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<<Ben Hearnberger, Industrial Technology Analyst, Stephens Inc.>>

Alright. Thanks for being here. We'll go ahead and get started. I'm Ben Hearnberger, I run the power and industrial technology practice at Stephens. Very happy to have MTS Systems, ticker MTSC, about \$800 million plus market Cap Company at this point, headquartered in Eden Prairie, Minnesota. If you read our research, you'd know we recently updated the stock on the thesis that execution in the legacy test business is improving and we'd like the synergy opportunities associated with the recent PCB acquisition. I'm sure we'll hear all about that today. Very excited to have Jeff Graves, President and CEO, and Andy Cebulla, Treasurer and Head of Investor Relations with us. We're going to do a city union 15 minute overview and then open the floor to questions, with that; I'll turn it over to Jeff.

<<Jeffrey Graves, President and Chief Executive Officer>>

State of the union that was bad. There's not much I can say that's more exciting than what we probably saw last night, most of you are probably tired after all that. So let me give a 10 or 15 minute overview of the company and then just open it up for questions. We are a test and measurement company. So I'll give you some round numbers for precision, you should pull the investor pitch and look at, we've got slices – on the pro forma basis and on actual basis because we just completed a big acquisition in July. So you can drill down in the numbers and try to understand who we were and now who we are going forward. Just looking forward, we are a company in the test and measurement space and what that means to us is we have a test business that I'll give you round numbers.

In total, we're about \$800 million in revenue now, going forward \$800 million in revenue, \$500 million of that comes out of our, what we call our test business. That test business is largely a business that builds and sells -- designs, builds and sells testing equipment for advanced material development and so things like carbon fibre reinforced composites, metals, ceramics, things that go into vehicle applications primarily cars, planes and trains, those kind of things that are increasingly dependent on advanced materials. We test materials, we build machines that test the component that these materials are made of and we build machines to test full scale vehicles probably the most dramatic products we make.

So if you Googled us and said MTS and vehicle testing or automotive testing or airplane testing, you'll see film clips of our machines putting a car through its paces to test the durability of the design. So cars are designed generally for 200,000 road miles, our machines can simulate by pushing, bending, pulling the car in one month in the lab, so we can condense a 200,000 design requirement to one month of testing in the laboratory. We make the machine that would do the testing and that includes the software and control system that controls the movement of the machine, the interface with the models the customers are running - the computer models for simulation and the data collection system of the machine.

So it's a turnkey system that allows the customer in the automotive industry for example to test a new car, and ring it out in a month. We make machines that do durability testing. About a decade ago, we moved into machines the duo aerodynamic testing cars. So these machines are large machines that go into wind tunnels basically to simulate a moving road under the car and that road can allow the car to actually drive it 200 miles an hour, stationary at a one tunnel while they blow wind over it to measure the resistance of the wind to hitting the car. That's critically important for fuel efficiency and meeting the new fuel efficiency standards and emissions requirement the automotive industry faces today. We do the same thing for aircraft.

We test full scale airplanes, literally full scale airplanes, make massive machines that bend the wings, bend the few - to simulate take off and landing and turbulence. We build smaller machines to test components that go in and smaller machines to test the materials that go into components. So aircraft, vehicles, planes and trains all types of ground vehicles, buses, trucks, tires, everything related to cars, planes and trains. That's our traditional business. We've been in that business 50 years. We were founded in Minneapolis, Minnesota, grown up from there. We still do about \$400 million worth of production out of our plant in Minneapolis. Our customers are quite happy about that. One of the key things to remember is our business is fueled by R&D spending in the customer base and the OEMs, okay? A lot of investors get this wrong.

Our revenue stream is tied to the R&D spending of customers not their capital spending on plans, not how many cars they are building, it's how much they're spending on new development. And if you open the newspaper today, you see the regulatory environment for fuel efficiency intermissions, you see the move toward autonomous vehicles. Those are all drivers of our business, drivers of the test business. We have about \$4.5 billion of machines we have sold in the last 50 years that are still running and increasingly we are getting involved in the servicing of those machines, so keeping them running. You can imagine a machine for a 20 year life of a machine is breaking things, breaking cars, breaking airplanes, it requires a lot of maintenance, spare parts, software upgrades.

