

Thanks, Warren, and good afternoon, everyone. I think it's fair to say I'm extremely pleased with Qualcomm's performance this past fiscal year. We delivered record revenues of \$19 billion, up 28% versus last year. Earnings, total reported device sales and MSM chipset shipments were also records, was driven by the increasing global consumption of wireless data across a diverse range of devices and particularly smartphones.

We also increased our dividend for the 10th consecutive year and returned \$2.9 billion to stockholders in the form of buybacks and cash dividends.

As to the fourth quarter, we are above the high end of our previous revenue and earnings guidance as demand in 28-nanometer supply improved as the quarter progressed. This gives us a strong base to build off of. And looking forward to next year, we expect double-digit revenue and non-GAAP earnings growth again in fiscal 2013.

For the year, we had a number of highlights. We delivered double-digit growth in our Licensing business, with record revenues and earnings. We now have over 220 royalty-bearing 3G licensees. And this year, we added more than 20 new Chinese licensees and our first license agreements with major Brazilian consumer electronic suppliers. We've also continued to grow our single-mode OFDM licensees. We now have over 30 single-mode OFDM licensees around the world and believe our 4G portfolio is the most widely licensed in the industry. Through our licensing program, we continue to foster innovation and enable a large and growing ecosystem that benefits wireless consumers worldwide.

Our semiconductor business had double-digit growth as well, delivering record revenues and earnings. During the year, we continued to lead in LTE with our integrated modem solutions. We delivered significant product enhancements across all key technology vectors including the modem, processor, graphics and connectivity with world-class integration. And we executed the fastest ramp of a new process node in our history. Now this was not without its challenges, but the teams consistently executed to an accelerated schedule over the last 9 months.

We believe the breadth and depth of our product road map is unparalleled, and our Snapdragon and Gobi family of chipsets has established the industry standard in integrated mobile semiconductors, allowing us to continue to extend our partnerships with key OEMs.

On the display front, we continue to believe MEMS-based displays will provide key differentiating features such as low-power consumption and outdoor view-ability. As we previously indicated, we are increasing our focus on licensing our display technologies, including our next-generation mirasol

display technology, while at the same time directly commercializing certain current-generation mirasol displays. And we're also evaluating various options for our display manufacturing facility in Taiwan.

Shifting to our spectrum-related initiatives, we achieved many significant milestones this year. In United States, we completed the sale of our 700 megahertz spectrum to AT&T, and we're working closely with them to enable their deployment of supplemental downlink using our carrier aggregation technology on this unpaired spectrum to improve download speeds and capacity.

In Europe, the regulatory group CEPT decided to harmonize the L-Band at 1.4 gigahertz for supplemental downlink. This, by the way, is the same band that we own in the U.K., and this opens up the potential to have supplemental downlink deployed widely across Europe.

And finally, in India, we received our license in the assignment of the 2.3 gigahertz spectrum we won in India's BWA auction. And Bharti Airtel, a leading Indian wireless operator, acquired a 49% interest in our Indian BWA entities, and we expect they will take full ownership of those entities in calendar 2014. Bharti's acquisition added an operator-partner with the scale, experience and resources to roll out and operate an LTE TDD network on this spectrum.

Turning to calendar 2013. Despite a somewhat cautious macroeconomic outlook, we expect 3G/4G device shipments to grow approximately 14% year-over-year based on the midpoint of our forecast. We believe our long-term growth drivers remain intact. Smartphone adoption continues at a rapid pace, with many increasingly capable devices at a variety of price points being launched on a global basis.

According to industry analysts, more than 300 million smartphones were shipped in the first half of calendar 2012, representing approximately 45% year-over-year growth. To put this in perspective, according to Gartner, this was over 2/3 higher than the volume of PCs that shipped during the same period.

Further, the demand for data on mobile networks continues to grow, which is driving the need for continued technological innovation, and we're seeing a fundamental shift towards mobile computing. Watch for these and other opportunities in more detail during our upcoming Analyst Day, and I look forward to seeing many of you there.

As you heard, due to the impact of Hurricane Sandy, we were unfortunately forced to move the Analyst Day to San Diego, but our thoughts are with all of those that were affected by this tragedy.

So to wrap up, we've once -- we have completed another outstanding year at Qualcomm. I would once again like to thank all of our employees and partners for their innovation, effort and leadership. Looking forward, I'm pleased with our outlook for continued double-digit revenue and non-GAAP earnings growth in fiscal 2013.

That concludes my comments. I will now turn the call over to Qualcomm's President and Chief Operating Officer, Steve Mollenkopf.

Steven M. Mollenkopf

Thank you, Paul, and good afternoon, everyone. QCT had another strong year, with record revenues up 37% year-over-year, driven by record shipments of 590 million MSM chipsets, which were up 22% year-over-year. In the fiscal fourth quarter, we shipped approximately 141 million MSM chipsets, above the midpoint of our prior guidance.

Revenue per MSM was up approximately 9% sequentially, driven by a greater mix of multimode 3G LTE devices, which more than doubled quarter-over-quarter and made up approximately 1/3 of our shipments exiting the quarter as expected. Similarly, shipments of our new dual-core MSM8960 tripled quarter-over-quarter as demand for our integrated application processors continues to grow.

