

Operator: Greetings, and welcome to the Astronics Corporation Third Quarter 2019 Financial Results Conference Call. At this time, all participants are in a listen-only mode. A brief question-and-answer session will follow the formal presentation. As a reminder, this conference is being recorded.

It is now my pleasure to introduce your host, Deborah Pawlowski, Investor Relations. Thank you. You may begin.

Deborah K. Pawlowski: Thanks, Christine, and good morning everyone. We appreciate your time today and your interest in Astronics. Joining me on the call are Pete Gundermann, our Chairman, President and CEO; and Dave Burney, our Chief Financial Officer. You should have a copy of the third quarter 2019 financial results, which were released earlier this morning. If not, you can find them on our website at www.astronics.com.

Let me mention first, as you're likely aware, that we may make some forward-looking statements during this formal discussion, as well as during the Q&A session. These statements apply to future events that are subject to risks and uncertainties, as well as other factors that could cause actual results to differ materially from what is stated here today. These risks and uncertainties and other factors are provided in the earnings release, as well as with other documents filed with the Securities and Exchange Commission. These documents can be found on our website or at sec.gov.

During today's call, we will also discuss some non-GAAP financial measures. We believe these will be useful in evaluating our performance. You should not consider the presentation of this additional information in isolation or as a substitute for results prepared in accordance with GAAP. We have provided reconciliations of non-GAAP measures to comparable GAAP measures in the tables that accompany today's release.

So, with that, let me turn it over to Pete to begin. Peter?

Pete Gundermann: Thank you, Deb, and good morning everybody. Thanks for tuning in to our call. Our agenda this morning, I'll make some comments on the major themes and thrusts affecting our quarter and our business; Dave Burney will plough through some of the specifics on our income statement and balance sheet; and then, we're going to turn our attention to the future, both the wrap up to 2019 in the fourth quarter that we're currently in and an early look at what our expectations are for 2020.

And as Deb hinted at, we're going to often refer to our adjusted numbers when we're talking about comparisons with last year. For those not as familiar with the story, we sold a semiconductor test business in February of this year, which was a pretty major contributor to our revenue and income in the middle of last year, the second and third quarter in particular, so one needs to be careful with backward comparisons that they're looking at adjusted numbers or at reported numbers. Those year-over-year comparisons will get simpler going forward in the fourth quarter and certainly in 2020.

Summary of our third quarter, top line was about where we expected. At \$175 million, it was actually our lightest quarter in over two years, since 2017, down sequentially from our second quarter of \$187 million. As we hinted at then, and feel more convicted about now, we are being affected pretty significantly by the 737 MAX grounding specifically. We put a certain amount of product on the airplane line fit and that revenue, obviously, is not too much affected, because Boeing is continuing to build 42 ships a month, but a lot of our sales thrust goes to the aftermarket to the airlines and the airlines, essentially, worldwide are down about 800 aircraft from where they thought they would be at the beginning of the year. It's a capacity crunch and it affects different companies in different ways. One of the things that we're being affected by is that the airlines are very reluctant to take airplanes down unnecessarily to put on passenger amenities, which is largely what we put on commercial airplanes. It's hard to quantify the impact of that, but programs in various parts of our business are slipping to the right, and it's playing out in our bookings and our shipments.

Segment wise, Aerospace in particular, obviously a majority of our business, was \$158 million. Again, our lightest in a couple of years, down sequentially from \$174 million in the second quarter and \$189 million in

the first quarter. Obviously, that trend is disturbing, \$189 million to \$174 million to \$158 million. We think the third quarter is a low water mark. We'll talk about fourth quarter in a bit here at the end of the call, but we expect to see a rebound in the fourth quarter based on schedules that are in place.

Our Test Segment in the third quarter is a little bit of a different story with \$17.1 million adjusted revenue, almost double the comparative period from a year ago that shows some strength in our aerospace and defense markets. It also shows the impact of one of our two recent Test acquisitions, Freedom Communications Technologies, early in the quarter.

For the year, our adjusted sales are up 7%, still even with the weakness in the third quarter, to \$566 million. We faced some significant headwinds in the quarter, and I want to list them and then talk about them in a little bit of detail.

We've talked in the past about our three struggling companies, and they, again, had a pretty big negative impact on our quarter of \$9.2 million, \$27 million operating loss year-to-date. I'll get into the details in a moment, but we see a path to reduce that number substantially or eliminate it in the New Year, and we'll talk about that in a second.

Tariff expenses are also on the increase. In the third quarter, we had tariff expense of \$3.2 million. Tariff expense has been increasing as the years progressed, about a \$1 million a quarter. That's the bad news, but again, we have a plan where we think, everything else being equal, we can reduce tariffs, roughly, in half in 2020. We also had a small loss on the sale of a product line that's part of our ongoing restructuring efforts. We actually have a large number of restructuring efforts underway; 2019 has turned out to be a year of restructuring. That loss is \$1.3 million in the quarter and is not expected to continue or repeat, obviously.