We're increasingly moving into providing that service to customers. They want us there and we're growing that as today about \$80 million of that \$500 million test business is test services, and that's growing at 7% to 9% kind of growth rate. So in terms of organic growth expectations for that test business, the equipment side of it, we say it's going to grow from 4% to 6% a year. It's 2 plus times GDP -- so we call that somewhere between 4% and 6% today worldwide. And then on top of that the services element's going to grow 7% and 9% a year of servicing our installed base. So that's the description of the test business.

Now you foot to the measurement side of the equation and that's our sensor business. So, we historically for about 35 years we have designed and built position sensors. So these go into industrial machinery to measure the position, the arm of a robot, the cutting head on a CNC machine, large saw placement for the lumber industry things like that. Lovely business, great business, it grew to be \$100 million over 35 years, all organically grown and very profitable. So we're talking 50% kind of gross margin rates 20% to 25% EBITDA margin rates, lovely business.

Problem is it was based on one technology in a lot of different product forms, along came a company called PCB late in 2015 and we looked at them, we liked the business very much, so we ended up acquiring them and we just -- the deal closed in July of '16. They brought to us a much broader portfolio of sensors that go into the industrial equipment space but importantly, about half the revenue came from selling sensors into the test space. These are sensors that go onto cars or planes as they are being tested.

So, that split and that coverage of both – industrial market for sensors and the test market for sensors very important task, because it brought us extra synergies. So we acquired them, we're integrating that business now with our traditional sensor business, so it will be a \$300 million business combined now. It's early days yet but we are very pleased with what we saw if we closed the deal and how the integration is going. That business is going to be growing at again 7% and 9% kind of organic growth rates and spinning off probably 23% 24% EBITDA margins. So a very strong cash generator.

In our business, we basically design and assemble machinery or components. So it's a very low CapEx business. So in terms of free cash flow, we generally convert most of our operating cash into free cash. We only consume about 3% of sales in terms of CapEx and most of that goes into software related to our manufacturing process. So a very low CapEx business which leaves us a lot of investment avenues for the rest of the cash. Our focus right now is delevering the business. We've always prided ourselves in having a strong balance sheet. We had to add some leverage for the PCB acquisition. We see bringing that leverage down in the next few years to 2-2.5 times EBITDA in the next few years and we're very comfortable with that in the long-term as we run the company. We do pay a dividend for roughly 40 years now. We yield today 2%-2.5% on the stock where it's currently trading and we're very proud of that.

So our plan from a cash perspective is support the CapEx required for organic growth, continue support the dividend and then delever the company as quickly as we can over the next few years. So we feel very good about our outlook. We run a very good CRM system. We have excellent visibility into our markets compared to most industrial companies and R&D spending in the world today is very stable and growing. So we feel very compared to most industrial companies, we feel very good about our demand profile, gives us a chance to plan for our growth and when we talk about those kind of organic numbers, we feel very good about those today. Markets remain relatively strong given the challenges our customers have in the regulatory environment with emissions and fuel efficiency and in the move of geography. They are selling obviously a lot more cars in China now, they are moving toward India and may be other emerging markets.

So our customers are forced to spend more in R&D and testing and that helps our business a lot. On the Internet of Things side, factory automation, we're very bullish on that in the long-term and while factory investments have been relatively low in the last few years, clearly the move toward smart machinery in factories is a trend that's unstoppable and our sensors are intimate with that. I mean they're integral to that whole expansion, measuring motion, vibration, stress, pressure things like that. So we love the business. We've been in the business for 50 years. PCB by the way was a 50 year experienced company as well, long history, big brand and big modes to entry.

We don't have a lot of emerging market competitors, virtually any quite frankly. And our customers are very happy with that because what they get in us and in our traditional competitors is confidence and the quality and the technology levels. We generally go to market as the technology leader and we try to get obviously a respectable value for that from our customers and they reward us with the lion share of their business in the markets we serve. So we're quite pleased and proud of that. So with that Ben maybe I could open it up for questions unless there is any area you...

Q&A

<Q – Ben Hearnberger>: It was a good overview and I'll go ahead and start. I've been told I talk too much so I'm just going to ask one question and open to the floor and I'll fill in as needed. You mentioned healthy longer term demand trends kind of mid-to-high single digits organic growth expectations over time. Most recently in the legacy test business orders in 3Q were a little bit softer than we expected. Can you talk about recent order trends and whether that was kind of unusual occurrence in 3Q relative to what you're seeing in the end market? And then also wanted to touch on the more industrial sensor side as well.

