Company: **MTS SYSTEMS**

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Operator: Good day and welcome to the MTS Second Quarter 2019 Earnings Conference Call. Today's conference is being recorded. At this time I would like to turn the conference over to Mr. Brian Ross, MTS Senior Vice President and Chief Financial Officer. Please go ahead sir.

Brian Ross: Thank you (Mike). Good morning and welcome to MTS Systems Fiscal 2019 Second Quarter Investor Teleconference. Joining me on the call today is Jeff Graves, our President and Chief Executive Officer. I want to remind you that we will make forward-looking statements today as defined by the Private Securities Litigation Reform Act of 1995. Future results may differ materially from these statements depending upon risks some of which are beyond management's control. A list of such risks can be found in our latest SEC Forms 10Q and 10K. We disclaim any obligation to revise the forward-looking statements made today based on future events.

This presentation will also include reference to non-GAAP financial measures. These measures are used by management to evaluate the operating performance of the company over time they should not be considered in isolation or as a substitute for GAAP measures. A reconciliation of our non-GAAP measures to the nearest GAAP measure can be found in our earnings release. I will now turn the call over to Jeff.

Dr. Jeffrey Graves: Thank you Brian and good morning everyone. We appreciate you joining us on our call this morning. We're halfway through our fiscal year and pleased with both the continuing demand outlook for our markets and our overall business execution. Our performance to date is headlined by record revenue in our fiscal second quarter which was up roughly 22% year over year. In addition, in spite of this terrific revenue performance our backlog continues to be at near all-time highs as we once again experienced a strong quarter for sales with orders up nearly 12% year over year.

Our sales performance reflects the strength of our technology offerings, our broad geographic presence and the expansion of our market verticals in both our sensors and test and simulation businesses. This top line performance reflects the increasing success of our growth and diversification strategy capitalizing on our market leading sensors and test and simulation equipment along with delivering premium service to our valuable customers across the globe. In short we're leveraging the strong core technologies in both of our businesses and prioritizing the introduction of new products and services in adjacent markets to accelerate our growth and diversify our market exposure.

In addition to our exciting top line performance we're also pleased with our growth in profitability as reflected in both our adjusted EBITDA and earnings performance. This can be attributed to two main factors one is the completion of some very challenging new technology projects in our test and simulation business that we've executed over the last two years. These were what we often referred to as first of a kind custom projects. These projects yielded some very valuable IP for us for the future but also brought with them higher execution risks from an engineering standpoint and lower profit margins in prior quarters. The majority of these projects are now complete and fully operational with our launch customers.

Due to the completion of these projects our backlog has also returned to a more profitable mix of standard versus custom products. The net effect of increased volume and improving mix in backlog is stronger margin expectations and faster manufacturing cycles as we clearly experienced in our second quarter. In addition to this backlog impact we're still in the earliest stage of realizing the benefits from our ongoing efficiency initiatives in our test and simulation business which will become more evident in the second half of the year and particularly during our fiscal 2020.

What we've been very pleased with the trends in our organic performance or diversification strategy has also gained traction through the integration of our most recent acquisition E2M Technologies which closed last November. As a reminder E2M complements our existing simulation business from both a technology perspective and through entry into a new high growth markets. These new market verticals are flight simulation which is predominately systems used for pilot training and entertainment which are systems incorporated into sophisticated amusement park rides. Our expectations for E2M and delivering top line growth as well as margin accretion in fiscal 2019 remain unchanged.

Let me now share a few more details on our financial performance through the second quarter before handing off to Brian for a more detailed discussion. In the second quarter we generated orders of $132 million in our test and simulation business a 26% increase over the prior year. Our sensor business added to this order volume by generating $79 million in orders during the quarter. For the first six months of the year we generated orders of $257 million in our test and simulation business a 20% increase over the prior year. This in addition to $178 million in sensor orders which is a 10% increase over the prior year provided for a combined company orders growth of 16% for the first six months of our fiscal year. These results reinforce the positive momentum we established in fiscal '18 when we finished the second half of the year with record orders for the six month period.

Test and simulation orders were once again supported by strength of the structures and materials sectors. Orders in our ground vehicle sector improved compared to the same quarter a year ago however demand continues to be softer than historical norms as our customers continue to balance durability testing with safety related testing for new autonomous vehicles. Our continued efforts to drive and improve balance of orders across the higher growth test and simulation markets that we serve is clearly paying off.