We also took a legal reserve of \$1.7 million related to an ongoing patent litigation suit that's been going on for almost a decade now, started in late 2010. I'll give you some details on that. We tend not to talk about it too much, but it's something that is affecting our third quarter, may affect our fourth quarter, and may well not be resolved for who knows how long; it could be another indefinite number of years.

So, let me take these headwinds in the order of simplest to hardest. The simplest one is the tariff expense. One of the efforts that we have underway is restructuring our supply chain. We get hit with tariffs on components that we source basically in China with the ongoing trade war, and we're adjusting our supply chain where we can to minimize things that we buy from China. We're moving them to elsewhere in the world. Those efforts are in an advanced stage, and if nothing changes in terms of tariff structure and tariff topics, as we project into 2020, our tariff exposure should be half of what it is this year. We think that's pretty good progress. It's not obvious we'll be able to do much more than that in the course of a year, but we think that's going to be a positive. Moving a headwind to a tailwind when we look at year-to-year comparisons 2020 versus 2019.

The three stragglers are probably the most important topic, and in order of simplest discussion to hardest discussion, Armstrong is a certification company that we've been talking about for a couple of years. Organizationally, we moved it into our CSC organization in Chicago. CSC stands for Connectivity Systems and Certification. At the current moment, we are basically physically relocating Armstrong from its Itasca operations into one of our CSC facilities in Waukegan, Illinois, so we're basically taking our footprint in Chicago from three organizations down to two. We have also restructured and redefined Armstrong's business mission and it's basically out of the woods. It's operating slightly below breakeven, but nowhere near the losses that we had seen and, more so, we have some reason to be hopeful that it could become a very significant contributor to 2020 based on some pieces of work that are outstanding. If we're successful in winning those pieces of business, this will actually become a positive topic perhaps in our next conference call.

CCC, Custom Control Concepts, is the second of our three stragglers. That is the Seattle-based company that does cabin management systems for what we call VIP aircrafts. These are private aircrafts, commercial aircraft, basically, converted into private aircraft like 737s or A320s or A330s or 777s, for

example. CCC has been struggling with a development program that they won right about the time we bought the company 31 months ago. That development program has turned out to be a real challenge and has been the source of continual losses and heavy engineering expenditures trying to get it under control, even as we essentially rebuilt the company as the thing progressed.

The message today is that this development program is on track, we believe, to conclude right at the end of the fourth quarter, in the middle of December. If it concludes, that will open the door for a reduction in engineering expenses as we enter into 2020. It'll still be reasonably heavy in the first quarter, but a lot of the efforts in terms of outside consultants and qualification and certification expenses should drop. We expect CCC to be profitable or right at breakeven for the year, especially in the second half.

That brings us to our third straggler, AeroSat. AeroSat is our antenna company. We've talked about AeroSat quite a bit. Our strategy has been to try to grow AeroSat in the critical mass. That strategy has resulted in significant losses, so we're basically reversing course and have made the decision to reorganize the company and consolidate much of its operations also into CSC in Chicago - AeroSat is located in New Hampshire. By doing that, we think we'll be able to more efficiently leverage the technical and manufacturing resources required to pursue the AeroSat pieces of business, but we're not sure we're going to pursue all of AeroSat's pieces of business.

There have been three or four major thrusts, depending on how you count them, and we're reviewing which of those we want to continue and which ones we don't. We're doing that in conjunction with customers to the extent we can and we're expecting, by the end of the quarter, to take a reserve in the fourth quarter related to that refocusing and relocation and move of that business. The move itself is expected to happen over the first-half of 2020, perhaps in the second quarter. The quote from me in the press release says we expect that reserve will be at least somewhere in the neighborhood of \$5 million and could be over \$10 million, depending on which pieces of business we pursue and which ones we decide to walk away from.

So, the goal with the three stragglers is to turn what has been essentially a \$27 million operating loss so far this year into breakeven in 2020. That sounds aggressive, but we really believe that we're on the verge of being able to achieve that, given the concluding development program at CCC and the pending consolidation and the reserve we're going to take in the fourth quarter for AeroSat.

As an aside, and we don't talk about this too much on these calls, but if you look back over 2019, we have done a number of restructuring efforts. It has become a year of restructuring, as I said earlier. It has been pretty comprehensive and has touched many parts of our business. It started early in the year with the sale of the semi test business that was a \$100 million sale. It prompted a pretty major restructuring of our Test Segment in terms of reducing cost and reallocating cost. We also added a couple of smaller acquisitions to our Test business, Freedom in the second quarter and a company called Diagnosys in the most recent quarter, and we think that the combination of the sale of the semi test and the addition of the two companies is going to set our Test business up for a nice rebound, away from semiconductor and more towards our traditional aerospace and defense lines of testing in 2020. We are encouraged at the prospects there.

