Operator

Good day, ladies and gentlemen, and welcome to the Intel Corporation's Third Quarter 2016 Earnings Conference Call. At this time, all participants are in a listen-only mode. Later, we will conduct a question-and-answer session and instructions will be given at that time. [Operator Instructions] As a reminder, today's program is being recorded.

I would now like to introduce your host for today's program Mr. Mark Henninger, Head of Investor Relations. Please go ahead.

Mark Henninger

Thank you Jonathan and welcome everyone, to Intel's third quarter 2016 earnings conference call.

By now you should have received a copy of our earnings release and the CFO commentary that goes along with it. If you've not received both documents, they're available on our investor website, intc.com. I'm joined today by Brian Krzanich, our CEO; Stacy Smith, our Executive Vice President of Manufacturing Sales and Operations; and our Chief Financial Officer, Bob Swan. In a moment, we'll hear brief remarks from all three of them, followed by Q&A.

Before we begin, let me remind everyone that today's discussion contains forward-looking statements based on the environment as we currently see it, and as such, does include risks and uncertainties. Please refer to our press release for more information on the specific risk factors that could cause actual results to differ materially.

Also, a brief reminder, that this quarter we've provided both GAAP and non-GAAP financial measures. Today we'll be speaking to the non-GAAP financial measures when describing our consolidated results. The CFO commentary and earnings release available on intc.com include the full GAAP and non-GAAP reconciliations.

With that, let me hand it over to Brian.

Brian Krzanich

Thanks Mark. Q3 was an outstanding quarter which produced records in a number of product lines and serves as evidence of our transformation to a company that powers the cloud of billions of smart connected devices. As a great proof point, third quarter revenue grew 9% over the last year to an all-time record of $15.8 billion on broad-based strength across our businesses.

I'd like to take a minute to share a few of the highlights with you now. I'll start with the Client Computing Group, which had a stellar quarter. This team is focused on delivering an annual cadence of innovative new products, improving product cost and driving operational efficiencies contributed to a remarkable 37% growth in CCG operating margins.

The Client Computing Group's revenue grew 5% over last year. But just as importantly CCG is playing in a direct and impactful role in our transformation.

In the Data Center Group, revenue grew 10% year-over-year to a record $4.5 billion. We saw the growth segments of the Data Center Group accelerating at a rate above our forecast. The Cloud Service Provider segment was up 32%. And the comp service provider segment, we continued to grow at a faster rate than the market, 16% growth as the market converts of NFE and STN and demand for our products increased.

In addition, non-CPU adjacencies across DCG grew an impressive 34%. This category includes our new omni-path high-performance fabric which is leading in performance and gaining design win momentum. It includes our Silicon Photonics and our Xeon Phi, all of which began to ramp this year.

However, enterprise revenue was down 3%, trending below our expectations of a roughly flat year-over-year. As a result, DCG revenue growth for the full-year will likely be in the high-single digits.

Another key growth opportunity for Intel, our Internet-of-Things business grew 19% over last year, setting an all-time revenue record of nearly $700 million. We saw strength across the board in retail, video and transportation segments.

Revenue in our memory business was approximately flat year-over-year. 3D NAND production at the Dalian factory is ramping ahead of schedule with yields matching those of our other production facilities. We continue to see industry enthusiasm building for our groundbreaking new memory technology 3D XPoint and we're making steady progress towards bringing it into production.

Intel's Programmable Solutions Group formerly Altera, was up 6% on strength in wire line, industrial and broadcast segments. I'm very pleased with the integration of Altera into Intel. We continue to execute against our deal thesis. And PST has produced three consecutive quarters of year-over-year growth compared to Altera's results after adjusting for acquisition related accounting charges.

In the third quarter we began sampling our Stratix 10 product, Intel's first FPGA produced on our own process technology and also the industry's first and only 14-nanometer FPGA. We're shipping our first co-packaged parts for the data center and are continuing to see opportunities for design wins with PST products across many of Intel's businesses. PST's results show the tremendous progress and execution.

The Intel Security business was up 6% over last year. Last month we announced that we will sell 51% of Intel Security to private equity first TPG and establish a jointly owned independent cyber security company named McAfee. This transaction will position McAfee to invest as an independent company while allowing Intel continues to participate in McAfee's success and growth.

Intel's transformation continues in restructuring program that we announced in April remains on track. I'm really proud of the work our employees are doing to accelerate our strategy. A change of this magnitude is hard. And going through it has again reinforced just how talented, committed and resilient this team is.

And finally, I'd like to welcome Bob to the Company as our Chief Financial Officer. He brings a wealth of leadership experience to Intel and his financial acumen and strategic insights will be an asset to the company.

At the same time, I'd like to thank Stacy for an outstanding nine years as CFO. He's been a great partner and I'm excited to have his leadership in manufacturing, sales and operations moving forward.

Wrapping things up, I'm very pleased with our results in the third quarter. We introduced exciting new products, delivered strong financials and continue to realign our resources to our strategy. The progress we're making leaves me increasingly confident in our transformation.

With that, let me turn the call over to Stacy.

Stacy Smith

Thanks Brian. In the third quarter we achieved record revenue of $15.8 billion and also achieved $5.1 billion in operating income.

Revenue growth of 9% year-over-year is driven by solid growth across the Client Computing, Data Center and Internet-of-Things groups.