Demand for our 28-nanometer products remained strong, including significant design activity on our follow-on chipsets. As expected, we ramped our 28-nanometer supply significantly in the fiscal fourth quarter, and we remain on track to match our current 28-nanometer demand profile exiting the December quarter.

Our industry-leading modem technology continues to be a tremendous differentiator for us. As modem complexity continues to increase with multimode and multiband requirements, we are well-positioned with a single solution that offers a true global modem, supporting all cellular modes including CDMA, WCDMA, TD-SCDMA and both LTE TDD and LTE FDD, as well as the approximately 40 related RF bands.

In addition, we recently sampled our third-generation multimode 3G/LTE chipset, the MDM 9x25, which is also a global modem that adds support for LTE category 4 and carrier aggregation.

We believe our first 28-nanometer Snapdragon product, the dual-core MSM8960 with integrated 3G/LTE has become the global standard for combined performance and battery life, powering recent flagship devices such as the Samsung Galaxy S III, the HTC 8X, the Motorola RAZR M and the new Nokia Lumia phones.

As carriers deploy LTE networks, they are looking to Qualcomm as the leader in multimode LTE for smartphones. For example, KDDI, NTT DOCOMO and SoftBank announced 27 new smartphones in Japan in October, and 24 of those were powered by Qualcomm Snapdragon processors.

Since releasing the MSM8960, 15 OEMs have launched devices with this chipset across 19 carriers around the globe. The 8960 was our fastest integrated product to ship 100 million units.

Our OEM customers have also moved quickly to adopt the Snapdragon S4 Pro, which includes our latest Adreno 320 GPU, 4 Krait CPU cores and is paired with an MDM9x15 multimode LTE modem. Early reviews show that this product has set a new bar for multitasking and graphics performance. The first OEM devices based on this platform include the Google Nexus 4, LG Optimus G and Xiaomi MI2, and we expect more leading devices on this platform to be announced soon.

Smartphone demand in emerging regions is growing rapidly, and we continue to invest in our Qualcomm Reference Design program to help service a new group of emerging customer accounts. The program now has over 40 OEM customers and 100 commercially launched devices. And this quarter we expanded our road map to include the new Snapdragon quad-core MSM8x25Q and our new 28-nanometer based MSM8930 with an integrated global modem.

We are pleased to see the initial launch of Windows RT devices, including the Snapdragon-based Samsung ATIV Tab and the Dell XPS 10. While this early, we are positioned to benefit from this new category as our Qualcomm Snapdragon chipsets are the only chipsets to power both Windows smartphones and these new mobile computing devices.

Our mobile connectivity solutions, which include integrated Wi-Fi, GPS, Bluetooth and FM continue to be used by the vast majority of our customers' designs for their 28-nanometer S4 devices.

As we mentioned on the last call, we expect a strong December quarter for QCT as our supply of 28-nanometer chipsets continues to ramp and our partners launch a broad lineup of handsets for the holiday quarter. We are expecting record MSM shipments of between 168 million and 178 million units in the first fiscal quarter, up approximately 19% to 26% sequentially, with revenue per MSM also up sequentially.

In fiscal 2013, we expect multimode 3G/LTE shipments for smartphones to constitute a much greater percentage of our mix, which we estimate will significantly increase our average revenue per MSM versus fiscal 2012. We

also expect our 3G/LTE leadership and broad-tiered road map to help increase our design traction within key customer accounts.

Leadership across multiple technologies require to succeed in mobile remains our strategic priority for our business, and we are increasing our R&D investments in fiscal 2013, including investments in our modem, the application processor and driving new process technologies, as well as our reference design effort.

That concludes my remarks. I look forward to seeing many of you in San Diego at our upcoming analyst event. I will now turn the call over to Bill Keitel.

William E. Keitel

Thank you, Steve, and good afternoon, everyone. We have strong financial results and guidance to report to you today.

Fiscal fourth quarter revenues were \$4.87 billion, up 18% year-over-year; and non-GAAP earnings per share were \$0.89, up 11% year-over-year, both above the high end of our prior guidance range. QTL revenues grew 16% year-over-year, and total reported device sales by our licensees were approximately \$46.5 billion, up 19% year-over-year.

We estimate that approximately 210 million to 214 million subscriber units were shipped by our licensees in the June quarter, up 12% year-over-year at the midpoint at an average selling price of approximately \$216 to \$222.

QCT fiscal fourth quarter revenues were a new record, growing 21% year-over-year, and QCT's operating margin was 16%, above our prior guidance, reflecting strong shipments of our multimode 3G/LTE solutions.

We returned \$1.27 billion to stockholders in the fiscal fourth quarter, including \$426 million in cash dividends and \$841 million through stock repurchases. In addition, since the end of fiscal 2012 and through yesterday's market close, we repurchased another 4.1 million shares of our stock for \$240 million.

Non-GAAP earnings per share were \$0.89 for the quarter, \$0.08 better than our prior-guidance midpoint. QTL was \$0.02 better, driven by strong 3G/4G device shipments. And QCT added \$0.07, driven by higher MSM shipments and favorable multimode 3G/LTE product mix. The net of higher operating expenses and impairment charge and higher investment income accounted for \$0.01 reduction.

