Now let me turn to our non-GAAP guidance for Q4 FY2017

This guidance reflects our current assessment of business conditions and we do not intend to update this guidance

This guidance is for results from continuing operations only

Net Revenue, Gross Margin, Operating Expenses and Share Count

- Net revenue is expected to be $4.8B, +/- $75mm
- Gross margin is expected to be 63%, +/- 1 percentage point
- Operating expenses are estimated to be approximately $780mm
- Tax provision is forecasted to be approximately $96mm
- Net interest expense and other is expected to be approximately $100mm
- The diluted share count forecast is for 457mm shares
- Share-based compensation expense will be approximately $261mm
- CapEx will be approximately $230mm
- On the Brocade front, we have received regulatory approval in China and, as Hock mentioned, subject to the satisfaction of the remaining closing conditions, we presently expect to close this transaction within our fourth fiscal quarter of 2017

QUESTION AND ANSWER SECTION

<Q - Ross C. Seymore>: Hock, I know this is our last shot at getting segment guidance, so forgive me for taking advantage of that. But as you talk about the wireless segment, can you give a little bit more color about what you meant by the fiscal first quarter holding up? Does that mean better than seasonal? Up or down sequentially? Any more color there would be appreciated.

<A - Hock E. Tan>: Sure. Well, from Q3 to Q4, and we have said that in the last earnings call, we expect probably to drive up our revenue. I'm careful in my choice of word – rocket, but drive up about 30% to 40% sequentially on wireless alone. And because of the delayed shipment and everything just shifts further out, so we expect in Q1 that the wireless revenue would probably hold close to the same level as what we will see in Q4 FY2017. Hope that helps.

<Q - Ross C. Seymore>: It does. That helps a lot. And then a question, Tom, for you, a little bit longer term. You mentioned about the CapEx coming down as we go into next year, so I'm not going to ask you for any more details on that. But as we think about a 35% FCF margin target, and a 45% target for your operating margin, I know there's some deltas in between those two, but it doesn't seem like it should add up to quite 10 points. Can you talk a little bit about what might bring that FCF margin target a little closer to the 45% operating margin or is it not going to approach that?

<A - Thomas Krause>: No, Ross, I think that's very fair. As we've seen, operating margins and EBITDA margins continue to expand and you look at sort of the one-time items this year around the campus activities, some of the things we're doing in the back end, the restructuring activities we've taken on, you're going see that continue to converge. I don't see the interest expense levels or other items that would tax rate dictate any expansion in that number. So I think as we get into the new year and we update you on the financial model, I think there's certainly room for more convergence.

<Q - Toshiya Hari>: Tom, I had a question on gross margins. You're guiding Q4 gross margins down, I think, about 30BPS at the midpoint despite the outlook for significantly higher revenue. I was curious if this is simply a function of customer mix and perhaps conservatism on your part or are there other factors at play here?

<A - Thomas Krause>: No, Toshi, I wouldn't say it's conservatism. If you look at the mix of business in Q4, obviously, wireless is a much larger percentage of overall revenue. Wireless, traditionally, as I think you probably know, does carry a below average – below Broadcom average gross margins. And so, when we see such a change in mix, you're going to see some pressure and headwinds on margins. I think despite all that, however, we're very confident that we can maintain relatively flat gross margins here which are, obviously, running at record levels.

<Q - Toshiya Hari>: Great. Thank you. And then as my follow-up, Hock, I had a question on your appetite for further M&A. I realize you guys are still working on Brocade right now. But beyond that, given what you see in the pipeline and given current valuation levels, I was curious how, I guess, hungry you are in terms of M&A. In the past, you guys have talked about your 15 product groups and, I guess, 19 including Brocade, but when you think about your pipeline and your team's capacity to run businesses, how many additional product groups do you think you can manage? Thank you.

<A - Hock E. Tan>: Good question. So far, this thing – actually, we have 19 product groups right now. Brocade would add a 20th one. And do we have capacity for more? Yes, our machine is running very smoothly. We can certainly do more.