I mentioned that we are consolidating Armstrong into CSC. That's happening right now, taking three Chicago operations down to two. We are also now moving AeroSat into CSC, which will significantly downsize an operation in Manchester, New Hampshire to again Waukegan, Illinois. I guess I didn't mention this, but we'll still have an engineering sales program management office in New Hampshire that we are going to retain, so we'll keep the critical intellectual property and experts critical to making the technology go, but the manufacturing operation itself, with all the overhead and support systems, will be moved to Waukegan.

The other thing that happened in the third quarter was, we sold an airfield lighting product line. We incurred a small loss on that, but it helps us, again, to refocus on the pieces of the aerospace world that

we want to continue with into 2020. The goal of all this is to position the company for significantly improved margins in 2020.

Let me say a word about the litigation charge. This is a patent infringement suit, or series of suits, that was brought against us by Lufthansa Technik way back in late 2010. It has largely been a debate in the US and in Germany. Now, it has recently been expanded into France and the UK. In the US, we were successful in, basically, defeating the patent and the case is over with no charges against our company.

In Germany, it seems to be going the other way. We have some indications from the court that have led us to incur charges. Including the charge in the third quarter, our total accruals are \$2.7 million. Our legal advisors on the ground in Germany suggest that the range of eventual awards could be somewhere between \$2.7 million and \$6.3 million. We're expecting the court to speak some more in the fourth quarter, and we could have an increased accrual based in that range. We also expect that an appeal is likely whether the decision is in that range or outside of it. We expect that an appeal will be filed by one side or the other, perhaps both sides, and that this could go on for a number of years. There's no real obvious end in sight.

The technology in question, I guess I would add, is not something we consider critical. It's not something that's important really to our product line and, in fact, once we became aware of the situation, we basically designed the technology out and had Boeing and Airbus approval within three months, which is amazing for any kind of change, but it's one of those things that we have to deal with and have been dealing with for about a decade now.

So, given all that, I think I'll turn it over to Dave to walk through the income statement and balance sheet; and then, we'll come back and talk about the future.

Dave Burney: Okay. Thanks Pete. I'm going to go right to the segment discussion. Pete covered a lot on the consolidated side of things. We'll start with the Aerospace segment. In the third quarter, operating margins contracted from lower sales volume as Pete discussed earlier. We had \$3.2 million of tariffs, which was a \$2.4 million increase from last year. We also had a \$1.7 million increase to the litigation reserve as Pete just discussed.

Losses from the three challenged businesses, all in the Aerospace segment, were reduced by \$2 million to \$9.2 million, including a program reserve of \$2.2 million for the VVIP program that Pete mentioned. Tariffs impacted the segment by \$3.2 million. The vast majority, if not all, of our tariff exposure is in the Aerospace segment.

Year-to-date, Aerospace operating profit increased slightly to \$48.9 million. As a percent of sales, operating profit was down 10 basis points to 9.4%. Aerospace operating profit in the first nine months of 2019 benefited from higher volume. Amortization expense related to acquired intangible assets was \$2.3 million lower than the year before, and we had slightly reduced operating losses from the challenged business compared with the prior year.

These benefits were offset by higher tariffs. If you remember, last year, the tariffs began in the third quarter, so we really hadn't seen much in the way of tariff costs last year until we hit the fourth quarter.

Moving over to the Test segment third quarter, in February of this year, we divested our semiconductor test business, so, for comparative purposes, it's important to keep that in mind. Unadjusted Test System sales were \$19.3 million as reported, down \$23.8 million.

The divested Test business had sales of \$2.2 million and \$33.6 million in the current year's third quarter and prior year's third quarter, respectively. Excluding the divested business from both periods, sales for the ongoing Test business increased by \$7.6 million, of which the Freedom Communications acquisition added \$3 million, while organic sales increased \$4.6 million.

The Test segment operating profit was \$2.1 million or 10.7% of sales. During the quarter, we expensed inventory step up cost of \$440,000 relating to the Freedom acquisition. That step up is fully amortized at this point, we don't expect to see the headwind from that in the fourth quarter.

Adjusted for the sale of the semiconductor business, the Test segment had operating income of \$133,000 compared with an operating loss of \$4.5 million in the prior year period. Year-to-date, Test segment sales decreased \$46.2 million to \$53.8 million. Adjusted Test segment sales, excluding the semiconductor test business, were \$46 million, up 65% compared with the prior year, driven by growth in the aerospace and defense market and the addition of Freedom.

Operating profit for the segment was \$4.2 million or 7.7% of sales. Adjusted for the sale of semiconductor business, there was an operating loss for this segment of \$0.8 million, reflecting the impact of \$2 million in restructuring costs that was recorded in the second quarter. Operating loss in the prior-year period adjusted for the divestiture of the semiconductor business was \$11.1 million.

Moving to the balance sheet and cash flows, our cash from operations in the quarter was very strong at \$21.2 million, driven by improvements in net working capital. That's the best quarter we've had in a while for cash flow generation, and we expect to continue to see solid cash flow generation from operations in the fourth quarter.