Turning to our results for fiscal year 2012. Revenues were a record \$19.1 billion, up 28% from last year. GAAP earnings were a record \$3.51 per share, up 39% year-over-year; non-GAAP operating income was a record \$7.1 billion, up 17% year-over-year; and non-GAAP earnings per share were a record \$3.71, up approximately 16% year-over-year.

QTL's fiscal 2012 revenues were a record \$6.3 billion, up 17% year-over-year, and QTL's operating margin was 88%. We estimate that the fiscal 2012 3G/4G device average selling price, as reported by our licensees, was approximately \$216 to \$222, up 6% compared to fiscal 2011 and reflecting strong adoption of smartphones in multiple tiers in both developed and emerging regions.

QCT's fiscal 2012 revenues were a record \$12.1 billion, up 37% year-over-year with operating margin of 19%. Our fiscal 2012 operating cash flow was \$6 billion and 31% of revenues. We returned approximately \$2.9 billion to stockholders during fiscal 2012, including \$1.6 billion of cash dividends and \$1.3 billion through stock repurchases.

We are reaffirming our 905 million unit midpoint estimate for calendar 2012 3G/4G device shipments by our licensees, up approximately 14% year-over-year.

Now turning to next year. We estimate calendar 2013 3G/4G device shipments by our licensees will be approximately 1 billion to 1.07 billion units, up approximately 14% year-over-year at the midpoint. Our economic outlook is largely aligned with consensus worldwide GDP forecast except that we have less optimism in developed economies.

The midpoint of our guidance is based on 3.0% world GDP growth in 2013 compared to consensus of 3.4%. We expect fiscal 2013 revenues to be in the range of approximately \$23 billion to \$24 billion, up approximately 23% year-over-year at the midpoint. We expect our non-GAAP operating income to be in the range of approximately \$8.1 billion to \$8.6 billion, an increase of approximately 18% at the midpoint.

While we anticipate strong growth in both our chip and Licensing businesses, we expect the higher mix of multimode 3G/LTE and 28-nanometer chipsets to drive growth in QCT's revenue and operating income at a comparatively faster pace than QTL. We expect fiscal 2013 non-GAAP earnings per share to be in the range of \$4.12 to \$4.32, an increase of approximately 14% year-over-year at the midpoint.

We estimate that the 3G/4G device ASP will be approximately \$214 to \$226 in fiscal 2013, a slight increase year-over-year at the midpoint. We anticipate that combined non-GAAP R&D and SG&A expenses will grow

approximately 19% year-over-year, primarily driven by increased R&D investments and those R&D investments focused on furthering QCT's leadership position.

Absent U.S. corporate tax reform, we expect both our GAAP and non-GAAP tax rates in fiscal 2013 to be approximately 18% to 19%. As a reminder, we do not include estimates for realized investment gains or losses on our cash and marketable securities portfolio in our financial guidance unless they are reasonably certain.

Now looking out to the first quarter of fiscal 2013. We estimate revenues to be approximately \$5.6 billion to \$6.1 billion, an increase of 25% year-over-year at the midpoint. We anticipate that non-GAAP earnings per share will be approximately \$1.08 to \$1.16 a share, an increase of 15% year-over-year at the midpoint. This estimate includes expected total reported device sales of approximately \$46 billion to \$51 billion by our licensees for shipments in the September quarter, up 17% year-over-year at the midpoint.

We estimate that QCT will ship approximately 168 million to 178 million MSM chipsets during the December quarter, with revenue per MSM higher sequentially, reflecting strong demand for our multimode 3G/LTE solutions and improved 28-nanometer supply. We expect a modest build in the 3G/4G inventory channel in the December quarter, as is typical for the holiday season. And we estimate that 3G/4G inventory channel will remain towards the low end of the 13- to 18-week band throughout the remainder of fiscal 2013. We expect combined non-GAAP R&D and SG&A expenses to decrease approximately 2% sequentially.

We hope to see many of you at our November 15 Analyst Day, where we will share additional data points regarding our fiscal 2013 guidance, including segment operating margins, ASP trends and 3G/4G regional breakouts. The event will be webcast live on our Qualcomm Investor Relations website, which also includes a slide presentation on the data points included on today's call.

That concludes my comments. I will now turn the call back over to Warren.

Warren Kneeshaw

Thank you, Bill. Operator, we are ready for questions.

Question-and-Answer Session

Operator

[Operator Instructions] Tim Long with BMO Capital Markets.

Timothy Long - BMO Capital Markets U.S.

Just a 2-parter on the chipset ASPs, if I could. It sounds like a lot of LTE and good smartphone shipments in the quarter and expecting the same next quarter. Two things. One, could you talk a little bit about what's going on with ASP at the lower end? Obviously, MediaTek is starting to do a little bit better. Are you seeing more price pressure there? And secondly, I'm calculating a little bit better gross margin profile for the chipset business in the quarter. Is that accurate? Have you seen -- starting to see gross margin benefits from the move to 28-nanometer or from the higher ASPs?

William E. Keitel

Tim, I'll take the first -- second part of your question on the gross margins. Let me just say, for our first fiscal quarter of 2013, we do expect a nice increase in QCT's operating margins. I won't comment on the gross margin, and I won't give specifics on the Q1 operating margin for QCT. But I think we'll share a little more color next week at the analyst meeting. But again, we do expect a nice pick up in QCT's operating margin in fiscal Q1.