<A - Thomas Krause>: Yeah, and Toshi, I think, as you know, in terms of capital allocation, we've been focused on maintaining a balance between giving back 50% of FCF to shareholders in the form of a dividend and then focusing the balance of the 50% on M&A. And I think we continue to believe we can do that and do it successfully going forward. Obviously, Brocade is the latest instance of it, but we see an opportunity going forward to maintain that model.

<Q - Craig M. Hettenbach>: Hock, I had a question on the merchant silicon, particularly Jericho vs. Tomahawk. One of your key customers recently spoke favorably about some momentum for Jericho. If you can just kind of update us where both of those are and how you're feeling about the ramp in both Tomahawk and Jericho.

<A - Hock E. Tan>: Well, those are very good – those two products, by the way, for each of them is a whole set of generation of Tomahawk switches, and Jericho generally are router switches. So both are used in different place, and both are doing very, very well and are very well received in data centers, both public data centers – the public cloud data centers as well as even private enterprises. And it's running very well.

And in terms of ramp, see, we have constant upgrades to those products. We have launched since last year Tomahawk and Tomahawk Plus, the Tomahawk I. We have launched this year Tomahawk II. We should be doing Tomahawk III by end of this year. And it will keep going on as we engineer new innovative next-generation products for our cloud customers, especially our cloud customers who desire higher and higher throughput and bandwidth.

And same applies to Jericho, which is a newer product, which is a routing product, using aggregation and spine. And that's also going in the same direction as we create generation and potentially future generation of those products. So we see those two to maintain our very, very strong market position in the switch networking connectivity business.

<Q - Craig M. Hettenbach>: Got it. And then just as my follow-up, your commentary around being able to drive content growth to get to competitive growth, mid single-digits, which is a target, clearly we see a lot of the wireless growth coming through and you talked about that. But just more broadly across the organization, any areas that you're more optimistic about the ability to drive higher content and market growth?

<A - Hock E. Tan>: I would say we are very, very broadly positive about content growth because this is the underpinning of our business model, which is using technology – leading-edge technology in very proven markets to keep driving innovation and performance for our key customers in each of those applications. We see that in networking, we see that in enterprise storage, we see that even in industrial. And, of course, wireless very much so. So that's the underpinning of business that every generation – and every generation may span annually to as long as three, four years, depending on the particular end market segment it's in, but it will happen. And each time it happens, we provide performance, we provide good value to our customers and that allows us, in turn, to create a return on the investment in R&D we make to generate that basically higher content and the premium prices.

<Q - Vivek Arya>: Hock, for my first one, when we look at your RF content, very strong this year. But broadly speaking, RF overall is getting to be a bigger part of the bill of materials for large smartphone customers, close to 10% or so. Is there a limit to how big it can be? At some point, do you think customers will start to complain? Or do you still see enough value being added by RF that we could consider this a growth area for the next several years?

<A - Hock E. Tan>: And that's the continuing challenge that applies not just to RF into our broadband access, even into our networking business, which is the ability to deliver more and more value features. And by extension, content, IP into our products. I do not see that stopping, not visibility wise for the next three years.

<Q - Vivek Arya>: I see. And as my follow-up, I think, Tom, you mentioned you have exceeded your non-GAAP operating margin targets already. How much more leverage is in the model? And more importantly, how do you trade off sales growth vs. driving to a certain operating margin? Because when I look at many of your other peers and semis, a number of them are targeting perhaps faster growth, but at lower operating margin. So just conceptually, how do you drive the right balance between driving to a certain level of profitability vs. achieving above industry growth? Thank you.

<A - Thomas Krause>: Yeah, Vivek, I think I'll piggyback off of Hock. It all ties back to the business model. And I've been here about six years and Hock's been here obviously over 10 years driving this model. And I think margin started out in the 30s when Hock got here as gross margins, they were in the 40s when I got here. I mean, the model continues to focus on investing in value-added product development and delivering better and better value for customers and for us. So I think what you're seeing is a constant increase in margins both gross margins and then with revenue growth and our operating margin. So we expect that to continue going forward.