Gross margin at 64.8% was higher than expected and up 3 points from the second quarter. Operating income grew 18% from a year ago. Earnings per share of $0.80 were up $0.14 from a year ago. The Client Computing Group had revenue of $8.9 billion up 5% year-over-year. During the third quarter, we saw strengthening of demand and an inventory-build in the world-wide PC supply-chain.

This segment had another quarter of significant profit growth with operating profit growing 37% from a year ago, as revenue increased, cost came down and investment levels declined.

The Data Center Group had record revenue of $4.5 billion up 10% year-over-year. In the third quarter we continued to see robust growth in the cloud segment of the business, which grew over 30% year-over-year, partially offset by a 3% decline in the enterprise segment over the same horizon.

The Data Center Group had operating profit of $2.1 billion down 1% year-over-year as we increase investments and ramp Broadwell, the first 14-nanometer server product.

Our Internet-of-Things business achieved revenue of $689 million, growing 19% year-over-year, driven by strength in our retail, video and transportation segments. Operating profit for the business was $191 million up 27% year-over-year. Our memory business had revenue of $649 million down 1% year-over-year. This segment had an operating loss of $134 million as a result of start-up cost for China factory and costs associated with 3D XPoint.

The Programmable Solutions Group had revenue of $425 million up 6% when compared to Altera's results from a year ago. Operating profit was $78 million. Our security business had revenue of $537 million up 6% from a year ago. In the third quarter, we announced a newly formed jointly owned independent cyber security company called McAfee.

The transaction values the business at approximately $4.2 billion and a deal-close we expect to realize a pre-tax gain on the sale of roughly $500 million when the transaction closes in the second quarter of 2017. The costs associated with the transaction are factored into our restructuring and spending guidance. Post deal-close we will own 49% of the new company.

We are generating healthy levels of free cash flow, which enables us to invest in our business and return cash to shareholders. This has demonstrated in our third quarter results as we generated $5.8 billion cash from operations, purchased $2.5 billion in capital assets, repaid $1 billion in commercial paper, repurchased approximately $500 million of stock and paid $1.2 billion in dividends.

As we look forward to the fourth quarter of 2016, we are forecasting the mid-point of the revenue range at $15.7 billion, roughly flat to the third quarter. This is below the average seasonal increase for the fourth quarter as we expect the worldwide PC supply-chain to reduce the inventory.

Since the last earnings call, our view of second half 2016 revenue has increased as a result of strength in the client computing and Internet-of-Things Groups, partially offset by weakness in the enterprise segment of the Data Center. We're now forecasting the mid-point of the fourth quarter gross margin to be 63%.

Spending is expected to be approximately $5.2 billion. Intel is in the midst of a significant transformation. We're focusing on being more efficient, investing in higher-growth segments and with the McAfee transaction, we're focusing our business on core strategic areas.

Given that I would like to provide a little more context on each. We're on track to achieve the run-rate savings and employment reductions associated with the restructuring program announced earlier this year. And in fact we're moving faster than we anticipated.

In addition, the deal involving the Intel Security Group, which was announced in the third quarter, will result in additional restructuring charges, a pre-tax gain and reduced spending levels in 2017. As a result of those restructuring charges and the increased mix of retirements and European severances, we're increasing the restructuring and other charges forecast by $700 million to $2.3 billion. The majority of the remaining restructuring charges will be realized between now and the middle of 2017.

We're on track to the original restructuring and focusing our business on core strategic areas. This is allowing incremental investments in critical areas like the Data Center, Internet-of-Things and memory.

The overall impact of the announced reductions Intel Security Group transaction and reinvestment as we expect our 2016 spending as a percent of revenue to be down almost 1 point versus 2015 and we expect to achieve another 1 point reduction in 2017 as we accelerate our transformation.

In the third quarter we achieved record revenue and strong operating profits. But since this is my last earnings call, I would like to take the opportunity to provide some historical perspective and how the company has changed over the 10 years since I've been attending these calls, which I really think shows the transformation of our business.

10 years ago, virtually the entirety of our business was tied to the PC market. Today, we have a diversified portfolio of growing businesses, with

roughly half of our profits coming from the Data Center and Internet-of-Things businesses. We're also a different company in terms of how we look financially. 10 years ago, our revenue was approximately $35 billion with a gross margin of 52%.

In 2016, we're on a path to almost $59 billion in revenue with a gross margin of 63%. And over the past 10 years, we've increased our dividend from $0.40 per share to $1.04 per share, and we've repurchased about $55 billion of stock.

Looking forward, Intel is positioned with technology leadership and amazing workforce and significant market opportunity as we power the cloud at the heart of all of these smart and connected devices. I'm excited about how we're positioned for growth and my next role in the Company and about the leadership experience and continued focus on driving long-term shareholder value that Bob will bring as CFO.

With that, let me turn it over to Bob for a few words.

Bob Swan

Thanks Stacy and thanks Brian. I'm both excited and very honored to be joining the team at Intel. The Company has had a profound impact on the world with industry-leading technologies that has a great business model driven by Moore's Law and an outstanding balance sheet.

Additionally I'm inheriting a top-notch world-class finance organization. It's an extremely exciting time in the company's history as we transition from a PC-centered company to one that powers the cloud in billions of smart connected devices. I'm looking forward to the journey.

With that, let me turn the call over to Mark.