Timothy Long - BMO Capital Markets U.S.

Okay. Then maybe the impact at the low end?

Steven M. Mollenkopf

Tim, this is Steve. On the low end, it's pretty much playing out the way that we've discussed and/or described over the last year or so, which is pretty competitive market at the low end. It's very crowded a bit competitively, and people are really pricing aggressively in order to get share or to maintain share. So we expect that to continue to some degree as we talked about for some time. One thing I should mention too, earlier I misspoke a bit. I said that the MSM8960 was our fastest product to 100 million units. It actually should have been 10 million units. Apologize for that. It's 10 million units.

Operator

Mike Walkley with Canaccord.

T. Michael Walkley - Canaccord Genuity, Research Division

Bill, on QTL or the CDMA device market, ASPs are flat to even improving next year, especially with your GDP comments about lower mix maybe from mature markets. Can you just walk us through some of the factors that are keeping ASPs flat to up next year? And what you might think longer term

with more growth from emerging markets that might put a downward pressure on QTL ASPs longer term?

Derek K. Aberle

This is Derek. Let me go ahead and take that one. I think as we've said in the past, over the longer term, we should see some amount of erosion in the ASP. I think as you look ahead to next year, and we'll provide some more color on this next week, I think there's going to be somewhat offsetting trends. I think we are expecting to see more volume coming from the emerging regions. But then sort of offsetting that to some extent, we're seeing more higher percentage of devices at the highest tier in some of the developed regions, and also we expect, as we've said in the past, ASPs in some of the emerging regions that have been quite low to continue to increase with more smartphone penetration cannibalizing the feature phone. So I think all that kind of nets out together to relatively flat picture going forward next year.

T. Michael Walkley - Canaccord Genuity, Research Division

And Derek a follow-on question is are connected tablets becoming a bigger impact in terms of the ASP trends that you report?

Derek K. Aberle

I'm sorry. Could you repeat that?

T. Michael Walkley - Canaccord Genuity, Research Division

Sure. Just wondering if connected tablets works more with LTE shipping and 3G? Are the connected tablets becoming more meaningful to your ASP calculations?

Derek K. Aberle

I think we've been -- as the volume goes up and down quarterly, the volumes themselves have changed, but I think the percentage of total units that are coming from tablets have been relatively constant. I think we'll kind of have to wait and see how things play out going forward with Windows RT and some of the other Android tablets coming into the market over the next year.

Operator

Simona Jankowski with Goldman Sachs.

Simona Jankowski - Goldman Sachs Group Inc., Research Division

Just wanted to clarify, when you talk about expecting a significant increase in the MSM ASPs, it's interesting that you're not also expecting an increase in the QTL ASPs to match that. So that will seem to imply that directionally your market share is increasing more at the high end of the total device opportunity. Is that a reasonable conclusion?

William E. Keitel

I think it's a combination of things, Simona. One, you're going to get a timing difference between the MSM shipment and the impact into our Licensing business. So that would be number one. But number two, we are - as Derek said, the high end of the market seems to be playing out pretty strongly here in the near term. So you're going to see more of effect of that initially. Through -- later through the year though, as Derek did say, we do expect the emerging markets to be growing at a faster pace than developed markets. So I think some of it's -- a lot of what you're seeing there is just timing, Simona.

Simona Jankowski - Goldman Sachs Group Inc., Research Division

And also wanted to follow up on the guidance for fiscal '13 within QTL. Can you just be a little more specific on what you're assuming there on the success for Windows RT with 3G/4G connectivity attached. Is that a meaningful assumption as part of your guidance? Or if that platform were to be successful, would that imply upside?

William E. Keitel

I would say on Windows RT, in our guidance here we've been cautious. But looking out in time, we're cautiously optimistic.

Simona Jankowski - Goldman Sachs Group Inc., Research Division

Okay, so not embedding a big number for that next year?

William E. Keitel

Not in our guidance.

Operator

Brian Modoff with Deutsche Bank.

Brian T. Modoff - Deutsche Bank AG, Research Division

A couple of questions. Steve, on the LTE side, you talked about your MSM ASPs going up because of the shift towards more of the LTE product and

more of the advanced MDM product. Can you talk a little bit about LTE competition? Our own checks indicate the competitors who are getting continuous delays in getting their products out. Can you talk about when you expect to see merchant silicon out from some of the competitors? And then, Bill, a question around -- you guide revenues next year, 23% and EPS, 14%. Why such a gap between the 2.

Steven M. Mollenkopf

Brian, this is Steve. On your first question about LTE, yes, LTEs become really a table stakes feature at the high end. And it's something that we have not only in our modem product line but also in the application processor line as you know. And it's become tiered now when you look at our 28-nanometer shipments, meaning that we have multiple tiers of AP shipping LTE now integrated. Moving into next year, we expect that feature set to turnover, meaning that the LTE solutions that we're shipping today will add additional bands, they'll also add different data rates, as well as carrier aggregation. I talked about how we had been sampling our new design as well, which is our third generation. So we think that's moving quite fast, and we think it's going to be a very difficult situation to come into that market. But as you know, everyone is trying to do that. So we expect a number of competitors to go after portions of that market. But I think getting the worldwide SKU, we're going to try to make it very difficult.