<A - Hock E. Tan>: Vivek, let me add to that and Tom is exactly right in saying that [ph] think about, Vivek, (30:09) we have 19 product franchises. Each of them are in specific end markets. You might almost say niche markets in some cases and we always thought of as niche markets, some of them end up as the mass market as the market moves to the niche we happen to have picked. And it's about developing products using technology we have and continuing to evolve the technology, which are the best superb in those end markets we are in. We are number one typically in those end markets, number one in technology leadership, number one in markets, and we keep investing again and again over the years to develop new product generation.

We do not manage this business by numbers. We just manage it based on this model, based on addressing market demands, and let the numbers fall where they may. As long as we believe we're getting value and a good return on investment we make in those niches we are in, we just sustain those niches. And the numbers you see us roll together is what arises as an end result of this business model. We don't try to trade off revenue against margin. That doesn't work. It's the basic business model that says in each of the 19 product groups we are in, we are the best there is and we get the bigger share. And that market continues to need new product innovations and we supply it. And by doing that, the revenue is whatever the revenue turns out to be and the margin gets richer and richer as we provide more and more technology. And the end result is consolidating all these 19 divisions you get what we show you and you get a gross margin that continues to expand, as I mentioned, because the nature of this technology market enable us to keep evolving new products with higher content and a higher price premium.

<Q - Romit Jitendra Shah>: That was helpful gross margin commentary. I wanted to ask about OpEx because for the quarter you're guiding – it's coming in a lot lower than what I was anticipating. And, Tom, I think you've previously sort of guided OpEx closer to like 18 percentish as a percent of sales. And in October, we're going to be closer to 16%. So I'm just curious if 16% is sustainable, what's the right way to think about OpEx going forward?

<A - Thomas Krause>: Yeah, Romit, we'll update this a bit next quarter. But, obviously, revenue has exceeded our expectations this year and is well ahead of what we would anticipate as long-term sustainable growth. So whenever you do that over a short period of time, you're going to look better on the OpEx side as a percent of revenue. I think if you focus on the dollars, what we've been saying we continue to sort of hang in around the $775mm, $780mm level. There's some puts and takes around project expense and when people come onboard or leave. But at the end of the day, that's kind of where we're running and we'll give you an update on how we think about next year, next quarter.

<Q - Romit Jitendra Shah>: Okay. Sure. And then on enterprise storage, just given how much it's up year-on-year, do you think it's reasonable for us to assume that this decline you're seeing in the October quarter may extend beyond this FY that this inventory correction may go on for a couple of periods?

<A - Hock E. Tan>: Romit, you've got a very good question for which I don't have a very certain answer. But you're right. We were saying for the last couple of quarters, be careful about hard drive, it looks too good to be true, was beginning to look that way. And so, yeah, I tend to like to agree with you to say that it may extend beyond Q4 to even Q1 next year and that will likely happen. Having said that, year-on-year, our storage business seems to be what it should be, which is firm but flattish. That's what we like to see enterprise storage over the long term. What we see this year, 2017, appears to be a bit of a divergence from that. But I think we'll get back to normality perhaps in 2018 and to see it being sort of flattish year-on-year, which is where enterprise storage should be as a very stable sustainable boring business.

<Q - John W. Pitzer>: Hock, last conference call, you talked about content gains in the handset this year I think approaching kind of 40% y-over-y and, clearly, I think we all understand the RF story. I was hoping to get a better understanding if you could talk about what's going on in kind of the combo chip wireless side of the market and other opportunities that you might have to be gaining content on the handset side.

<A - Hock E. Tan>: You're asking a very difficult question for me to try to answer. As I mentioned the last time, we have multiple sockets in those high-end flagship status smartphones. Multiple – multiple sockets doing multiple key functions in those phones. So, to be able to pick out one vs. the other, they are different. You're right. The first answer.