<A – Jeffrey Graves>: Sure. It's a little bit of an awkward time because we release earnings here in the next few weeks, so it's a little hard to comment at all on Q4. But I would tell you from a longer term perspective, we were very transparent in earnings calls about the opportunity pipeline we have. We track it closely to calibrate – In our test business, we work with customers, it's typical for us to work with customers for about two to three years on a new testing piece of equipment, okay, because they often have to put in a new building or renovate a building to contain this equipment. So we have excellent visibility into the demand profile in the long-term and then we track it very closely in the short-term.

So we'll talk about a 12-month opportunity pipeline which in Q3 the last quarter we talked about publicly was between \$900 million and \$1 billion toward \$1 billion of opportunity in the next 12 months of orders that are going to be placed. Now reality is, our history says 50% of those orders will float around in time. So when you talk about any one particular quarter we can have flatness or softness in orders profile driven primarily by these large projects that may move out a quarter. Say the building is not ready on the customer site or something little delay placing that order with anybody, okay? But in general, we have excellent visibility.

So, my confidence is looking out over the next few years and saying these trends are really solidly in place for our customers to spend more money on testing driven by safety environment a lot of those kind of standards either customer expectations or regulatory standards that are kicking in now. Any one quarter can be softer. I would also tell you given the demand profile, we are being very selective about the business we're taking to make sure it fits well with the company. We had as you know Ben you follow us closely, we've had some quarters where we always run a fairly high custom content on machinery. It's our business where we like to do the first of a kind machine and then replicate that as we sell it to OEMs around the world.

So any one quarter we can always take a hit with that in terms of a custom machine, it took us more time or something. We certainly have had some challenges there in the last couple of years

as our custom content – customer orders have grown rapidly. We've expanded -- workforce brought us some training tools, planning tools. So we're pleased with our positioning of it now. I would also tell you we're being reflective about our order intake and what orders we're taking to both reduce risk and performance into our margin enhancement.

So a big focus in test right now is margin expansion. So how do we get the most value for our technology? Because we believe -- the demand profile is solid and sensory bring us an enormous amount of growth opportunity. So we can afford to be a bit selective in our testing equipment and make sure we balance risk and provide value at the right price. So we have a big focus on margin enhancement. So I wouldn't worry too much about the overall demand profile, order intake rate. We have a very strong backlog of business right now, just want to make sure we're booking the best quality of business.

<Q – Ben Hearnberger>: And I'll ask a quick follow up, on the industrial sensor side, I know it's more book and ship I know you can't speak to 4Q. It's been relatively soft for the last couple of years. Are you seeing as of 3Q some stabilization now in the broader machinery and equipment spaces? It seems like there is some stabilization out there. And can you talk about the secular trend, your ability to kind of about what we're seeing in the industry just getting on more equipment?

<A – Jeffrey Graves>: Yeah, so we've had -- so the last two to three years in the industrial equipment space has been challenging. If you look at kind of the flagship big heavy industrial machinery companies, they faced very soft demands. We've generally been able to offset their volume challenges with new design wins. So we've kind of held our own. This year before the acquisition, it was continuing to be a challenge. There is not, in my opinion, there is not any product in the supply chain and we've pretty much seen the downside of it now. But the question is how fast will it come back? How fast will it reemerge? It's been a discussion before about some of these – their stocks have rebounded in anticipation of growing demand. So I would love to see that. As of Q3, it was still a relatively flattish market for industrial equipment.

So we were offsetting any volume drops, design wins to be relatively flattish. PCB, buying them really changed the game for us because it gives us a bigger value proposition for industrial equipment which is great and also exposes -- again, half that business was the test market. So driven by the strong test demand that brought us a much bigger growth profile in our sensor business even in the short-term. So we're bullish on that and any rebound in the industrial equipment space will be immediately felt by the business. So I don't want to be overly bullish there, but I think we're positioned pretty well for a rebound.