From a sensors perspective orders were strong coming off two back to back record bookings quarters which were headlined by placement of the initial purchase orders under our contract associate with the Department of Defense. As a reminder our sensors DOD contract inclusive of all options totals approximately $187 million over the next five to seven years of which we had roughly $35 million in backlog at the end of the second quarter. In our non-defense sensor markets the positive momentum is coming from broad strength across all end markets including both our industrial and test sectors. Based upon this continuing market demand we've accelerated our pace of new product launches to maximize our ability to participate in new customer product platforms which incorporate these sensors.

Having summarized our sales drivers let me next give you some color on our backlog position. From a consolidated perspective we're very pleased with both the volume and the quality of our backlog. We completed the quarter with a total company backlog of $493 million slightly below the record backlog position we reported three months ago but significantly higher than historical levels. This slight delight decline in backlog in the face of sustained sales strength was driven by acceleration in our revenue conversion rates enabled primarily by strong production execution in our test and simulation business.

I particularly want to recognize our operations team and the test and simulation business for not only delivering these improved production efficiencies within our factories but also for excellent management of our supply chain where we drove incremental materials cost savings in an otherwise tight market environment. With the investments we continue to make in our operations we expect these trends to continue gaining momentum. We believe our backlog is significant leading indicator of future performance our ability to deliver on our growth expectations and expansion and profitability in fiscal 2019 and beyond. More importantly we believe the favorable market dynamics that we're experiencing will continue to provide a tailwind for us and further strength of this key leading indicator.

Moving next to our top line performance revenue from our test and simulation business was up 37% in the second quarter compared to the same prior year period. This performance reflects outstanding follow through from our strong backlog position at the end of the first quarter. Our production execution in the first six months of the fiscal 2019 has generated a 21% increase in our test and simulation business. We believe this is repeatable as we continue to take advantage of opportunities outside of the ground vehicle sectors of our test and simulation business. In addition, E2M has expanded the revenue base in our test and simulation business and is performing as we expected since we acquired the business late in our first quarter. We remain very optimistic in the continued upside potential associated with the integration of our businesses.

We continue to diversify our test and simulation business and reduce our overall exposure to ground vehicle development markets through expansion into adjacent market verticals. While we continue to view the testing of new ground vehicles as attractive we recognize that it brings somewhat higher volatility, which can be disruptive to our workforce planning and to our overall financial performance. Our objective therefore is to broaden our market participation gaining more consistency in our growth and greater efficiency in our engineering operations. With a continued strong focus on adjacent markets where we see favorable demand trends and where we can leverage our world leading technology expertise in force and motion control we're beginning to seep the benefits of this effort.

While overall sales have increased substantially revenue from our ground vehicle markets have reduced from historical norm of roughly 45% to 40% today. Looking forward we expect continued declines in this revenue percentage as indicated by the orders profile in our second quarter which showed ground vehicle orders at 36% of total. This trend gives us confidence that we'll obtain our target of 15% in the future while continuing to grow the overall test and simulation business. Through this shift in the mix of our business we expect to experience more consistent growth, decreased volatility and improved profit margins in the test and simulation business.

Demand for sensor products continues to be steady as industrial markets across key geographies were supported by economic strength and favorable market trends. I'd like to take a second to help reconcile our first half top line performance in sensors with our expectations of 10+% average annual growth in this business over the next few years. We continue to expect our sensors business to grow revenues on average in the double-digit range with some years being above and some below this mark. At the halfway mark of our fiscal 2019 sensors delivered revenue growth of 2% for the first six months of the year. This was strictly attributable to the timing of shipments which reflected in the initial ramp up of production for the DOD contract and the introduction of a record number of new products.

As we exited our second quarter we were at a run rate that we believe support strong double-digit growth in the second half of the year. Given the market outlook and our backlog of sensors for the US military we would expect this trend to continue through fiscal 2020. This puts our full year expected revenue growth for sensors in the 6% to 8% range for fiscal 2019. This top line performance should allow us to deliver our targeted sensor gross margin and EBITDA margin performance of roughly 50% and 21% respectively. With the strong outlook for sensors demand in the industrial and test markets and the continuing opportunity represented by our DOD sales we remain extremely bullish about our sensors business. From a geographic perspective, our growth in the second quarter was privately driven by strength of the Americas and in Asia with Europe generally being a weaker region in the quarter to date, and year to date. This trend held for both business units and the company in total.