William E. Keitel

And Brian, to your second question, the reason that revenue growth is greater than earnings per share growth is simply the difference in margins between QCT and QTL. Now we're expecting QCT next year to grow at a substantially higher rate than QTL. That is the primary difference. There's a small amount of difference as well, because we don't forecast realized gains on our cash and marketable securities portfolio beyond what we have clear visibility on. And that tends to be a very near-term picture. So those are the 2 factors. The great majority, though, being the fact that QCT we expect to be growing at a much faster pace than QTL, albeit both businesses we expect to grow double digit.

Operator

Ehud Gelblum with Morgan Stanley.

Ehud A. Gelblum - Morgan Stanley, Research Division

A couple of quick questions. One is, if you look at your guidance for QTL market size, these are the market size in June that you got relative revenues on and, in September, was \$46.5 billion. And you said that's going to go to

\$46 billion to \$51 billion. The midpoint of that is up 4%. Most of what we've seen, I think you've probably seen the same things from all of your licensees, which show that smartphone growth from calendar Q2 to calendar Q3 was a lot more than 4.5% or 4%. I think most of the numbers are showing well into the double digits. How did you get to your \$46 billion to \$51 billion range? I would have thought it would have been higher than that. And then, just want to see what you did or didn't bake into that, and then I have a follow-up on royalty rate.

William E. Keitel

Yes, Ehud, this is Bill. Yes, we monitor the OEMs as you do. Obviously, we're able to engage probably at a more detailed level. There's -- as we mentioned, we're seeing -- Steve Mollenkopf and Paul describing this way that the OEM market is kind of getting to be a barbell, where you have one end of the barbell with names that we all recognize. But the other end of the barbell has a lot of names that very few people recognize concentrated in Asia. And it's the -- it's that visible name in one end of the barbell that people tend to focus on and where data is more readily available. The other end of the barbell, the data can be hard to come by. So I think that's probably a key difference between what you're rolling up, and what we're rolling up.

Ehud A. Gelblum - Morgan Stanley, Research Division

So I'm guessing it's more that you can't see it either, and so you're going conservative there versus you actually know more than we do there. Or do you know more than we do? And then my extra question is on the royalty rate. It came back to 3.4%. Obviously, it has to do with a couple of your providers or a couple of your licensees that have some fixed components to their rate structure. And when they're up or down, it does fluctuate a little bit. But as you look into 2013, do you expect the same 3.4% to hold? And at what point do you expect your single-mode LTE licensees, who presumably have a lower royalty rate than 3.4%, to start dragging on that?

William E. Keitel

On the TRDS question, total reported device sales, I hope is that we have more visibility than you or others do. We've tended to do reasonably well with our forecast. I'm hopeful that we're going to hold that pattern here going forward.

Derek K. Aberle

This is Derek. Let me try to answer your question on the rate. As we've pointed out kind of repeatedly, we do tend to see quarterly fluctuations in

the rate. And it's for a variety of factors that can move it around. And last quarter, obviously, the TRDS was a bit higher than came in this quarter. So that's an impact, and we actually saw with some of this growth at the high end of the market a larger percentage of devices hitting the caps that we have in place. So that's going to have an impact on the rate. I think we're not prepared today to talk about what we see going forward. But hopefully, we can give you some color on that next week. What we did say a couple of quarters ago is we expected to finish up the year towards the low end of the 3.4% to 3.5% indicator we gave at the outset of the year. And I think we're pretty close to that. It's where we ended up.

Operator

Rod Hall with JPMorgan.

Roderick B. Hall - JP Morgan Chase & Co, Research Division

Just a question on R&D, maybe for you, Bill. If you could talk a little bit about -- R&D's a little bit higher than we thought it would be in fiscal Q4. How much of that was related to 28-nanometer? And then I also wanted to ask about next year, the fiscal 2013 guidance. I mean your R&D is -- or the overall OpEx is kind of pacing in terms of growth a little bit below expected revenue growth. And I wonder if you could talk a little bit about -- but put that in context with Paul's commentary about R&D investments increasing next year. Should we expect OpEx to shift more toward R&D next year? Or how is that going to play out as we move through the year?

William E. Keitel

Sure, Rod. Yes, next year, we expect R&D to grow at a rate substantially higher than SG&A. We're pretty excited about the R&D investment opportunity ahead. And at the same time, I think we're pretty pleased that we think we'll be able to get a lot of leverage -- operating leverage out of the SG&A we got in place. So we expect R&D to grow at a rate substantially higher than SG&A. What you're seeing in fiscal Q4 is just we're on that ramp. The expenses came in a little bit higher. Now we did point out that we did have an impairment charge in the quarter. It was a \$54 million impairment charge related to our display business, which as I think everybody's aware, we're -- we've shifted our focus there a bit. And that impairment follows on that shift in focus. But other than that, we're on a ramp here that there's a fast growth in R&D because of the exciting opportunities ahead.

Roderick B. Hall - JP Morgan Chase & Co, Research Division

Though, would you -- would your R&D have ended up in the quarter around 850 or something like that without the impairment of the 28-nanometer? Or can you give us any idea kind of where it would be normalized?

William E. Keitel

The impairment was charged to SG&A. So I brought that up in the context of our total operating expenses.

Roderick B. Hall - JP Morgan Chase & Co, Research Division

Oh, sorry, okay. So -- and your -- but your R&D underlying, can you give us any idea where that might have been or...