Mark Henninger

Okay. Thank you Brian, Stacy and Bob. Moving on now to the Q&A as is our normal practice we would ask each participant to ask one question and a follow-up if you have one. Jonathan, please go ahead and introduce our first questioner.

Question-and-Answer Session

Operator

Certainly. Our first questioner comes from the line of C.J, Muse from Evercore. Your question please.

C.J. Muse

Good afternoon. Thank you for taking my question. I guess, first question on DCG, you took the number down for Q4. Curious how we should think about contribution from enterprise looking into 2017, when you think that could stabilize. And then as you start to think about greater contributions from hyperscale and networking, is that 10% to 15% sustainable or should we be thinking high single digits going forward? Thank you.

Stacy Smith

Hi C.J. this is Stacy. So, let me take the first part of that question. So, yes, I mean as we just said on the call, what we're seeing in the Data Center is very strong growth rates in the cloud, very strong growth rates in networking and storage as those areas become virtualized and our products extending to those areas.

And then we saw some weakness in the enterprise in Q3 and that's what we're expecting for Q4. I think we're going to hold-off on providing a forecast for 2017 at this time. We would normally provide that to you in January and then have a much more in-depth conversation in the investor meeting in February.

C.J. Muse

Okay, very helpful. And I guess on the PC front, given the volatility there, I wouldn't expect you guys to put the flag down and say that we've completely stabilized. But curious what trends you can speak to in terms of growth, perhaps, I guess in emerging markets and what that speaks to in terms of the trajectory for unit demand from here?

Brian Krzanich

Sure and I would agree, we're not going to raise the flag and say everything is good again. But if you take a look at this quarter, what we saw was kind of an increased strength in the areas that have been strong in the past. So, definitely the mature markets were a bit stronger. The one that was probably a little bit of a shift is China, was a little bit better than we had forecasted as well.

Enterprise was again strong, consumer was better but it's still not back to where we consider it where we would like to see the consumer side. And it was a good mix between desktop and mobile products, laptops and devices like that. So, it's kind of an increase in what's been strong in the past as really what drove the growth for this quarter.

Mark Henninger

Operator, please go ahead and introduce our next questioner.

Operator

Certainly. Your next question comes from the line of Stacy Rasgon from Bernstein Research. Your question please.

Stacy Rasgon

Hi guys. Thanks for taking my questions. First, DCG revenue was up 10% year-over-year, operating profit down year-over-year. I know you had sort of highlighted some increased investments. But we also have cloud growth in networking and some of the other non-CPU stuff that's been growing as well. How should we think about that change in the growth drivers in terms of impacting the margins over the last year? And how should we think about the likely margin trends for the business as we go into next year?

Stacy Smith

Yes, I'll take that and then Brian, maybe want to talk about more the longer-term. But it's not a driver what we saw in the third quarter, they really are the two issues. We have been very consciously increasing investment there, we see tremendous long-term opportunity, so that's been an ongoing process for us. But anything that really kicked in this quarter is they're ramping their first 14-nanometer server product which is Broadwell for the server market and those first products coming out on that product-line are fairly expensive.

To the mix question, it doesn't really drive things probably as much as you would expect. We have very strong product margins across the portfolio of server products and the enterprise or in the Data Center ranging from enterprise to storage to networking. And in fact when we look at the server ASPs, we actually saw ASPs up kind of across the board in every one of our server categories, so MP, DP, and so it really is a mix impact of what you see happening in this quarter, where it's a little weaker on enterprise and a little stronger in places like networking.

Brian Krzanich

Yes, and Stacy maybe this is Brian, maybe let me help you just think about the data center from a larger perspective right. As Stacy said, what you have to really take a look here is, the growth areas that we said we were going to continue to grow and the cloud service provider, the Telco, networking and storage, networking specifically is, was the more our fastest growing areas of the data center.

And in the adjacencies which are all new emerging markets for us around things like Silicon Photonics and omni-path fabric and all. All of those are growing at or above what we had forecasted and doing quite well.

And as Stacy said, across each of those, our ASPs are both increasing and if you take a look at that, even if you go down to like an Atom server, the Atom-based server, yes, their ASPs are lower but the margins are still quite healthy down there, because their costs are quite a bit lower. So you got to keep all of that into perspective as you look at the mix that goes across these.

What happens quarter is that we anticipate the enterprise to go from that low-single-digit decline to roughly flat and it just hasn't, enterprise market hasn't showed up there yet. We're working on tactics to show that up over the next couple of quarters and we're still very convinced on the long-term path of those growth areas that we described are going to be what drives the data center.

Stacy Rasgon

Thank you. For my follow-up, I'd like to touch on the last point you just made. So enterprise is, like you said was disappointed this quarter. But I mean, let's be honest, enterprise has been in decline for years. Why would it stabilize, why would it start growing, why is the - I know we've probably talked about this over, why is the cloud growth that we're seeing in the enterprise with this indicative of that cloud growth, I just - I don't understand why we should expect that business to ever turn around? Can you give us some color on that?

Brian Krzanich

Sure. I think there is two parts to this. A certain amount of the enterprise weakness right that has occurred over the last few years is certainly driven by movement of those enterprise applications to the cloud. And we're very comfortable it doesn't really matter for us from a product definition or product performance standpoint whether it goes, those applications go to the cloud or whether they stay in the enterprise.