As went to the third quarter we anticipate these trends to continue for the foreseeable future. So to sum up we're pleased with our market position and our performance trends of the first half of fiscal 2019 and see a strong second half performance ahead. For our test and simulation business while we expect no significant change in our ground vehicles market we anticipate growth in our materials and structures equipment market and are expanding market for simulation. In addition test services will continue to grow in the second half of the year and beyond. Given the strength of our backlog position while it may be tough to surpass our first half performance on a direct comparative basis we believe our year over year growth in test and simulation will be strong.

From a sensors perspective after a lot of heavy lifting in the first half related to several key new product introductions and production ramp-ups we anticipate a strong second half of double-digit revenue growth from a year over year perspective. With this growth we expect strong margin performance at both a gross and EBITDA level. To deliver this performance we simply need to keep doing what we've been doing that is focusing on execution and providing unparalleled total customer satisfaction.

One other continuing popular question that we've addressed over the last few quarters is our business in China and the impact of trade tariffs. As many of you know we focused on our China markets for many years and they represent an area of significant growth for us. We continue to see strong demand in China with an increase in year over year orders. In addition we've only experienced minimal macroeconomic impacts of the tariff enactments and believe we're well-positioned to navigate not only the import and export challenges but also minimize any long term effects of raw materials inflation. The longer tariffs remain a headline in the news the more we could potentially see a slight degradation in the market simply because of this effect that it's already seeming to have on the global macro-economy. However, we continue to see steady to positive momentum in the markets we serve in China and we remain very bullish about our future there. Now I'd like to turn the call back over to Brian to further discuss our financial results and our outlook. Brian?

Brian Ross: Thank you Jeff. I'd like to start by reiterating how pleased we are with our performance trends and in particular those of our test and simulation business. We have maintained a steady focus on improving both the top and bottom line of this business over the last couple of years and it was gratifying to see improving momentum throughout the entire first half of fiscal 2019. With record backlog levels in revenue, a steady order pace, and significant bottom-line performance improvement coupled with the recent addition of E2M we are confident in the strength of the business and the bright future ahead.

I will move right into our second quarter fiscal 2019 results which focus primarily on year over year quarterly comparison. Jeff already touched upon the strength in our orders backlog and revenue performance so I will start with gross margin. While there was a significant increase in our consolidated gross margin dollars in the quarter our gross margin rate for the quarter declined by 160 basis points for both of three and six months period. This decrease is simply attributable to the change in mix of revenue between our two businesses as growth in our test and simulation business was more significant than our sensors business in the first few quarters.

With its lower gross margins this mix shift towards test and simulation dampens the consolidated gross margin percentage. Looking at the individual business units test and simulation gross margin rate increased by 30 basis points in the quarter even with offsetting cost increases from the E2M acquisition inventory fair value adjustment of $500,000, from purchase accounting valuation and a slight increase in variable compensation expense. An important metric to call out for a test and simulation business is that income from operations increased from 3.9% to 7.2% for the first six months comparison to last year which shows a concerted effort by our team to improve overall bottom line performance.

The gross margin rate for our sensors business declined 120 basis points versus the same quarter results in fiscal 2018 primarily because of production inefficiencies related to the introduction of an abnormally large number of new products. For the first six months of this fiscal year we have seen the margin rate decline to 49.2% however we believe we have resolved most of these manufacturing issues and expect to see the margin rate for the sensors business return to approximately 50% for the full fiscal year which is our ongoing target for this business. In addition to these mixed driven affects both businesses continue their ongoing programs that have begun to lower their cost structures and drive productivity improvements.

We continue to manage cost closely to keep our expense leverage aligned with the needs of our business and to be prudent in the investments we undertake to drive profitability. These efforts have resulted in an improvement of 2.7 percentage points in operating expenses as a percent of revenue for the first half of this year. On a dollar basis operating expenses for the quarter of $63.2 million and $123.5 million for the six months period have increased by $5 million and $4 million respectively when compared to the prior same results mainly due to the increase in cost from our E2M business as well as additional variable compensation expense from the strong performance of the businesses.