During the quarter, we repurchased 1.8 million shares of stock at an average cost of \$27.42. This exhausted our share repurchase program that had been in place since the end of 2017. In September, our board approved a new \$50 million share repurchase plan.

Our debt increased to \$180 million from \$122 million at the end of the second quarter, due primarily to the \$50 million share repurchase and the \$21.8 million acquisition of Freedom.

We continue to be in a comfortable spot with regard to our liquidity and the options we have regarding capital allocation going forward. Our leverage, excluding the \$78 million gain on the sale of businesses, is below 2 times funded debt. Our capital allocation strategy continues to be investing in M&A and opportunistically returning capital to shareholders via share buyback programs.

Going to our tax rate, our tax rate for the year is forecast to be 21% to 25%, higher than what we expect going forward as the tax on the sale of the semiconductor business had a high state tax component associated with it. We expect our tax rate next year to be in the range of 18% to 22%.

In 2019, our CapEx range for the year has been lowered to \$14 million to \$19 million, reflecting pushing some programs into next year and canceling some other CapEx programs. That's a significant change from where we were about three months ago. Our CapEx plans are still being developed for next year, but I expect that we will probably be north of \$20 million next year on the CapEx side of things. We will provide more guidance on that in the fourth quarter earnings release.

Pete, that's all I had.

Pete Gundermann: Okay. Turning to the future, future being the fourth quarter of 2019 first, we are expecting fourth quarter sales to be in the range of \$175 million to \$195 million. That's a wide range you might think given that we're well into November already and the year ends at the end of next month, but as always, there are a bunch of things that are stacked up in the second half of December to ship. There's the possibility that some of those might slide out into January, but the reasonable range is \$175 million to \$195 million. That means we should see a little bit of a step up from third quarter volume, which gives us some confidence to think that the third quarter is the low point here.

This will tighten our 2019 forecast to be in the range of \$750 million to \$770 million. Our 2018 adjusted revenue by comparison was \$719 million, so midpoint would suggest 5.7% growth. We would expect Aero to end up \$680 million to \$690 million (last year was \$676 million), and we now predict Test to be \$70 million to \$80 million for 2019 (2018 was \$48 million after removing semiconductor), so a pretty

significant increase there. Freedom, obviously, helped out in the second half; Diagnosys helped out to some extent in the fourth quarter.

Again, in the fourth quarter, we expect reserves for the AeroSat consolidation and reorganization, and perhaps an increased reserve on the litigation side of things.

For 2020, the big assumption we're making as we initiate revenue guidance for next year is that the 737 MAX return-to-service happens sometime around year end here or shortly thereafter. We don't pretend to have information that's not generally available out there in the industry, but there are more and more voices all saying the same thing - that it's likely to get the green light sometime in late December or January. That's a critical assumption to our plans going forward.

And per our stated plans in the press release, we expect consolidated sales next year to be somewhere in the neighborhood of \$770 million to \$820 million. The midpoint of that range versus the midpoint of our 2019 forecast would suggest 5% growth or so. We're expecting Aerospace sales of \$690 million to \$730 million, so that's a little bit less than the 5% consolidated expectation. We expect Test to be somewhere in the \$80 million to \$90 million; that's 13% growth.

As we see the world today, and of course we don't issue bottom line guidance, but the big change from 2019 to 2020 is that we are expecting to reduce or/and eliminate the observed operating losses from the three stragglers, which this year-to-date was \$27 million; and we would expect to cut our tariffs in half, which in the last quarter was \$3.2 million and year-to-date was \$6.8 million. It will be a busy year, but we think that those are achievable goals that we're dedicated to realizing.

I think that ends our prepared remarks, a little bit longer than normal. Christine, we'll take questions at this point.

Operator: Thank you. We will now be conducting a question-and-answer session. [Operator Instructions] One moment please while we poll for questions. Thank you. Our first question comes from the line of Ken Herbert with Canaccord Genuity. Please proceed with your question.

Ken Herbert: Good morning, Pete and Dave.

Pete Gundermann: Good morning.

Ken Herbert: Pete, good news on the restructuring effort. It has certainly been a busy year. I wanted to first ask, the revenue guidance in Aerospace in 2020 implies, you said, just under 5% growth, or about \$25 million of an increase assuming the midpoint of this year to end the year. Can you parse that out a bit by maybe how much growth you're assuming from the three businesses versus how much of a tailwind the MAX is next year versus just maybe what you're seeing organically across some of the parts of the business?

Pete Gundermann: Yeah. There are a lot of moving parts. Let me talk about MAX first of all. The party line that most people seem to be working towards is continued production rates of 42 airplanes a month. We expect that to jump up to the high 40s upon return to service and we expect it to trend up towards the end of the year to the high 50s as the year wraps up. That all assumes a January return to service, and we're making some assumptions that there's a resumption of normal sales sequences to the aftermarket.