<Q>: [Question Inaudible]

<A – Jeffrey Graves>: It's very interesting. The actual cost of the components really put on the cars is relatively modest. I mean these sensing systems they have on cars which frankly speaking is why we're not in the automotive sensor space. I mean we really don't sell much into automotive industry itself to go on cars. We sell under the testing of cars. So the fact that they consume a little bit more R&D money putting their sensing technology in the cars really does not affect at all how much they have to spend on testing. Testing is still testing and whenever you

change the basic layout of a car, the basic body, say it's because you want to go to a hybrid electric drive train or an electric drive train or you want to automate some features of the car, it has to go through testing again because again, as you guys know, when companies get that wrong, it costs them an enormous amount of real money and brand issues, right? So it's all goodness for us.

The move toward autonomous vehicles is a really interesting one and certainly is going to drive more testing. The question is what kind of testing? How does it play with us? We got a great brand in testing in general and so the key question for us going forward with autonomy is what other types of testing should we be involved with around autonomous vehicles. **Clearly our bread** and butter on durability and aerodynamic performance is helped by any evolution of the car. So the question is where do we grow from there? What do we do from there?

<Q>: [Question Inaudible]

<A – Jeffrey Graves>: Yeah, we spent some money on autonomy. We spent some money actually participating a little bit in autonomy just to make sure we understand it where it's going. We talk to customers a lot about it. I'll give you an example. Many years ago, MTS was one of the first in on crash survival so crash sleds. Everybody's seen film clips of -- dramatic film clips of crash sleds slamming cars into walls and things, we built several of those and the company decided that wasn't going to be the market to be on. So we didn't do it. That business has largely commoditized. It's great -- people gain share, they -- so we stayed out of the crash survival business. Now you see the game is changed, it's not only survival, it's avoidance of crashes.

So whole new testing arena and many of the regulations around that are still evolving which is remarkable considering car companies are actually putting dates out there on when they're going to launch autonomous vehicles, a lot of regulatory considerations that drive the insurance industry are still being decided on. So once those are decided, you decide how you test for that and that's really where we come into play. So it's a really interesting area. We don't really have a position on it yet, on what we're going to do in that area, but durability is we're building from, aerodynamic performance and then we move into other types of testing from there. The testing is a great business for us. We have all of the major automotive customers as great multi-decade customers. So undoubtedly, we'll try to do more for them.

<Q>: [Question Inaudible]

<A – Jeffrey Graves>: So we've done -- great question, so we've done two things. In our second quarter this year, we had two big project or project areas that came -- that were being finished. They cost us more money than we have planned, okay? They were from great long-term customers and we needed to finish them off right and get them out there. But because of that we went back and earnings were off of plan in the second quarter we put out and that also had a ripple effect on revenue. There is a revenue recognition impact on that as well. So Q2 was disappointing to us. Q3 came back strong and what we said in the earnings call and we've continued to do is really look at the backorder business we've already booked and say okay, do we have a good risk management plan around it? Is there more we could do there? And then on the order intake side, make sure we were fully staffed from an engineering standpoint, make sure

we're using our engineers to work with the sales team and go through a little bit more concept design on some of these brand new first of a kind projects to make sure we really rung out the risk on them.

And we're either charging to reflect that risk or we're putting in risk abatement plans in the contract or more design planning in the contract. So, I think we're managing both our backlog and order intake rate right. So you may see, I would have told you the demand for these custom products is enormous, okay? So we could actually deliver much higher bookings rates if we elected to. We're being a little bit more picky now about -- picky is kind of a funny word but we'll be a little more selective about what orders we're taking, what we're charging for them, how we manage risk coming in on the custom side of our business to make sure that we don't overextend ourselves. We love the business. Engineers loved their own devices will design the most incredible machinery you've ever seen. You've just got to balance, get paid for it and what risk you take on in fixed price contract. Yeah?

<Q>: [Question Inaudible]

<A – Jeffrey Graves>: It's really interesting. So we have today about \$4.5 billion installed base of equipment running. To-date we sold six, \$4.5 billion still running. Our customers spent a \$1.2 billion a year by our estimates keeping our machinery running, \$1.2 billion. We today capture about \$80 million of that, a little more. Customers' biggest request to me when I took over the company four years ago as CEO was please do more services Jeff, please do more services because you're equipment is getting much more sophisticated. It's very painful for us to hire and train a bunch of engineers to maintain the test equipment and upgrade it, please do it. Obviously there is -- we have to do it at the right price, there has to be the right value proposition, but in order for them to hire and train the people to do it, these are often degreed engineers that are keeping the machinery running. So by some definition it's a back office job by very highly paid engineer, it's not designing, building or selling a car or an airplane.