We also incurred acquisition related expenses of $1 million and an additional intangible amortization of $1.3 million in the first half of fiscal year 2019 from the acquisition of E2M. Total acquisition costs for E2M are expected to be no more than $1.5 million for the year. Net interest expense of $7.4 million increased slightly in the quarter due to additional drawdown of the revolving line of credit for the acquisition of E2M. We expect interest expense to be $7 million to $7.5 million per quarter for the risk of fiscal 2019. The effective tax rate of 17.1% for the second quarter is indicative of our overall annual expected effective tax rate range for the year excluding any discrete items for which we recorded only a minimal amount in the second quarter.

The effective tax rate for the six month period was 12.8% and includes an additional discrete tax benefit of $1.3 million recorded in the first quarter due to the true up and finalization of the measurement period for the tax act that was enacted in December 2017. Our guidance for the full fiscal year effective tax rate is 15% to 18%. For the quarter adjusted EBITDA of $37.6 million increased 36% versus the prior year quarter primarily driven by improved top and bottom line performance from our test and simulation business. Our test and simulation business has increased adjusted EBITDA in fiscal 2019 to 13.1% of revenue and our sensors businesses hovering near 20%.

Our performance in Q2 yielded us GAAP diluted earnings per share of 73 cents a 66% improvement over the prior year with a six month GAAP diluted earnings per share of $1.27. To remind everyone our fiscal year 2018 six month diluted earnings per share of $2.16 includes an additional $1.32 per share recorded in our Q2 2018 results in relation to the discrete tax benefit for the tax act. Our just a diluted EPS was 76 cents for the second quarter and $1.36 for the six month period this year. Our EPS performance for the first half of the year has us positioned well to achieve our full year diluted EPS guidance.

We ended the quarter was $74 million in cash which is in line with where we ended fiscal 2018. We generated $20 million of operating cash for the quarter and $14.5 million free cash flow which is 6.2% of consolidated revenue in line with our normal annual free cash flow generation of 6% or 8%. We ended the quarter with a total debt of $464 million a slight decrease from the end of the first quarter 2019. The debt portion of our tangible equity unit issuance from July 2016 will be fully extinguished on July 1, 2019. Going forward we expect strong free cash flow and available cash balances to help us pay down our debt.

As a reminder before the acquisition of E2M we had reduced our debt for eight consecutive quarters bringing our gross leverage ratio down to 3.64 times leverage. With the additional debt for the acquisition we temporarily increased our levers to roughly four times leverage and currently sit a 3.72 times leverage at the end of Q2 almost back to a leverage level prior to the acquisition within only four months from the date of acquisition. We currently forecast our leverage ratio to decline to less than 3.5 times by the end of fiscal 2019 through a combination of debt paid down and continued improvement in adjusted EBITDA performance.

I would like to discuss a few points regarding our E2M acquisition which is included in our test and simulation business. Having only been included in our financial result since the purchase date of November 21, 2018 E2M continues to hit the marks we set out for the acquisition driving optimism for the long term potential of this business. For the first six months of the year we have recorded preliminary purchase accounting amounts in our consolidated financial statement and amortization expense of $1.3 million within G&A for intangible assets acquired as part of the acquisition. We expect to report a total of $3.1 million in amortization expense for fiscal 2019 or approximately $900,000 in each of the remaining two quarters.

In addition we recorded a preliminary $1.1 million inventory fair value adjustment which increased the inventory balance upon acquisition. Approximately $1 million was recognized through cost of sales for the first six months of 2019 with approximately $100,000 remaining to be recognized in the third quarter all of which costs are recorded as additional cost of sales.

Moving to our guidance, we remain confident our fiscal 2019 full year guidance of revenue of $830 million to $870 million, GAAP diluted earnings per share of $2.30 to $2.60, adjusted EPS of $2.42 to $2.72 and adjusted EBITDA of $122 million to $142 million. The reconciliation to adjusted EBITDA and GAAP earnings per share can be found in Exhibit F and G of our press release. These expectations are supported by our outstanding backlog position, growth in our test and simulation business as demonstrated in the first six months of performance, a significant increase in top line growth rates in the second half of the year in our sensors business, improving business mix and increase contributions on the from the E2M acquisition. For many of you that have long followed MTS you will remember that our test and simulation business often experiences quarterly fluctuations throughout the year. Given the timing of our backlog terms we expect revenue in the second half of the year to be slightly down from the first half of the year however it will still be a notable step up from the prior year comparisons.