That said, there is several enterprises that we are in talks with it that all want to grow, they're all private clouds. And they're really looking at how best to do that, when do they do that. So I think it's more, the customer feedback we're getting that gives us some confidence that the enterprise side with their own private clouds will continue to see some improvement.

It's not going to be a growth area though, so don't take this as I'm saying Stacy that this is going to be a growth segment.

What we're saying is, given what we're seeing from customers, we should see some level of stabilization or less of a decline didn't show up this quarter, we'll have to take a look at that as we move through into '17.

Stacy Smith

And just on a tactical basis, Stacy, to reinforce. Our forecast now for the data center for Q4 also is not including improvement in this segment of the business.

Brian Krzanich

Thanks Stacy.

Stacy Rasgon

Thanks guys.

Operator

Thank you. Our next question comes from the line of Vivek Arya from Bank of America Merrill Lynch. Your question please.

Vivek Arya

Thanks for taking my question. And before I forget, thanks and good luck to Stacy in his new role.

Stacy Smith

Thank you.

Vivek Arya

So, first question is again staying on the data center theme. Can you quantify the enterprise mix in DCG now and is that required to be flat in order to maintain the double-digit growth in DCG or can it actually start growing double-digit if the growth in other areas remains at this current pace just because of the mix-effect?

Stacy Smith

So, let me take a shot at the quantification question and again I think we'll, Brian talked about this bullishness on the long-term for the data center but we'll hold-off on specific CAGRs in 2017 forecast to both Earnings and then the Investor Meeting.

On the, I think you were referring back to what I showed a year ago which was the size of the enterprise versus the size of the data center - or size of the cloud for the server segment of DCG and that we were heading towards a crossover between those. Again, we'll update that explicitly come February.

But based on what we've seen this year with really robust growth still recurring in the cloud so, again this quarter over 30% and our weaker than expected enterprise I think that cross-over point pulls in. And then I think you have a phenomenon that says the cloud portion of the enterprise becomes so big and continues to grow at a fast pace that we can certainly maintain a robust growth rate even if the enterprise segment is not growing to slightly weak.

Vivek Arya

And as my follow-up, a longer-term question, I think there is a debate in the industry that computation is becoming parallel with this growth in deep learning and machine learning which benefits products like GPUs more than CPUs. I'm wondering would you agree with that and do you think this parallel computing market is incremental or cannibalistic for Intel? Thank you.

Brian Krzanich

Sure. So, firstly - to your first question I 100% agree with what Stacy said. And I expect that these growing segments that's why we focus on them so much and we'll be the dominant as we move out into the later parts of this decade.

Your question on accelerators really is what you're asking, when you take a look at GPUs and things like deep learning, the first thing you have to separate out is things like are you talking about the deep learning on the learning portion or the scoring portion.

And so, we don't look at accelerators as cannibalistic because you still have to have a Xeon System with those when you go to, actually do the implementation of the deep learning applications.

The second thing we tell you is that we actually had worked over the last two years or so to really implement a much broader collection of accelerators when you think about these. If you want to think about kind of the rates of performance of each one of these, you have FPGAs which are accelerators and we see those accelerators go into everything from networking devices to machine learning applications. Those have high levels of flexibility that can be programmed on the fly but maybe not quite the performance.

Then you have GPUs, GPUs do have as we say, good accelerating performance in certain linear algorithms. Those are quite good and we have our Xeon Phi in that space. And then the highest performance area, are ASIC where they're workload specific and designed around the algorithm specifically. And you saw our applications of Nirvana; we also did an acquisition of Movidius earlier this quarter. Those are all very specific workloads around machine learning that are basic driven and even give higher performance.

So, we look at those accelerators as being enhancing this growth. You sell a Xeon typically with that so it doesn't cannibalize the business. And we believe we have the widest really offerings of these accelerators from FPGAs through the Xeon Phi and then into basic driven devices.

Vivek Arya

Thank you.

Stacy Smith

Thank you.

Operator

Our next question comes from the line of Toshiya Hari from Goldman Sachs. Your question please.

Toshiya Hari

Thanks for taking my questions. My first one is on gross margins. In your Q4 guide, you have memory and higher factory start-up cost on 10-nanometer working against you. But I was curious when you would expect these items to fade and potentially provide a tailwind to gross margins?

Stacy Smith

Yes, so, this is Stacy, that's a good question. So typically on the shape of start-up costs, you would expect that 10-nanometer costs go up in the back half of this year as you're seeing they stay high into the first two to three quarters of next year and then they start to fall-off in the back half of next year. So, I'll just stick with that for now and then we'll let Bob to show you the kind of start-up cost trends as he thinks that that's important.

On the memory costs, what you're seeing is really two impacts. One; is the start-up cost associated with Dalian China factory for memory and then some of the first wafers coming out for 3D NAND and 3D XPoint. And I'd expect that that starts to get better into next year, it's hard to pick the quarter but it should become a tailwind as we get kind of into 2017.

Toshiya Hari

Okay, great. As my follow-up I have a question on CapEx as well. Based on your annual guide, I think the implied Q4 number is close to $3.5 billion which is clearly a pretty big number. Should we take this as a new normal for Intel or is this a one-off quarter where you're spending aggressively in both the core business and a memory and that the quarterly run rate going forward should revert to somewhere in the $2 billion to $2.5 billion range? Thank you.