William E. Keitel

Well, it -- I would say there weren't that many. I don't see a lot of non-recurring elements in our fourth quarter R&D. The largest R&D program in Qualcomm today is 4G LTE along with 28-nanometer. That is our largest program in Qualcomm today.

Operator

Kulbinder Garcha with Credit Suisse.

Kulbinder Garcha - Crédit Suisse AG, Research Division

Yes, I have one question for Steve. I guess, with the rising ASPs you're talking about in the QCT business, is it fair to say that -- how do you think about QCT margins over the next year, maybe over the long term? Can we get back to historic levels? Is that level of investment you're needing to make or pricing pressure or competitive environment you're breaking into the next fiscal year so margins don't expand? Any color there would be, specifically of QCT, will be helpful. And I guess, Bill, I'm just going back to the whole issue off OpEx. And I think all the questions are really getting guys [ph] this. You have like fairly decent R&D growth last year, fairly decent OpEx growth. This year, it's going to grow slightly a touch slower than sales. But you're not necessarily giving, especially in the R&D line, as much leverage I guess as we once spoke about. I thought there has been a number of investments and heavy level of investments in recent years. And so, at what point do you think you could get actual significant operating leverage over R&D? Is that still a 3- to 5-year discussion? Or could we actually start seeing that towards the end of the next fiscal year, for example?

Steven M. Mollenkopf

Kulbinder, this is Steve. On the first question, what you're seeing in the QCT business is we have the strategy, and it's particularly true on the high end of trying to set the design -- essentially the design point for the industry really create an integrated product that leads in multiple dimensions. Those dimensions, graphics, modem, connectivity, what have you, we continue to invest pretty heavily in. And we think that, that strategy is working, particularly as you look at the outlook in '13. We feel that we'll be able to really see a significant year-over-year growth because of that, as Bill mentioned. The other thing that you're seeing as well is we are transitioning through nodes at a faster pace than we have done historically. So we have, probably on a historical basis, a bit more VLSI investment consistent with transitioning through nodes quickly. We think that, over time, it'll be very difficult for people to continue to keep up with that level of technology innovation. That's essentially our strategy on the high end, and it seems to be paying off right now. We're going to continue it through the next year. And as Bill said, we're pretty excited about where we think that's going to lead. Particularly at a time when the smartphone and the tablet are converging, we think long term.

Paul E. Jacobs

In terms of getting leverage on the R&D investments outside of things Steve has been talking about, obviously, we have a pretty significant investment in supporting multiple operating systems and being, let's say, cautiously optimistic about kind of the revenue growth derived from that in the near term. But I would think that those are great growth opportunities looking out. And then we're also doing reasonable amount of R&D in new areas to deal with the data growth and really satisfying customer demand there. And then finally, new R&D in other growth markets that are adjacent. And we'll get into some of those discussions in the Analyst Meeting on where we see the opportunities.

Operator

Stacy Rasgon with Sanford Bernstein.

Stacy A. Rasgon - Sanford C. Bernstein & Co., LLC., Research Division

Firstly, with QCT growing significantly more than QTL, it sounds like a lot of this is going to be pricing. But do you see share gains as well? And to the extent you see that, is it more customer exposure versus new [indiscernible] driving it? For the second question, a question on mirasol, you're moving that to a licensing business. So this last year, I think it lost more than \$300 million. There's probably \$0.15 or \$0.20 of EPS. Do you have upside in your annual guidance for next year from that mirasol transition to licensing? Or is

there potential further upside once you figure out what to do with it? Or is it already in there and you're spending the savings on the OpEx?

William E. Keitel

Stacy, this is Bill. I'll take the mirasol one first. There are savings built into our guidance. We had indicated earlier this year that we would be -- we're executing on a plan that would deliver savings, and those are built into our guidance. On the question on share gains, we are targeting to do better in QCT. There is a -- we've got both a richer mix, and we're targeting to capture more design wins as we go forward here. So it's a combination of the 2, Stacy.

Operator

Ian Ing with Lazard Capital.

Ian Ing - Lazard Capital Markets LLC, Research Division

You're upping estimates for emerging market devices in 2012 by \$15 million. Could you talk about that? And do you have thoughts on how much of the China market can actually migrate to 3G and 4G? There is a bit of a negative case out there that EDGE plus WiFi is a sufficient smartphone experience for some, given the density of WiFi hotspots in China, and even like iPhones already on the China Mobile network.

William E. Keitel

Ian, this is Bill. On the first question for 2012, yes, we did increase our estimates. It's disclosed on our website, I assume that's where you saw it. For 2012, China and India by 15 million units. And then that was offset with some reductions that we think are occurring elsewhere. The -- between the -- that emerging market estimate, it's primarily China. And that's really extrapolating off the trends we're seeing. I think many are seeing it's a very, very active smartphone market, both the consumers are high consumer take rate and we think a good operator experience as well.