In summary, we are very pleased with our performance trends through the first half of the fiscal year 2019 and especially with a strong top and bottom line performance for our test and simulation business. We continue to be well served by our strategy that includes expanding our portfolio products in a rapidly growing sensors market, staying focused on meeting the demands for the new test and simulation solutions due to evolving technologies and favorable demographics and continued diversification into adjacent high growth markets. Before I turn the call back over to Jeff I wanted to share with you an exciting event we are hosting at our headquarters in September to help the investor community fully understand our business strategy and plans. We are planning our first Capital Markets Day to be held during the first week of September. Planning is well underway and we expect save the dates, formal invitations and details about the agenda to be done in short order. Our entire team is engaged and excited to share with you how we will capitalize on the opportunity in front of us. I will now turn the call back over to Jeff.

Dr. Jeffrey Graves: Thanks Brian. So to reiterate we're pleased with our performance trends through the first six months of the year executing nicely on our backlog flow through to revenue and continued orders momentum. The clear highlight for the second quarter was the record revenue in both our test and simulation and our sensors businesses all while maintaining a robust backlog and the support it provides to the outlook for growth and profitability for the rest of the year.

As we mentioned over the last year we've continued to invest in our core test and simulation business and are starting to see the return on those investments in project execution both on the top line in the bottom line. These investments have proven to be very beneficial not only in the organic core growth but also in our ability to integrate E2M and maximize its positive contribution to MTS to date. For our sensors business we look forward to an exciting second half with strong organic growth and margin performance. As I stated earlier we're focused intently on three key tenets for the remainder of the year.

First, we need to keep executing on sensors leveraging the hard work and new product introduction from the first half of the year. Second, we need to continue taking advantage of the strength in our non-vehicle related test and simulation opportunities. And third, we need to successfully integrate E2M technologies without any loss of momentum in their current business which is on an excellent trajectory. So far we're executing well on each of these tenants and anticipate continued success moving forward. So with that Brian and I are happy to take your questions.

Operator: Thank you. At this time will open the floor for questions. If you would like to ask a question please signal by pressing Star 1 on your telephone keypad. Questions will be taken in the order in which they are received. And if any time you would like to remove yourself from the queue you may press Star 2. Again to ask a question please press Star 1. And we have our first question from Deepa Raghavan with Wells Fargo.

Deepa Raghavan: Yes, good morning. Quick color you provided across a segment so appreciate that. But if you could just tighten some of the questions I have that would be nice. First quarter growth pretty strong, backlog strong besides being sequentially lower, you called out some, you know, you called out test and simulation and then contrasted that with soft market environment just curious what's, what are some of the drivers that gives you the confidence that this can be sustained going ahead?

Dr. Jeffrey Graves: Thanks for the question Deepa. I would say it's pretty straightforward. If you look at our verticals in the test and simulation business materials testing equipment and services on that equipment have been with us for over 50 years and it is driven by the introduction of advanced materials in the world. And right now you're seeing a dramatic growth in the use of carbon fiber composites and other exotic materials. And particularly the proliferation of composite is driving an enormous amount of new testing needs because they're growing from being used on aircraft to be used in automotive and other applications now so you have to derive specific design data from these materials, so that's one factor.

Another one is additive manufacturing. We're really seeing the implications now of the advancement in additive manufacturing technology. The ability to make an S shaped part is wonderful but the material properties are often completely different in a part made through additive manufacturing than with conventional techniques. So those parts have to be tested to determine what the performance will be. So those are drivers and are material systems that we're quite pleased with. From a geography standpoint a big part of the growth is in the Americas where we're seeing advanced material introductions. And in China because of the growth of their automotive industry and their aircraft industry they're seeing the same revolution in the use of advanced materials there we've seen for many years in the western world, so that's a very good market for us as well.

In structures testing that's - there's two areas there that are strong and long term for us one is energy, and a piece of that is wind energy. So if you look at the testing of anything from a wind turbine blade those long big blades to the entire wind turbine itself that's a growth business for us and we expect to continue with this growth in the green economy initiatives. And then infrastructure, if you look at the violent storms that are occurring in the world and ongoing earthquakes in places that are heavy population centers and growing market sin, you know, China, India throughout Asia the demand for more robust buildings, and bridges and other infrastructure big, big need for understanding new building designs. So we're selling more and more equipment for doing seismic evaluations, testing of either the Earth moving and shaking or large waves coming in and impacting infrastructure so those businesses we're very excited about.