The way our aftermarket sales typically work is something like this. We come up with new products or we respond to the demands of airline customers. There's a series of bidding exercises and proposal exercises; and then, there's usually a flight test or some period of time when an airline will take some hardware and they'll actually put it on a number of their aircraft, and they'll observe it, and they'll test it, and they'll fly it to see what they think and then they go forward. Where we're getting a little bit sideways here in our aftermarket pursuits is that those flight trials are being pushed out.

We're making some assumptions that those flight trials will resume shortly after the 737 is lifted and it will result in sales, particularly in the second half of the year. We are not being very aggressive, frankly, in that range with the three struggling businesses, so I would dare say that, from today's perspective, there's upside potential to our forecast there. We had pretty big revenue increase expectations from the three. We

were pretty disappointed with the AeroSat results. We talked earlier about a launch of what we thought was going to be a pretty good program back on April 1, which may turn out to be a bad day to launch a program of any type. On April 14, a meteorite hit a satellite that pretty much grounded that effort and that grounding continues to today. But, we are seeing pretty good growth this year out of CCC. We actually are going to come close to doubling revenues there if the fourth quarter goes as they think it will go.

We are being more conservative in our growth expectations for that trio next year. I mean the big contribution from the three in our plan will be simply to stop the losses, but there are pieces of business that all three are looking at that could drive growth. As always, we'll look at that range and we'll update it as we can as time goes on. It'll be a quarter-by-quarter kind of thing, but today, based on what we expect to happen with the 737 and what we expect to happen with the three stragglers and with what we are observing in the rest of our business, we're thinking that's a comfortable range.

Ken Herbert: Okay. That's helpful. I appreciate all the detail. If I could then just to jump down to the margins, who knows exactly how the fourth quarter will shake out, but pre any incremental restructuring charge on the three businesses if you run a loss of \$30 million to \$35 million for the full-year and call it 8% to 8.5% or so with tariffs, if you get to breakeven next year on the three businesses and tariffs, you have \$35-ish million or so, give or take, of margin tailwind heading into 2020. I just want to make sure that I have that correctly.

And second, are there any other moving pieces specific around margin next year that we should be thinking about?

Dave Burney: Yeah, Ken, on an annualized basis, I think your number makes sense, but keep in mind that it's not like a water faucet that you just turn off on 12/31 and everything's restructured and the losses disappear starting on January 1. As Pete mentioned, the AeroSat restructuring will be occurring as we move through the first and into the second quarter. Certainly, we expect that, by the time we get to the second half of the year, those annualized numbers that you talked about should be realized as we go into the second part of the year, but probably won't start out in the first quarter that way.

Pete Gundermann: But fundamentally your numbers are on target.

Ken Herbert: Yeah. Okay. No, I can appreciate it. It's clearly going to be a steady, gradual improvement with the second half, really, when you see the benefit of the restructuring; and then, of course, you'll start to anniversary that in obviously 2021 as well. Okay. I'll pass it back there. Thank you very much.

Operator: Our next question comes from the line of Jon Tanwanteng of CJS Securities. Please proceed with your question.

Jon Tanwanteng: Good morning, and thank you for taking the questions.

Pete Gundermann: Hi, Jon.

Jon Tanwanteng: Can you just talk about the program reserve and CCC. What was that all about?

Pete Gundermann: Essentially, the company a long time ago, about the time when we bought it, bid off a program that it was not set up to execute well on, so eventually that became pretty clear and we've been in a struggle, basically, to get this program executed. The reason we're pursuing it and the reason we didn't abandon it upfront is we actually think the technology will prove to be quite valuable over time on a competitive basis. It's something the market seems to want in certain classes of aircraft and it's a pretty high profile program with a high profile customer. Of course, in the aerospace industry when you run into trouble on a program you can decide to fight it out, execute it and keep the customer happy, or you can turn and walk away. If you turn and walk away, you might as well never show up at that customer again ever.

So we decided to stick with it, and the program charges are, basically, realizations at certain points in time that we're not quite as far along as we thought we would be. The estimate to complete the program is

higher than we thought it would be and the accounting rules say that you have to take those charges as you recognize them, not as you incur them. Dave, do you want to clarify that at all?

Dave Burney: Yeah. That's right. This program was crossed into the loss contract program a year and a half or two years ago. You continue every quarter to revise your estimated cost to complete and there was a lot on this project that was unknown. Every quarter, we expected that we had adequately accrued for the cost estimate and we continued to run into some stumbling blocks there. Now, we estimate that the program is about 90% completed, with the finish line in sight. The additional cost really was related to the additional time it took. If you remember a couple of quarters ago, we thought we'd be done in September, I think it was. Three or four months added on to this adds cost to the program.

Jon Tanwanteng: Okay. Got it, but that's scheduled to complete in mid-December. You don't see any barriers at this point to getting over the line.