Paul E. Jacobs

If we look at the EDGE smartphone market, I mean, we believe that's a transitional step. Obviously, people aren't going to be satisfied with the EDGE experience when it comes to the kind of content that many people are consuming on their smartphones, high-bandwidth content like video. The other thing is WiFi is going to tap out because it's going to be interference limited. And the nice thing about the licensed band technologies that you can cause the base stations to manage interference among themselves. And

that's the kind of technologies that we're going to be bringing to the market over the next few years. And those, I think, will drive the kind of capacities of the network at very, very much decreased cost points. So the wireless operators are going to be in a position to really supply a lot better data experience, lot better quality of service over the 3G and 4G networks. And so while we love WiFi and we sell an awful lot of WiFi through Atheros, we believe in it for offload, it's not going to be the solution for the mass of smartphones and tablets going forward.

Operator

Tal Liani with Bank of America.

Tal Liani - BofA Merrill Lynch, Research Division

I have a question on MSM ASPs. If I increase the ASPs for MSM by 9% in the fourth quarter, which is I think put an assumption here. I think it's a fair assumption. And from that point, from this quarter point, I keep it flat completely for the following year. I'm still getting 14% growth in ASPs year-over-year. So when you spoke about growth in ASPs for MSM, do you mean that it's going to stay flat, and that's going to imply during -- according to my math, 14%? Or do you mean it's going to further increase from the current fourth quarter level?

William E. Keitel

Tal -- or Steve, do you want to -- go ahead.

Steven M. Mollenkopf

Yes. It's really referencing the fourth quarter that we just reported on. So we believe it's going to increase through the year. And as I said, there will be a sequential increase for Q1. As I mentioned in my remarks earlier, fairly significant sequential increase.

Operator

Jeff Kvaal with Barclays.

Jeffrey T. Kvaal - Barclays Capital, Research Division

I would like to ask across the service first, if I could. I think many of the benchmarking studies have indicated that your own architectures are superior on many metrics to the internal ones from Samsung and Apple. Could you talk about why it is that those phones have done so well? And what the implications there are on the apps processor market? Just -- do believe that your market share will go back up again? Is that what you're

referencing in your prior statement? And then, Steve, perhaps for you on the seasonality. You had said earlier that you would expect supply to only match demand later in the second half of the December quarter. Does that mean that you will still be working off demand in the March quarter? Is that the implication of that statement?

Steven M. Mollenkopf

Sure. So on your first question, what we've continued to believe, and it's been our strategy for some time, is that we believe that for mobile, you have to have expertise across multiple areas. You have to be able to innovate across multiple dimensions, the modem, the application processor, graphics, connectivity. And probably even more importantly, you need to be able to put those together in some sort of integrated product, where you control the architecture. Because there are a number of different trade-offs that are required. And we've been able to do that over the years and significantly here over the last several years, 8960 being a great example of an area where we've had -- we were the first people to come out with the new micro-architecture for the ARM, CPU, as well as integrated LTE and brand-new graphics core. It's really important for mobile, we think, to put those all together in one package and really optimize the architecture for what's required for mobile. And we've benefited from that. And you're seeing that in the benchmark. So that's our strategy. We're going to continue that moving forward. We're pretty happy with where the roadmap goes to be able to do that moving forward. Incidentally, I think that's also one of the reasons why you're seeing some people who have expertise in one area, let's say CPU or GPU, try to add the other expertise areas. Because it's very difficult to compete unless you have them all. With respect to seasonality, let me clarify my comments. For the fourth quarter, we have been talking about how we thought that exiting the fourth quarter we thought supply and demand of 28-nanometer would be matched. By implication, the starting point or the beginning part of the quarter, meaning the October and September time frame, we are still burning off excess or not enough supply. And by the way, these are calendar quarters. So I'm talking about the December quarter. Now going into March, we feel that we have supply and demand imbalance. And we think that, that will be the case, really, exiting the December month. So hopefully that clarifies it.

Operator

Mark McKechnie with Evercore.

Mark McKechnie - Evercore Partners Inc., Research Division

This is probably for Steve and/or Derek. I wanted to ask you, your top customer, Samsung. They've got a legal battle with Apple. I don't expect you to comment too much on that. But are you feeling any impact as they move product around that may help you -- may have helped the ASPs here? And then also going forward, if you have any contingency plans. I mean, if the -- if -- depending on how their legal outcome plays out.

Steven M. Mollenkopf

Mark, this is Steve. Maybe I'll take a piece of that. One of the things that we're seeing, particularly at the high end, is that the customers, they're really very, very -- these launches are global. And the global launches essentially have caused the high end of anybody's smartphone portfolio to absorb technology very quickly. But it's technology that's really the union of all the technologies, all the modem technologies, for example, across the world. And what we've seen is that we've been able to leverage, to some degree, a design win in one geography and be able to move that to another geography. And I think that's just consistent with the way the high end of the market is moving. It's very fast paced in terms of the means at which -- or the speed at which it's taking technology.

Mark McKechnie - Evercore Partners Inc., Research Division

Okay. Great, that's helpful. And one other question as a follow-up, Steve, if you don't mind. Your chip ASPs ticked up a bit. You talked a little bit about connectivity, but could you comment at all on your attach rate of the WiFi piece, the Bluetooth piece, the connectivity with your 8960 solution?