Obviously the E2M acquisition gives us immediate exposure to flight simulation and moreover pilot training which we already viewed as a very, very exciting growth market and one that there are big barriers to entry in which we are now a part of with very limited supply chain in that whole infrastructure. And now you've got increased focus on pilot training. So we're excited about that. And then the entertainment industry meaning primarily these amusement parks with the drive to do very realistic simulation of motion for all of these exotic exhibits and the availability of disposable income to people in China and elsewhere to attend amusement parks in those parts of the world not only in the Americas but in Asia obviously.

We view those as both exciting growth markets to capitalize on our expertise in force of motion. So we love those markets. They're driving really nice growth for us and I would not underestimate the testing of new automobiles. It will remain an integral part of our business for us going forward. It is not going through any exciting growth right now because the extent of our customers is largely on safety related testing for autonomous vehicles. But it will remain a part of our business and in the out years we believe drive some meaningful growth for us. So we're happy with our position there we'll be holding it but the growth is really in the adjacent markets.

Deepa Raghavan: That's very helpful color, appreciate that. Can you talk about some of the synergy updates with E2M now that you have it as part of your portfolio for at least more than a quarter now? Perhaps some underlying metrics that were better than you expected and some that looks like needs more heavy lifting versus your initial acquisition expectations?

Dr. Jeffrey Graves: When we acquired E2M it was with an eye toward growth. We saw very little direct cost synergies out of that acquisition. What it does bring us though Deepa is a dramatic uplift in our technology base for electric motion. We've traditionally been a company built on hydraulic power, you know, big heavy, you know, very precise motion systems. Those are now expanding with the advancements in electronic drives are expanding into simpler more electrically driven systems for high force and motion control. E2M brings us that technology synergy rapidly. They're very good at that. And we are now looking to leverage that technology base across our traditional markets in addition to helping them grow in the new markets that they brought to us.

So the synergies are primarily technology synergies and then I would say growth but it's really entry into their, entry into the markets they had already gotten approvals on over the last decade and then to top it off services. So most of the customers that E2M supports are very rigorous about wanting service on the equipment, you can imagine these are systems that contain human beings for pilot training or entertainment. So our services infrastructure in test and simulation is a wonderful add to them because we can immediately provide service that those customers require on an ongoing basis.

So most of the synergies there were around growth we advertise no real cost synergies. They do bring an immediate lift in both top line obviously but also in EBITDA margin performance over the business. It's a lovely cash generating business. So those are the metrics we primarily focus on top line growth and adjusted EBITDA performance of that business and they're firing on all cylinders. And the outlook for that business is quite strong so we're very pleased with the acquisition to date.

Deepa Raghavan: Understood, last one for me and I'll pass it on. Defence spending have been growing at cycle highs, at least a growth basis, it's been growing on cycle highs. Given this trend would you expect some of the sensor wins to convert earlier than your five to seven year target conversely what are some of the risks we should be thinking about if that spending were to moderate? Thank you.

Dr. Jeffrey Graves: So in terms of delivery rates yes we've seen nothing but our customer wanting, you know, more sensors faster if you will. So these DOD platforms do take some time they're very big and complex obviously there's a lot more people involved than just us. But in terms of sensor demand obviously we've got a nice portion booked. We've booked roughly $40 million out of the $187 million contract, $35 million is still in backlog. We've ramped up production to support higher annual production rates now. And that will continue through the remainder of the year but we'll see a big step up in the second half and then into FY '20. And, you know, our outlook Deepa is the rest of this contract we believe will be translated into purchase orders and will lie in backlog we'll keep you guys posted on that.

But the - in terms of the long term, you know, cyclicality of defense spending what continues to give me great optimism about the business is just the proliferation of sensors in all modern military platforms. If you look at whether it flies or runs on the ground or goes under the water they all require more sensors in general in everything from man to unmanned vehicle systems so we view our sensor technology as adaptable to ongoing military needs and we'll continue to pursue new activities there. So while overall demand in the out years may become more cyclic again the proliferation of sensors in the military is we think is an ongoing upward trend.

Deepa Raghavan: Thank you. I'll pass it on.