Second answer for broadly across, except to say that broadly across, as you go from one generation to the next, in those flagship smartphones, the functions we do drives towards more and more complexity, more and more functionality and certainly more and more performance. And to do it, chips get – the chips we do, the FBAR we do on a case of cellular connectivity, in the case of wireless Bluetooth integrated chip, the same thing applies as we go from 802.11ac, [ph] am first to ac, ac (37:07) second wave and in the next year or two to ax. It goes for more and more performance, multiple users, and with it a larger and larger chip that requires more and more investment to make it perform, which allows us to ask for higher and higher price for the value we provide to the end users.

And the other thing, whether it's wireless – whether it's Wi-Fi, Bluetooth connectivity or GPS or RF analog, which we also do, or even the touch screen controller, all that have the same characteristics that each generation of phone requires more and more performance and complexity.

<Q - John W. Pitzer>: That's helpful. Then, Hock, maybe for my follow-up, in your prepared comments, you did call out optical and optical China as areas of weakness. Can you just remind me again how big of the wired business that is? And do you think this is a one-quarter phenomenon and we get back to some sort of growth sometime in the January timeframe, or how are you thinking about the demand pause you're seeing in that part of the wired business?

<A - Hock E. Tan>: I could give you something, but I've been a selfish person that I am in the bigger scheme of things. Wired, we hodgepodge a bunch of stuff together, all of them very strategic to us. On the one side, we have networking. On the other side, we have broadband from set-top box to broadband access gateways, networking switches, routers, whether it's merchant silicon or ASICs to interconnect – fiber optic interconnect and building block physical layer products and embedded SoCs, embedded CPUs, what do you call, use in things like VoIP phones and what you call point-of-sale terminal.

You can see how broad it is. And to be honest, yeah, we point out – so there are always puts and takes. And couple of product lines are soft. Other product lines are strong. And so we'd like to give you a bit of color. Sometimes I regret giving you too much color because you start thinking of it particularly and really it does – it has an impact in this particular quarter, but it may not have impact the next quarter. You get what I mean?

<Q - John W. Pitzer>: Yes.

<A - Hock E. Tan>: So, broadly, look at it as a broad spectrum of wired combining networking, as well as access product lines. And that just moves along in a very, very stable manner, growing anywhere from 5% to 10% on an annualized basis. Best way to look at it. Because involved in it are product lines that grow very slowly and some that are very more exciting, as you guys like to point out.

If I talk about exciting things, you might extrapolate to see the whole 50% of my revenue growing like [ph] weeks (40:15) when it doesn't. So I do want to be very careful in making sure I clarify all this for you guys.

<Q - Harlan Sur>: And good to see the diversification in the business playing out here. Your ASIC design win pipeline is pretty strong. You've got switching, routing, service provider, AI, deep learning and a whole bunch of other mixed signal and analog stuff. It's very diverse like the business, diverse sort of applications ,end markets. Can you just talk about the competitive landscape within your ASIC business? And we all know the benefits of ASSP or off-the-shelf, but is the team seeing an uptick in customers wanting to do ASICs? And if so, what's driving this trend?

<A - Hock E. Tan>: Customers wanting to do ASICs, yeah, Harlan, to be honest with you, it's harder and harder to do ASICs now from a broad industry trade. As you go from 28 nanometers, which seems like history, to 16 nanometers, to now increasingly 10 nanometers and 7 nanometers, the costs of designing ASICs is exponentially growing. And you can probably understand why, as the process and the process technology and equipment goes up very, very sharply. So unless you are a player, a system guy, with very high volume, a system OEM or even an end user with very large volume of a particular part, it's really expensive for you to want to do ASICs for your particular needs. And if you do, we're happy to address it, but we're finding out at this stage a very high bandwidth because you need to address those high bandwidth, high throughput, you need very advanced, the most technology. It becomes very, very expense. And to be honest, I think we can foresee a trend towards merchant silicon in those networking applications.