Pete Gundermann: We sure hope not. That's the plan. There's a customer review process in mid-December and we are working hard to meet our requirements for that review. If we're successful, then the engineering phase of this program will be concluded. There will be ongoing support requirements and refinements, because the hardware is not actually going to fly for a little while, but it will be relatively low level. At the moment, we have a lot of external cost. We have a lot of external consultants helping us with this development program and it's a major push. That's part of why it's so expensive. We expect a lot of those related expenses, both in terms of outside companies doing work for us and the qualification certification cost, to drop significantly as year-end comes.

Dave Burney: I would add to that too. The other piece to this that falls through the cracks or gets hidden is the distraction from other programs, where that organization is so focused on getting this to the finish line that there are a number of other programs that will benefit by having the attention of these engineers on them when they can move off of this program.

Jon Tanwanteng: Okay. Great. Thank you for that color. Dave, what are your total projections for problem unit losses, legal reserves, program charges and restructuring costs in Q4 and maybe into 2020 if you can get that far out?

Dave Burney: Well, as Pete mentioned, there's a range of potential possibilities with regard to the restructuring and, at the low end, probably \$5 million-ish, but there is a lot of moving parts to this yet. We're going to learn a lot over the next month or so and to finalize that plan. At the low end, as Pete mentioned, we think it would be above \$5 million for restructuring there. We actually think the CCC business, as Pete mentioned, will not generate a loss in the fourth quarter.

Pete Gundermann: That's dependent on sales, which are going to butt up right against the end of the year, but there is a good chance CCC is actually positive in the quarter.

Dave Burney: And, I'm sorry, what were the other ones?

Jon Tanwanteng: The legal reserve, I think Pete bracketed it at \$2.7 million to increasing potentially to \$6.3 million, right. Is that what you are getting at?

Pete Gundermann: Yeah.

Jon Tanwanteng: Okay.

Pete Gundermann: That's an unknown number. The number for the AeroSat transition is unknown at this point. We are actively reviewing the various business pursuits that the company's been involved with and what we decide to go forward with and what we, more importantly, maybe don't decide to go forward with will result in various charges from, specifically, inventory and maybe some goodwill impairment kind of charges. We're looking at it program by program.

Dave Burney: Included in those would be a lot of non-cash type charges, again depending on if there is inventory relating to a program that we decide we do not want to pursue. Included in Pete's numbers were non-cash charges as well as severance and reorganization costs.

Jon Tanwanteng: Okay. Got it. Pete, I'm surprised, you didn't talk about the win with Rockwell and SES and Vista Global for AeroSat. How do you see those ramping through the years in terms of installed rate and the incremental process for each one?

Pete Gundermann: Thanks for that, Jon. I did not mention it. That's one of the things that we're investigating and trying to get better insight into, but yes, Rockwell Collins or Collins Aerospace has decided to enter the business jet satellite connectivity market using a derivative product of ours that we are developing at AeroSat. We think it's confirmation that there's a lot of potential demand there to draw a company like Collins into it and we're pleased that they've picked our antenna to work with. There has not been a hard launch on that. I mean, there was a launch on the program, but they're not actually doing sales at this point. It's more tying up the loose ends of the technology, improving the network and doing those kinds of things. It's a little premature to know for sure what the expected volume is going to be both for 2020 and 2021, but we're expecting purchase orders shortly and we're expecting the hard launch of actually putting hardware on airplanes and initiating the sale process in the first quarter 2020 or so.

Jon Tanwanteng: Okay. Great. And last one for me, how should we think of the core Aerospace margins outside of the three problem businesses in 2020?

Pete Gundermann: I think they're healthy.

Dave Burney: Yeah. We can get the headwinds behind us here going into 2020 and I think we should be able to see the segment operating margins for the Aerospace business start to push back into that mid-teen range. We've been there before. The last couple of quarters have been disappointing but I think we should be able to push back up into that mid-teen range. Next year, to add a little bit more color on the way we expect the year to progress, partly due to the 737 situation and partly due to some other programs that we expect to roll out, we expect the year to build in terms of the top line growth, with the second half being much heavier than the first half, and actually, the first quarter probably being our weakest quarter.

Jon Tanwanteng: Okay. Great, thank you so much.

Operator: Our next question comes from the line of Josh Sullivan with Seaport Global. Please proceed with your question.

Josh Sullivan: Good afternoon.

Pete Gundermann: Good afternoon.

Josh Sullivan: Just on the Test growth, can you outline some of the contracts or opportunities that you're looking at for 2020?

Pete Gundermann: Well, we sense that there is a better funding environment, in general, in military tests. That's a turnaround that we've been waiting for for some time, dating back to before the Trump administration took office. Part of it is better funding along those lines and part of it is some of the recent thrusts that we've had both with our acquisition of Freedom, which takes some of our radio test capabilities and expands it into the governmental market I guess I would call it, as well as our expectations for Diagnosys. Maybe we'll talk about Diagnosys a little bit.