Dr. Jeffrey Graves: Thanks Deepa.

Operator: And just a reminder if you do have a question please press Star 1 now. And just a reminder if you have a question and would like to add a comment that is the Star key followed by the 1 key on your touch-tone phone. And at this - we do have a question from Jeff Russell with clear bridge.

Jeff Russell: Hi, good morning. Could you guy's comment on yesterday's shelf filing please?

Brian Ross: Good morning Jeff. Yes just…

Jeff Russell: Good morning.

Brian Ross: …quite simply yes. So our current shelf registration statement with - so there's a three year mandatory fall off on that just expires here in the first part of June. It doesn't matter just good corporate practice we decided to replace the expiring shelf with a substantially similar filing. While we have no current plans to do so having a shelf on file provides us the flexibility to raise money if needed in the future without the process of having to go through the registration process again.

Jeff Russell: Great, thanks for the clarification.

Brian Ross: You're welcome.

Dr. Jeffrey Graves: Thanks Jeff.

Operator: And once more if you do have a question please press Star 1 on your telephone keypad. Again, to ask a question or add a comment that is the Star key followed by the 1 key now. And we have our next question from John Franzreb with Sidoti & Company.

John Franzreb: Hi guys. I apologize I'm a little late to the conference call but I actually just wanted to discuss a little bit about what's going on in the test delivery cycle. If you already addressed it we can take this off-line but it seemed like it was a little stronger in the quarter than it has been historically. Can you talk a little bit about the timing deliveries? Do you still expect the fourth quarter to be the best? Is there a push pull that's going on there that I need to be cognizant of?

Dr. Jeffrey Graves: No, John it's pretty simple. A couple of large affects is we've - in the - really spanning the last couple of years we've been engrossed in shipping a number of large first of a kind custom projects that consumed a lot of resources and really dampened the production cycle if you will going through the factory. So those are behind us they're installed and running now at customer sites and they're running quite well actually. They were just painful to get through the system here.

So what you're seeing John is in part is a return to a more normalized mix in backlog of standard versus custom projects on top of which we've been investing pretty heavily for the last year and a half in our efficiency initiatives in both our own factory and supply chain. And you're just starting now to see the benefits of that in terms of turn rates. So it's that combination we have a more normal historical mix of standard and custom and we've - we're starting to benefit from efficiency initiatives that we've been funding over the last year and a half.

John Franzreb: So Jeff, you're saying your cycle times are shortening due to increased efficiencies?

Dr. Jeffrey Graves: Yes, yes without a doubt John and I think its early days. I think you'll see more of that over the next year and a half.

John Franzreb: Okay, so should we still expect the fourth quarter to be seasonably strong on deliveries or is that no longer the norm?

Brian Ross: Yes John, hi it's Brian. So generally we do expect the fourth quarter to be a little stronger. What we talked about on the call was that, you know, first half obviously a very strong performance in test and simulation.

Dr. Jeffrey Graves: Right.

Brian Ross: We do expect the second half of the year to be down compared to the first half however we'll be strong enough compared to the second half of 2018.

John Franzreb: Got it. Got it, thank you Brian, and one last question the orders that you're taking today that are going into the backlog how far out are some of the delivery cycles?

Dr. Jeffrey Graves: You know, John based on the mix the - I'd say on average they're not much different than history but certainly the materials testing orders are much faster turning orders, they're three to six months and that's been strong for us. And then on the - some of the larger custom projects particularly for infrastructure testing those are more than normal 18 month kind of cycle times. So and automotive stuff while it's still coming through it's at fairly depressed levels so those are kind of the standard one year to year and half kind of projects in general terms but that has not been what's driven the backlog.

John Franzreb: Okay. Okay, thanks for taking my questions. I apologize for coming in late again.

Brian Ross: No, no problem John, thanks for the call.

Operator: And once more to ask a question please press Star 1 on your telephone keypad now. Again that was Star 1 to ask a question or add a comment. And at this time I am currently showing no questions in the queue so I'll now hand the call back over to Mr. Jeff Graves.

Dr. Jeffrey Graves: Okay (Mike), thank you very much. So thank you all for participating in the call today and for your interest in the company. We look forward to updating you on our progress again next quarter. Thank you and have a great day.

Operator: Thank you ladies and gentlemen. This concludes today's teleconference. You may now disconnect.