So customers would really rather not do that if it's effective. So we've been building on our team. Today we are between 250 and 300 field service engineers and service folks around the world, so we've got a nice base. We're adding about 10% per year to that workforce which is about as fast as we can hire and train people effectively. Customers like it. We're able to go in now spare parts, software or – maintenance offer nice packages to do to meet their needs. So what we're talking about is probably 7% to 9% kind of growth rates organic growth rates on our services business which generally runs five plus percent higher margin than our equipment business depending on the customer and the geography. So we're really excited about it and our customer satisfaction actually goes up for doing it. It's just frustrating this whole process of building out the right folks to do it. Yeah?

<Q>: [Question Inaudible]

<A – Jeffrey Graves>: So I've got multiple questions to those tuned in on the recording, so status for PCB integration, the outlook for the future. So we're thrilled with PCB. It was very special to MTS because they had really nice exposure to both the industrial equipment space and the test space. So we're little bit different than a lot of other sensor companies because of this balance of

market exposure to testing and to industrial equipment. The integration has gone very well. So it's early days. We close in July but in terms of our pre-planning, we did extensive pre-planning. Our teams have now met across the company balance once we got through all the legalities of close, so on sales, on our factory footprint, on supply chain optimization. We got teams working on all of those integration activities I'm very pleased with the direction. They're getting some traction.

Certainly we advertise fairly -- well we advertise fairly modest numbers early on which kind of give a lot of visibility in the year-by-year synergies. But we talked about the four year synergies of integration, I would tell you we still feel very good about those numbers. I think not doing an enormous amount of acquisitions, we try to be conservative or very realistic about what we can realize in synergies. And I feel like we're on very good path there. In terms of demand outlook, we bring to PCB a much larger sales team, in the test space particularly a much larger sales team, a much larger exposure to China which has been very strong for us. China today is over 20% of the company, so we're in and out of China driven by laboratory spending, investment in labs. So that not only helps our test business, it ducktails right into the PCB business is exposed to testing. So we love that.

We expect that to get more traction. The PCB sensors need calibration and team maintenance, so we have now the service team to do that as they did not have that before in large part. In the industrial equipment space, they are having -- they've been working hard at design wins. I'm very bullish about the sensors they make in the industrial equipment space. I just think factory automation is going to boom over the long term and these machines are getting very smart very fast and sensors is at the heart of that because it's like the nerves in your fingers, that's where the machine data is taken is from the sensors. Where it goes now to the cloud and how they process it, that's someone else's business. Our business are the sensors that go into the machine and collecting that data. So I feel very good about that industrial equipment space as well. It's just been down last couple of years but I think we'll see it rebound here. Other questions? And maybe I've missed a part of that, was there something else embedded in there? Was there? Okay.

<Q>: [Question Inaudible]

<A – Jeffrey Graves>: Sure. So the question is on the competitive landscape. I would tell you there is unique competitors for each market we serve. For example, automotive testing, aerospace testing, materials testing, all different competitors sets largely, okay few overlaps but not many. I'll refer you to our investor presentation deck, it goes through market by market or what we believe our market share is and who the competitors are. I would tell you in general, let me paint it in general terms though, we generally compete with a number of private companies and the most serious of them across most markets like automotive and others are regional companies. So we offer a national value proposition.

So if you are a big automotive OEM and pick a name, General Motors, Ford, BMW, Daimler any one you like, Toyota, they are all serving multiple geographies. We're able to help them in any geography they want to put a lab. So our value proposition is technology leadership and a global footprint to servicing, selling the equipment and servicing the equipment. Our most serious competitors are very regional competitors. So German, Japanese other western type technology

companies but very regionalized. So they don't have the scale we have, they don't have the technology level we have. They go to market based on customer servers, local language, trying to be very responsible locally. So those are generally the competitive landscape is, us as a multinational firm versus those guys as regional firms. There are selective markets where we're up against the global competitor. The only market we serve – substance where we're not the largest market share in general is materials testing.

We've kind of carved off this niche of fatigue testing it's actually called durability testing for materials, we're really, really good at that and we've got the largest share we believe in that. But the materials market is much bigger than just quality control testing and things for materials which a couple of other companies are bigger than we are and that bigger part of the market. So we do have the materials market where in total which in – we look at the total number, we are probably number three in the world not number one in terms of market share. And in that case we are only up against really multinational companies in materials testing.