Earlier this year, we won a program with the New York City mass transit organization to provide a test architecture for one of their rail lines, one of their new programs, and our main competitor there, it turns out, was this company called Diagnosys. On the heels of that win, we ended up in discussion with Diagnosys, and one of the mutual observations was that what they have complements well with what we need. One thing led to another and we explored teaming arrangements and we explored some contracting arrangements and we ended up deciding with the owners of Diagnosys, a privately-owned company at the time, that the best path forward was an acquisition.

We feel that, together, we're a pretty strong force in this mass transit train test market, which we think is a growing market. The logic here is, if you think of modern trains, they're increasingly digitized; they're increasingly connected; they're increasingly complex, mission critical type systems compared with trains of yesteryear. The operators, who are generally municipalities and government agencies, are realizing that they have the same basic decision that maybe the army might have to make or the marines when they want to develop a testing and verification capability for all of their required equipment. The marines, let's say, have long been in the practice of developing a standardized test architecture that can be customized by various add on pieces of equipment or add on connectors and boxes so that a big standardized tester can be deployed on a number of test items consecutively.

You don't have to have dedicated test equipment for each of the items that you want to test, maybe say on a forward deployed situation. So, the municipalities are realizing that they can use that same logic, that same architecture, to save space and increase commonality and to decrease costs when they want to test the various components and elements on a train. We think that, with Diagnosys as part of Astronics, we are no doubt on the leading edge of this market and, if things go the way we think they're going to go, we could have other program wins to announce in the coming months. The New York City program is a program called ARC-211, for those in the know, and could be just the beginning of what we think could be an interesting vein of business for us to explore.

Josh Sullivan: Got it. That's helpful. And then, just dovetailing into that, has there been any change in the M&A perspective? You went through some of the dynamics behind Diagnosys, but just how has the strategy evolved over the last 12 months to 18 months?

Pete Gundermann: Well, we've looked at a lot of things. I can't tell you that we've seen a whole bunch of things that are right down the aisle for us, and it seems like there's a lot of money chasing a few items, so the prices have been really high. Those are observations, things we've experienced, and we certainly learned a little bit from our experience. We stumbled here on a couple of things, and you learn every time you stumble for sure. The CCC experience taught us something and the AeroSat experience certainly taught us something. They had some common elements to them. But, overall, acquisitions have been an important part of how our company's evolved. In the midst of all that, there are other acquisitions that have gone very, very well for us and I would say that it's too early to tell for sure how Freedom and Diagnosys are going to work out, but Telefonix was certainly one that we enjoyed. PECO has been a really big plus for us. The Test business that we bought from EADS has been a mainstay of our Test business, including the semiconductor capability that it brought with it.

So, I don't think we're a company that's ever going to bid on or buy everything that moves. As we get older and as we collect battle scars, we're getting a little wiser and we look for certain things, but all that said, acquisitions will continue to be part of what we do in the future for sure.

Josh Sullivan: Got it. And then, is there any update on your position on the free Wi-Fi trend, particularly with Delta or any other customers?

Pete Gundermann: I don't think we have anything new to say other than, I guess, personally speaking, my observation is that it's becoming more and more of the discussion in the industry and the industry is again distracted by the whole 737 thing. That has really cast a shadow over the entire world. Even airlines that don't fly the 737 are dealing with increased levels of demand.

I guess, our observation is, that's where the world is trending. More and more people expect free Wi-Fi and they expect it continuously; nobody expects to pay for it anymore. Maybe in really expensive hotels, but even that's getting less and less common. It's usually something they give away when asked. We're all fans and that's a big thing for us. I mean, our conviction is that people are increasingly committed to their personal electronic devices. They want to use them. They carry them everywhere and they expect it for free, and the aircraft world is a world that's ripe for continued development and better service. That's kind of our sweet spot, so we think free Wi-Fi is a big deal.

Josh Sullivan: Got it. I appreciate the time.

Pete Gundermann: Thank you.

Operator: Our next question comes from the line of Michael Ciarmoli with SunTrust. Please proceed with your question.

Mike Ciarmoli: Good morning. Thanks for taking the questions here.

Pete Gundermann: Good morning.

Mike Ciarmoli: Just to stay on Test for a second, as we look into 2020 organically, you have Test going at \$85 million at the midpoint from \$75 million. Is that just a function of Freedom and Diagnosys or do you expect any organic revenue growth in there?

Pete Gundermann: Well, it's a little tricky to measure organic, just because Freedom and Diagnosys are, using a poor term maybe, largely bolt on acquisitions and that they're augmenting initiatives that we already have underway. It's one of those situations where we're hoping that, in both cases, one plus one can equal a little bit more than two. So, it's hard to answer your question, because some of the work that we might otherwise plan to do in our other Test locations, Orlando and Irvine in particular, we might transfer to some of those other businesses. Some of our R211 business, for example, would probably move out of Orlando or Orlando will subcontract to Diagnosys, which is in Boston.