Stacy Smith

Yes, I think if you go back to the guide, I think we probably talked about sometime prior April that I pointed to Q4 as probably being a pretty high CapEx quarter and it's a combination of where we're at in purchasing the first production that for 10-nanometer and where we're at with the memory factory in China. So, I think you're seeing some lumpiness, I wouldn't run rate that out.

Brian Krzanich

Yes, this is Brian. I mean just having managed CapEx in this Company for years, you really have to take a look at our annual guidance because literally within the quarter-to-quarter the tools would push out, we'll try and always be more efficient and where you'll have these kinds of one-time kind of up-side things come together. So we expect our annualized run rate for this year to be the $9.5 billion or so that we forecasted and don't expect that quarterly run rate to be indicative of Q4.

Toshiya Hari

Very helpful. Thank you so much.

Brian Krzanich

Thanks Toshiya.

Operator

Thank you. Our next question comes from the line of John Pitzer from Credit Suisse. Your question please.

John Pitzer

Hi guys, thanks for letting me ask the question. I guess my first question is just relative to what's embedded within PCs for the calendar fourth quarter, it's getting a little bit more difficult to kind of track because of CCG including the mobile. And if you kind of looking at the volume growth in the September quarter, it was clearly above normal seasonal trends for the core PC businesses. So, how much below seasonal do you think PCs will be in the calendar fourth quarter and how are you guys thinking about sort of the inventory channel management in Q4?

Stacy Smith

Yes. I'd say from in-market standpoint it's pretty seasonal. And then from our business it's the impact that Brian and I both talked about which is, we saw some strengthening of demand in the third quarter, we saw some refilling of the pipeline which was kind of lean coming in. And then in Q4, we're expecting kind of seasonal in-demand but some depletion of inventory pipeline. And it doesn't take much, if you think about the size of the PC market, you're down to changes in inventory levels across the worldwide PC supply chain it was measured in days or certainly less than a week of inventory that kind of shifts around.

John Pitzer

And then guys, and as my follow-up, all year long you guys have sort of been giving what's turned out to be conservative gross margin guidance by quarter. You've been beating that guidance in part this quarter helped by all the PC volume. But I'm just kind of curious as you'll get to calendar fourth quarter I guess I understand the headwinds coming from memory and 10-nanometer startups. But what about some of the tailwinds from 14-nanometer, I mean, you're kind of going into a period now where you're reaching materials in PCs on '14, you should start to be reaching materials on servers for '14. How much of a tailwind is that and are we looking at another quarter of conservative guide on the gross margin line?

Stacy Smith

I guess I can only say I'm sure Bob will do a better job of forecasting gross margin than I have done. I highlighted for you the two big items from Q3 to Q4 which are the things that are worth a point and it's as stated the increase in 10-nanometer start-up cost and what we see going on in the memory business for the elements that I saw.

Yes, I think we'll see some slight benefit associated with 14-nanometer, I also think will be down a little bit in terms of PC volume but those are all relatively small impacts to the gross margin forecast.

John Pitzer

Thanks guys.

Brian Krzanich

Thanks John.

Operator

Thank you. Our next question comes from the line of Ross Seymore from Deutsche Bank. Your question please.

Ross Seymore

Hi guys, my first question is on the CCG side of things. And specifically in the third quarter you talked about the ASPs year-over-year and desktops and notebooks and overall. I think the ASPs were up 6% in CCG but the desktop and notebook side were both well below that. Is that just the counter revenue still in there or is there anything we can read through on to the mobile business given those differences?

Stacy Smith

Yes, that's a great question. So yes, and we published what we saw happen in notebook and desktop ASPs that the piece that's missing as relatively small but it has a fairly big impact on the averages that within the phone and tablet products we saw relatively less volume in Q4 so we got our Q3, we got the mix effect. And that ASP is up dramatically on a year-on-year basis as a result of the abatement of the counter-revenue program. So that's the missing piece you need to get to the overall platform ASP math.

Ross Seymore

So, I guess as a follow-up switching over to the OpEx side of things, Stacy, in your script you mentioned about the OpEx to revenue improving by about a point this year year-over-year and then again another point next year. Can you just walk us through a little bit about what that means either from a linearity perspective or an absolute dollar perspective? Any more color would be appreciated?

Stacy Smith

Sure. I'd be happy to do that. So, let me just, let me take you all the way back to, because I think this gets very confusing because we obviously had the restructuring program in place. We now have the spin-out or the divestiture excuse me, the Intel Security business, the timing of those things will play out differently over the course of next year. So I just thought it was best to clean all of this, up and give you one metric for the year that summarizes everything.

And so, starting with restructuring, it's on track. When you look at the savings that we've already generated this year, really the only adjustment to the spending guide that we've made when we started the restructuring as the fact that profits and revenue is up and we have some profit and revenue dependent spending.

But you can kind of see we're over three quarters saving on the order of $700 million, you can take of it as an annualized run rate of a little north of $1 billion of savings that then rolls into next year. Then we'll get some incremental savings, we throw McAfee into the mix here and we're going to make some reinvestments as we talk about some of the areas that are important, think of data center and IoT and memory.

And so, when you add all that up, it would just give you an all-in number that captures the full calendar 2017. What we're expecting is that from the starting point of 2015, we're down about a point in 2016. And we should be down on the order of another point next year in 2017 with all of this all-in, the restructuring, McAfee and the reinvestment. I hope that helped?