<Q - Harlan Sur>: Got it. Great. Thanks for the color there. And then on the storage side, I didn't hear you mention anything about your SSD business. You guys, obviously, are supplying into two of the top three enterprise SSD companies. I think on the enterprise SSD side, they're not seeing as much issues shortage-wise just because that's where the highest profitability per bits are. And I think some of your customers are growing these businesses like 30%, 50% y-over-y. I'm just wondering, are you seeing these kind of trends in the business or do you think that this segment is also sort of subject to some of the supply constraints?

<A - Hock E. Tan>: You're obviously reading the signs out there all very correct that enterprise SSDs are very much in demand, very much in short supply, but nonetheless on a trend basis growing very rapidly and we are supplying a lot of the flash controllers into those SSDs, among a particular few of those very successful SSD suppliers. I'm sure and we are benefiting from that and I agree with you. But, again, on an overall scheme of things, even in our storage business, it helps add to our total revenue of $700mm, $800mm every quarter and we love that. But, again, the puts and takes in the overall scheme of things. And it helps us get our revenues, doesn't move the needle, some, but not tremendously. But back again, we see it because we are the lead in enterprise flash controllers, so we do get the benefit from that back to the franchise model. We believe we're the ones with the technology and we put our head down and continue to grind and benefit from that growth. So we do see that growth.

<Q - Blayne Curtis>: Hock, I did want to ask you, obviously, the focus is on the North American customer, but if you could just comment on the Korean customer, your ability to hold share and grow content. They obviously just launched a new phone. But as you look into next year as well, if you could just comment on your ability to continue to grow there as well?

<A - Hock E. Tan>: We have the same phenomenon. Actually, a very parallel phenomenon. They are both – well, on the Korean customer, obviously you have a range of phones from high-end flagship phones down to feature phones, low-end smartphone. And our products are very well-represented in the markets we are good at in their flagship phones and still there. And our ability to keep driving away on new products, new technology continues unabated. Every year, new generation, we're there.

<Q - Blayne Curtis>: And I do want to ask you on the non-mobile Wi-Fi side, 802.11ax, when do you expect to see some revenue from that and what type of driver could it be for you?

<A - Hock E. Tan>: Well, that's a very interesting question. We are sampling our chips now. We're enabling the enterprise access points, markers and trying to enable basically the enterprise access markets in ax. And we're assembling now and we probably won't get into production until around middle of next CY. And that's how long these things take because there's lot of software, it's not just hardware. But we're very positive about it and we're pushing it very nicely.

<Q - Amit Daryanani>: I guess, to start off with, on the FCF side, you guys had obviously fairly strong FCF conversion this quarter despite the working capital inefficiencies you had. So maybe just help me understand the working capital inventory uptick that you had this quarter, does that all sort of get rectified in the October quarter? Or, given the fact this product was delayed a little bit, at least the launch was, does working capital normalize more in Jan and April for you guys for next year?

<A - Thomas Krause>: Yeah, we'd expect things to normalize this particular quarter, given where we are with our FY-end that we see a big ramp at the end of Q3 and then it normalizes in Q4. So we'd expect that to shake out and be more back to normal in Q4.

<Q - Amit Daryanani>: Got it. And then, I guess, just on the Brocade transaction, any change on the revenue and EBITDA contribution that you guys had expected when you announced the deal to today? And could you just remind me what approvals are remaining at this point for you guys to get it done? Because I think you just got China approval recently.

<A - Thomas Krause>: No change. I think Brocade just came out with their earnings result this afternoon as well. And the SAN business, which is the business we targeted with Brocade, continues to perform well and in line with our expectations. And so it's going be a business we think generates $1.3B plus of revenue and $900mm plus of EBITDA on a run rate once integrated.

On timing, I think both Hock and I mentioned Q4, we're highly confident that we're going to be able to get there this quarter. Obviously, being delayed, no one likes that, but we are working through various approvals. We did get MOFCOM. What's left is CFIUS. CFIUS plays a very important role and we certainly respect that. And we're in active dialogue. We've been through that with them multiple times before and I think, like I said, we're pretty confident we're going to be able to get there this quarter