So, it's not going to be easy to really measure how much of it is acquisition growth and how much of it is organic growth, but I would view it more as organic.

Mike Ciarmoli: Okay. And then, just on Aero in 2020, 787 rate cut and 777X getting delayed, does that enter into the forecast next year? It sounds like you're going to have a little bit more strength in the second half, which might be when you start to feeling some of those, especially the rate cut on the 787. How is that contemplated in the 2020 outlook?

Pete Gundermann: That's baked into the numbers. The 777 is something that we have quite a bit of line set content on, 787 much less so, directly to Boeing. But yes, we have those baked into the numbers, assuming that the cuts and the extensions or delays don't turn out to be greater than we expect.

Mike Ciarmoli: Okay. And then, just a last one for me. The bookings trajectory and backlog, is there any real time update in terms of how the bookings are tracking now or maybe how you expect to end the year in terms of backlog? I think you called 3Q sort of the bottom here. Can we assume that's maybe the bottom for bookings too in Aerospace?

Pete Gundermann: I would hope so. We don't have an update for the fourth quarter, but obviously, we expect bookings to rebound here in order to support those revenue levels for next year. I think we're seeing it on Test, but it's not quite as evident on Aerospace at this point. But based on scheduled programs that are in backlog, we're reasonably confident on a step up in revenue in the fourth quarter and the first quarter we would expect to be at that increased level also and then expand from there. Again, that's assuming that 737 gets back in the air at or near year end.

Mike Ciarmoli: Got it. Perfect. Thanks a lot.

Pete Gundermann: Thank you.

Operator: Our next question comes the line of George Godfrey with C.L. King. Please proceed with your question.

George Godfrey: Thank you and good morning. Thank you for taking my questions. I have two questions. Pete, the first one is, you stated very clearly that you don't really have any other information on the Boeing 737 getting certified and coming back into service before the end of this year or January and you're making your best estimates. If we take a more pessimistic outlook and that continually gets pushed out, what can you do at Astronics specifically to try to mitigate that downside or do you just have to sit there and just take the punches as they come in? Thanks.

Pete Gundermann: I think we're kind of in that position unfortunately. If it gets extended significantly, if at all, the odds increase of a production slowdown or even a suspension, which would have a significant effect on our company, of course. We put \$95,000 or so, plus or minus, on each new airplane, and that does not assume any passenger power for example, so if you add passenger power to it, it can easily double. If they go from 42 airplanes, which is where we are today, to zero, that would obviously hurt us and we'd have to scramble around and look at what we can do. It would be an uncomfortable development, for sure, because a big part of our cost structure isn't necessarily production related; it's all the support and engineering that goes into our products. If I flash forward to that potential reality, I guess I would say that we would be really reluctant to cut costs in that way, because those technical skills are our lifeblood really. We would be reluctant to cut that, so it would be a bad development if that were to happen. No doubt.

George Godfrey: Understood. And then, the second question is, you talked about the meteorite hitting the satellite and changing some of the program outlooks for AeroSat. When I think about those three businesses, I always thought the greatest variability in revenue was on the AeroSat piece. Are there other programs for other reasons that may or may not look as attractive today due to competition and product development costs that are also causing you to want to consolidate that facility beyond the platform of program issue with the meteorite? Thanks.

Pete Gundermann: That's a good question. I think the best way to look at it isn't in a program-by-program review, but rather the overall review, kind of a top level observation. I guess, from my perspective, we think that the technology is important and the technology is good and the technology is valuable. We have had a lot of trouble cracking the code frankly. We've missed badly on what our revenue expectations were and, in some cases, they were clearly things that we could not control. Some people might think we should control or be able to control meteorites, but I don't think we can. That's something that was just an external factor that affected a program that we were counting on at that point in time.

But there are other issues where, sooner or later, when it happens over and over and over again, we have to sit back and look at, is it smart for us to continue to spend money like we've been spending money to pursue things that we, like I said, have not been able to crack the code. The collection of thinking is that, again, the technology is good. There are valuable programs to apply it to and there are markets that we want to pursue and, certainly, that business jet market is one of the ones that we want to continue to pursue, but we want to do it in such a way that we don't risk the all or nothing financial impact of executing on the programs in the short term. By doing the consolidation or the reorganization or whatever you want to call it, we can leverage assets that are otherwise free and clear, already paid for, and the incremental return on the antenna programs when we find success will be greater, and the downside risks of another meteorite hit, for example, are greatly reduced.

George Godfrey: Understood. Thank you.

Pete Gundermann: Thank you.

Operator: We have no further questions at this time, I would now like to turn the floor back over to management for closing comments.

Pete Gundermann: Well, thanks everybody for tuning in. We appreciate your time. We look forward to talking with you again soon. Have a good day.

Operator: Ladies and gentlemen this does conclude today's teleconference. You may disconnect your lines at this time. Thank you for your participation and have a wonderful day.