Ross Seymore

Yes, it did. Thank you. And congrats on your new gig.

Stacy Smith

Thank you, sir.

Operator

Thank you. Our next question comes from the line of Chris Danely from Citigroup. Your question please.

Chris Danely

Thanks guys. Just on the PCU, you guys were pretty much first to call the inventory burn in Q1 of this year. In terms of your call for inventory burn in the PC channel for Q4, is this reflected in your order book, is this what your customers and channel partners are telling you or is this kind of you guys think that, things were little too good in Q3 so thereafter ease up little bit in Q4?

Brian Krzanich

I'd tell you it's a mix, we have some indications from some of our partners that they were some inventory building tied to various skews. We're also watching the sell-through as it goes all the way through the OEMs and out into the retail sectors.

So, it's never a guess on our part. It's always some combination of that dataset that is what the OEMs tell us what we see in retail and our discussions with retail and even just our own, we go out and collect that data in the retail space of what people are doing, what's the basically population density at a place like best-buy, how many people are out there, buying PC versus something else on the store.

And we compile all that data to give that forecast. Like Stacy said, we're not talking about a major shift in the inventory, we're talking about a couple of days, about a couple of days when you ship a million units a day is a big number, when you take a look at the ASPs and a million units a day. So, it doesn't take a big swing, we're not talking weeks here, we're talking a couple of days.

Stacy Smith

And I would say, the order book is much less meaningful than it used to be because in many cases we hold inventory at a hub at our customer's location. The cancellation policy is such that they only pull demand when they need it. We have policies to make sure we're not creating false incentives for them to take demand they don't want. So, while we do have some indication of what they want, it can change on a daily basis.

Chris Danely

Got it, great, and then for my follow-up a question on inventory. So sales were up over $2 billion but your inventory only went down a little bit. Can you just comment on why that happened and where utilization rates are going? What you feel comfortable as far as inventory levels go, does it worry you at all?

Stacy Smith

Yes, it came in pretty much right where I was expecting Chris. What we saw is a reduction in CPU inventory in the third quarter. And even within that a pretty sizeable reduction in first generation 14-nanometer products being replaced by second generation 14-nanometer products. So, that played out as expected. And then we saw some increases in other areas in inventory kind of non-CPU areas.

And then, we're still on track, those looking at, we're expecting from a sales standpoint and what we're expecting from overall builds and yields and everything, we're still on track to have inventory come down in Q4 which is what I signaled on the last call.

Chris Danely

Great. Thanks.

Operator

Thank you. Our next question comes from the line of Blayne Curtis from Barclays. Your question please.

Blayne Curtis

Hi, thanks for taking my question. I just want to circle back on DCG. Just when you look at the way September played out and as we look into December, it was enterprise really the only area that changed. And I'm just trying to understand you talked about a mix of networking, was there any difference and you had also talked about some lumpiness in cloud. Did that all play out as you expected?

Brian Krzanich

Yes, it absolutely did. We tried to talk about the numbers in the preview at the start just showing you five segments there, cloud, Telco, Networking and Storage, and then the adjacencies, they all grew at or above our forecast. Those are still, as we talked about earlier in one of the questions, growing in percentage of our overall data center business, so they weren't quite enough to offset 3-percentage decline in the enterprise side. But absolutely that was the story for the quarter.

We're quite happy and I think our thesis of what continues to drive their growth is holding. When we go out and talk to our partners and customers about what's driving cloud growth, what's going to drive the networking and storage requirements, out in time we start to look at devices like autonomous cars and the IoT network in general. All of those things are driving large requirements into those data centers in those growth segments. And so that's what gives us the comfort that yes this will continue. And our forecasts are holding in those spaces.

Blayne Curtis

Thanks for that. And just on the non-volatile group you've been spending a lot of money another big CapEx in Q4 here. Can you just talk about when the capacity additions could lead to revenue and then as you look at the operating margin of that business when could it be a positive contributor?

Brian Krzanich

I'll start with the first and then I'll let Stacy talk about the margins. Absolutely as we said and I think Stacy said a couple of minutes ago as well, in our Dalian China Factory, we are now running wafers, the yields are quite good they're as good as our existing factories. So you'll see that factory now ramp through the first half roughly of next year and as most of that spending will occur in that same timeframe as far as adding the equipment to facilitate that ramp.

And from there then it's just purely just running the volume and continuing to grow in that space. That's primarily 3D NAND. And again, we believe we have a cost performance that is quite good relative to the rest of the market.

The 3D XPoint we are in the process of shipping samples now to customers by, as we go through this quarter, we'll ship thousands of samples to customers. We're targeting to start, finish qualification at the end of this quarter. And that ramp really starts it's really a 2018 ramp for that product. So you'll see it again, the revenue and hence the cost go down on 3D XPoint as we go into next year as well.

Stacy Smith

Yes, let me - I'll hit on the margin but do you want to do a shout-out to the China factory team, I was just out there and I was being a little humble. The yields on their first production material matched the yields on the mature production facility which is a phenomenal result for a factory. So they're doing quite well.

In terms of the overall margin if you look at, just focus on Q3, what we saw in Q3 is an improvement in the underlying NAND business being offset by increased start-up cost associated with Dalian China and some increased costs associated with 3D XPoint. As Brian said, when we get into the first half of next year, those products are ramping and so we should start to see pretty significant improvements in the overall P&L because that headwind if you will goes away and we have a very competitive very cost competitive product line that we're selling in the market.