Steven M. Mollenkopf

Sure. The ASP uptick is really a combination of better modem features, as well as better application processor features, in really selling more and more of the integrated products. On connectivity, what we've really added throughout fiscal year '12 was the ability to attach wireless LAN to our solutions. As you know, we've had very strong attach on GPS and GLONASS here recently, Bluetooth and FM. With the integration strategy that we have, we've added wireless LAN. And as I've mentioned really throughout the year and have reiterated here today, the vast majority of our 28-nanometer S4 designs use our integrated wireless LAN. So we're very pleased at how that's going right now. And we're really trying deliver on the fan-out that we've been able to get. For -- in our view, we think the integration strategy really works across all of these technologies.

Operator

James Faucette with Pacific Crest.

James E. Faucette - Pacific Crest Securities, Inc., Research Division

Just a couple of questions. First, I wanted to follow up on an earlier question related to device ASPs. I think Mike Walkley has asked about when we might expect to see the growth in emerging market start to have downward pressure on ASPs. At least, how we should think about that qualitatively? And the second question that I had was related to cash. You highlighted very well the use of cash and return of cash to shareholders over the last little while. How should we think about your outlook for buybacks and dividend policy going forward?

William E. Keitel

James, this is Bill. On the device ASP, emerging markets having a larger effect on the total average. The -- although emerging market units are growing faster than the developed markets are, the total dollar value of the developed TRDS is far greater than the emerging market TRDS. And so we're ways away from that crossing over where emerging market dollar value is equal to or greater than the developed market. But I think we're planning a little more color on this next week. So I'll leave that point there. And Paul, do you want to talk about...

Paul E. Jacobs

Yes. So I think you've seen that we're focused on returning capital to shareholders. And we're going to continue to be focused on doing that, as well as investing into research and development and -- because we see the opportunity ahead of us as being so great. But the board, obviously, looks at cash flows when they determine the dividend policy. And we'll continue to look to be opportunistic on the buybacks as well. So I think the one thing that could make a step function difference in these things is hopefully, we'll see some corporate tax reform and go to territorial system going forward. And that would have a significant impact on that as well.

Operator

Romit Shah with Nomura.

Romit J. Shah - Nomura Securities Co. Ltd., Research Division

Just relative to your outlook of 14% growth for device shipments in 2013, can you guys just deconstruct for us the impact from replacement rates versus this transition from 2G to 3G?

William E. Keitel

This is Bill. On the -- we are going to get a little more detail on -- next week on replacement rates. It's the -- it's more of a growth in demand and growth in 3G relative to 2G. The replacement rate is still a positive factor. But we think it's going to be a little bit less of a factor in 2013 as compared to 2012. But we'll get in, I think, into some more detail on that next week.

Romit J. Shah - Nomura Securities Co. Ltd., Research Division

And just to follow up on ASPs, my understanding is that the strong smartphone adoption that's happening in the emerging markets has been driven in part because the smartphone ASPs have come down. I think, Paul, you were talking recently about the price points getting to \$100 and, at some point, maybe going down as low as \$50. And I'm just trying to reconcile that with the comments around ASPs at the low end running up, and hence, supporting the outlook of flat to up ASPs in 2013.

Derek K. Aberle

This is Derek. Let me just try to take part of that, and then if Paul wants to add on. I think there's still -- even though the pricing from smartphone is coming down tier, which obviously is a positive for driving growth, there still is a meaningful gap between sort of the lower-end smartphone and the low-end 2G or 3G feature phones that have been sold before those became available. So as we look out and we see the trends, I think we do continue to expect, even as the prices come down, a combination of more people buying at a higher price than they were historically on a feature phone as well as people migrating to even the higher-tier devices will provide some stability there.

Operator

Craig Berger with FBR Capital Markets.

Craig Berger - FBR Capital Markets & Co., Research Division

Just based on your next fiscal year revenue guidance and operating profit, it seems like you expect gross margins to go down and that -- at least, a little bit. And that seems somewhat counterintuitive to your higher content for chipset commentary. So can you just explain the kind of how you're looking at gross margins for next year and then the emerging market impacts as well?

William E. Keitel

The -- Craig, the primary driver when you're looking year-over-year at either estimating the gross margin or looking on our guidance on the operating

margin, it's really the facts that we see the QCT business growing at a significantly higher rate than the QTL business. And obviously, QTL gross margins and operating margins are much higher than they are for QCT. But both businesses were looking to grow by double digit next year. It's just QCT at a much higher rate. And for both businesses, we'll get a little more into operating margin discussion next week. But both of them, we expect, to perform a very good and healthy operating margin next year.

Operator

This concludes today's allotted time for questions and answers. Dr. Jacobs, do you have anything further to add before adjourning the call?

Paul E. Jacobs

Yes, I just wanted to say I'm really happy that the year turned out so well. And it was a little harder year than I had anticipated. Obviously, the very beginning of the year, we had our engineering teams working feverishly to get chipsets done. They did that so well. And then we ran into supply constraints and had talked to customers about not being able to give them everything that they wanted, and you add that to a somewhat uncertain macroeconomic environment. But in the end of the day, global demand for data and for mobile data and smartphones and tablets and all these device just pulled it really through. And I think that's a testament to the employee base, the focus that they had and just the worldwide excitement around mobile technology. And now looking forward, continue to execute with great team of people. We've got some great products coming out that we're already getting good traction on. A lot of new technologies, a lot of very interesting markets that are expanding. I'm very, very excited by the opportunities that lie in front of us. So I hope to see you all next week, and we'll get chance to go into a little bit more detail on that. I just wanted to say thanks, everybody, for the support.