Brian Krzanich

Just a correction, the team here just caught me on. I think I had my ears off. So, on the 3D XPoint it will be qualified at the end of this quarter. And we're shipping thousands of samples to customers, we're shipping samples already, we'll ship thousands through this quarter. And it ramps in 2017, I think I said by mistake 2018, I'm sorry I'm just too many years that were talking through here. So, ramp in '17, revenue growth in '17, samples, thousands in the fourth quarter and qualified at the end of the quarter. Sorry for that confusion.

Blayne Curtis

Thanks.

Operator

Thank you. Our next question comes from the line of Chris Rolland from Susquehanna. Your question please.

Chris Rolland

Hi guys thanks for the question. Welcome Bob and congrats on your guy's PC number. Do you guys think that there is some cannibalization here of Broadwell from those waiting for the release of the Purley platform next year? And also, how do you guys view the value prop for Purley? You guys have a faster interface there, more pins than IO. But do you think there's some killer feature there that makes Purley much stronger than typical platform ramp?

Brian Krzanich

Sure, so, I think I heard all of your questions. But I think your question is in, you can correct me if I got it wrong. How much of the enterprise slowdown that we saw is being driven by cannibalization basically of people waiting for Purley a.k.a. SkyLake platform and then what are the real features that we're looking for that drive SkyLake performance? Did I get that right?

Chris Rolland

Yes. I'm just trying to gauge if there could be a reacceleration in DCG around Purley.

Brian Krzanich

So, first, it's always very difficult for us, I mean, if you take a look at Broadwell, the Broadwell platform, the performance is quite good. What we find is that each one of these generations as long as you stay on this cost performance curve, people are willing to go buy those that are running these cloud platforms quite quickly.

And so, we’re seeing demand for Broadwell from the cloud service providers, from the networking and Telco side quite strong. So we don’t think we see if we’re going to see performance based cannibalization you’d see it in those real high-level performance sectors first actually I would think.

So, we don’t see that. On the Purley platform we’re actually starting to sample those products already to some of the leading edge customers. And they’re seeing not only just an overall TCO performance advantage that we typically see with each one of these but this also continues our integration of things like the omni-path fabric, it has more integration of the silicon photonics so it’s still the adjacency functions that are quite strong, and they will get more and better as we go through each one of these, there will be a second generation of Purley that includes 3D XPoint.

It allows pooling of memory and then there will be future ones that will allow additional pooling of things like FPGA. So, each one of these now add some additional features across the rack that really helps in the overall system performance.

Chris Rolland

Great. Thanks for that. And then a lot of discussions that I’ve had with the channel recently have been fairly positive around PC ASP increases next year. And part of this is the mix towards enterprise as consumer mix down. But others are pointing to sort of an inflection in ultrabooks, thin and light. So let’s say we got a massive ASP increase in laptops, like they’re up 10% or something like that. What kind of fall-through would we expect for CPU ASPs?

Brian Krzanich

100% of that. Firstly I do want to recognize that our OEM partners are putting out some great products. And I think you’re going to have to take a look at this and really ask, that’s a pretty interesting scenario and I’m very hesitant to this. But typically Stacy is right, if ASPs go up across the board at the system level, it tends to float all boats. So our OEM partners would see an increase, we’d see an increase, the other partners within that infrastructure would see.

We really more think of our pricing though as value base. So as we bring out new products and bring out new features we make sure that the value-based pricing is there and that people are either getting more value for the same price or quite a bit more for slightly increased price.

So, I think it’s such a unique scenario, it just over across the board, all of a sudden one day prices go up, actually we wouldn’t necessarily float through that ASP to our end-partners because we didn’t necessarily drive that from new features. If it happens with 10-nanometer launch and it’s because of features then we do have those. So we do it based on what value we provide to the end user and our OEM partners.

Stacy Smith

And if I can just add, the way we would see that is actually with a mixing app, we don’t raise our pricing but the way you articulate this, if it’s a bunch of high-end notebook, ultrathin like, we would see a mixing up of our overall demand. And in fact it is one of the phenomenons that we’ve been seeing I think we’ve done a good job of creating a differentiated product line. And this quarter we saw great sales of i7s and notebooks. So, it’s consistent with what you’re seeing in your channels.

Brian Krzanich

And probably the best example of that is the gaining space right. We continue to see, we put out the case skew, 12-core monster and we wonder how many people are going to go buy it, and we find we’re sold out. So I think that’s an example where “RSPs” go up but it’s a really a mix function. But otherwise it’s going to be, we always just do pricing based on value and features that we bring.

Chris Rolland

Great. Thanks for the detail.

Mark Henninger

And operator I think we got time for two more questions.

Operator

Certainly. Our next question comes from the line of Timothy Arcuri from Cowen & Company. Your question please.

Timothy Arcuri

Thank you very much. I guess, my first question is, I think you had said at the spring analyst meeting that the enterprise would be a little bit less than half of DCG this year, revenue-wise. So, can you right-size us sort of on what enterprise will be as a percentage of DCG just in the fourth quarter?

Stacy Smith

Yes, so, this is Stacy, and I think I took a stab at this earlier but let me just reiterate what I said. And to be clear, I was talking CPUs. And so if you take the slides that I showed back a year ago, we've seen robust growth rates in the cloud, we've seen less than expected growth rates in the enterprise. So if anything we've pulled in those cross-over points.

Beyond that we haven't given a new percentage and that would be something that we would logically talk about when we give the longer-term perspective to the market in this coming February investor meeting.

Timothy Arcuri

Got it. Okay. And then I want to ask a question on the mobile losses. I know that you don't break out MCG anymore. But I think I asked you last call about feeling good about this $800 million improvement in losses this year. So, I guess, that would get you to roughly a loss of $2.2 billion to $2.3 billion in the former MCG. Can you talk in light of the iPhone win, can you talk maybe how you think about the degree to which you could get further improvement in that number next year? Thanks.

Stacy Smith

Sure. So first-off let me just say as is our standard practice. We don't talk about our customer, what technology they use inside their products in this space. So I'm not going to confirm or anything on a particular win. But I'll take you back to the mobile last year. So, as you got right, we no longer have a mobile segment we haven't for a while.

We had articulated that in 2015 we expected to improve the loss by $800 million we actually ended up closer to $1 billion. We said everything we know of what's going on with counter revenue and investments and margin improvements and all of that. That we'd expect something on the order of an $800 million improvement in '16.

Everything I know from there would say we're on-track or exceeding that just because we know this has gone through our restructuring, we've made some further disinvestments, as you just heard earlier, our volumes were little lower, our counter revenue is looking a little lower, the product margins all look good.

So, I'm not saying anything that say it's smaller, if anything it's going to be bigger in terms of the overall savings. And I do just want to reiterate it's impossible for us to detangle it going forward.

So, where you really feel is in the CCG operating results. And as we started this call, they had phenomenal operating margins this quarter. And everything went right, revenue growth, they saw unit cost coming down, they're making I think prudent disinvestment decisions. And when you add all that up they become a real kind of cash and profit driver for the company.

Timothy Arcuri

Thank you.

Stacy Smith

Thank you.

Operator

Thank you. Our final question then comes from the line of Harlan Sur from JPMorgan. Your question please.

Harlan Sur

Good afternoon. Thanks for taking my question. On the IoT business, it's good to see the reacceleration in growth. Can you just talk about the sustainability of the double-digits year-over-year growth trends and the sustainability of the 20%-plus operating margins on a go-forward basis? I know you mentioned broad-based strength across the verticals. Maybe you can just also talk about some of the product segments that are powering this growth?

Brian Krzanich

Yes, sure. I'm trying to make sure I really think about what question you're asking. Can we sustain the double-digit growth? We absolutely believe that we can and we've tested that with our deals that we see on plate going forward, but we've kind of forward tested that. And we've looked at our product road-maps and what we're bringing out and we got products like Atlas Peak and Atlas Peak 2 that are coming that are Broxton-based products that are quite strong and quite capable in this segment and priced and designed right for that.

But the segments are going to continue to believe, we believe the video analytics segment that continues to go well, there are other segments of the industrial segment that we believe will continue to grow on machine automation, machine factory automation think of this as factory automation.

The retail segment will continue to be an area where it continues to grow. And then automotive, and you saw us make deals for example this quarter with BMW on autonomous driving which is a little further out but that's just an example, you'll also see products from Land Rover and a variety of other OEMs that are a mix of everything from autonomous driving programs to in-vehicle infotainment type systems.

And those systems are quite, we're thinking them more and more as servers on wheels as you start looking at all of the adjacencies too, they're needing connectivity, they're needing storage, they're needing Silicon Photonics for moving the infotainment, basically the graphics video around the system. They use FPGAs for accelerators like we talked about earlier.

So, when we look across those segments, and we test it out, we do believe we could continue that. Those are also high compute areas and it's what gives us the confidence in the margin functions as well. They tend to reuse a lot of our intellectual property from the PC segment and carry that down over Intel right, that's one of the real strengths of Intel's integrated device manufacturing kind of business model.

And so, the amount of investment required to bring those to market are less then, if you start from scratch and that's your only product. And so that's what gives us the confidence in the margin space as well.

Harlan Sur

Great, and then thanks for the insights there. On the cellular modem front, obviously the team is driving good success here with the 7360 this year. Looks like you guys are continuing to drive the road maps. I notice that your next-generation platform, the 7480, was just qualified at AT&T just this month. This was actually about the same time last year that you guys qualified the 7360 at AT&T.

So, now that it's qualified, can you just help us understand when should we expect 7480 to show up in mobile devices? Would this be 2017, and any other color you can provide us in terms of other global carriers that you've qualified this new chipset with?

Brian Krzanich

Sure. So, I think you really want to think the modem space as really an annual cadence. And I think that's what it's taking us a while to get to is, to get to that annual pace. But we really believe we're on a clip now. And as you said, the 7480 is now qualified. As we said, it's qualified to AT&T there. We typically go then out and around the world, so you'll see it many of the same places that the 7360 got qualified, in Europe, in China, other parts of Southeast Asia. So those will be ongoing now.

And you should just think about we're really targeting modem technology advancements on an annual basis. And typically right, they get qualified in the third and fourth quarter of the year before and then customers start to roll-out those devices, typically more towards the second half of the following year. So you should see these things start to show up in devices in the second half of 2017.

And you should just think about that from this business from here on. We should come out with another series next year at this year with the 2018 kind of target. And that's really our business model for the modems moving forward.