So to go into more detail now becomes very market specific, so just look at our book and you can go through each market segment and who we think the competitors are, okay? As a general brand, we go to market as a technology leader and we try to price accordingly and get value for that technology because it takes a lot of investment to get there. Others go to market with simpler machines that are truly probably lower cost and lower price point, less fidelity and less ability to do more complex testing. So depending on what a customer wants, they'll target a certain company.

<Q>: [Question Inaudible]

<A – Jeffrey Graves>: Yes, so it is important, we're not an enormous spending company on R&D, we spend – Andy we're 4% of sales on R&D, that's sufficient given the custom jobs we do where we'll develop a custom machine for which we only IP for. So if you really add those two components together, actually our R&D spending probably doubles, okay? So in terms of R&D spend, it's important to maintain because the technology level in testing is really going up fast or wants to go up very fast and we're the guys to take it there, okay? And the reason is these cars, planes and trains are becoming so complicated with onboard computers.

When you drive a car down to road today, many cars are going to drive by wire now, so you turn the steering wheel a sense of electric pulse, you're not really connected to the tires, if that doesn't frighten you. It is connected by a wire, which sends an electric signal. That wire sends a signal to a computer that talks to several other computers in the car, it says, oh we want to turn now. And by the way, the road is slippery, or the road has a bump or this or that. So all the tires respond differently. So all of what I'm saying is the car is becoming extremely intelligent and then you super impose autonomy on top of that. So now it has to not only do all that responsiveness stuff, but it has to sense other vehicles around it. So while I'm turning am I going to hit anybody? Things like that. The cars have grossly outstripped in ability to keep up with them from a modeling standpoint from its design.

So you could do conceptual design, you can get down the road with the design a little bit, - pun, you can get down the road with the design of the car. But then you would actually have to build a

prototype car and test it, okay? So the key to our success is making sure that our test machine can work well with our model and feed data to it very quickly. So literally in one room there's going to be running a model of a car on a fictitious road and can push a button and say I want a road in Mumbai or I want a road in Tokyo, it will feed the data to the test in the other room. The testing machine will operate, feed data right back to the model. I think we're the best in the world at that interfacing.

So taking data from the machine and interfacing it seamlessly with a model that the customer's running. We get a lot of questions around simulation. We are not moving directly into the simulation space and doing all these 3D computer models, what we're investing in is the ability to plug the machine -- the testing machine into those models, we call it hybrid simulation. So you're still doing a mechanical test but it's feeding data very rapidly into a very sophisticated model the customer's running, okay? So the practical difficulty is every customer runs different modeling routines, different design practices all of that. So we just want to be the best in the world in having our machines interfaced with the computer model, okay? The long way to answer to your question. Other questions?

<Q – Ben Hearnberger>: I've got one. Part of our thesis is that we're seeing top margins in the legacy test business that – and your stats have been kind of in the mid-teens most recent year, 11% 12% or so. I guess the question is can you get back to legacy margins without a mix shift back to more standard work just in better execution?

<A – Jeffrey Graves>: So yes, so the simple answer Ben there's three legs to that stool, getting margins and improved over time, one of them is operational excellence. It's just -- we're newer to implementing Lean in our factories. So we've got a lot of upside there in Lean, Six Sigma focusing on our factories. We're doing a lot more design for assembly – design for manufacture ability that kind of activity. So one's operational excellence. The other is strong focus on margins in terms of sales so which jobs do you want to take, how rapidly you want to take the mixture, make sure they are supporting a good margin for the business. And then the third leg is the overall mix and selling more services with the equipment really helps that. So we have services growing at 7% to 9% number for example, we have equipment growing 4% to 6% kind of number organically. So that mix shift between the higher margins service business and the equipment business should help us as well. So there are three parts of that is why we're bullish on margins and it is a very strong focus in the business right now.

<Q – Ben Hearnberger>: And you kind of touched on it but could you talk about some of the processes that have been put into place? It sounds like you're going over in more detail contract language, can you talk around how often you're working to the backlog? What level within the organization you're working to the backlog in that kind of detail?

<A – Jeffrey Graves>: So two things I would tell you, if you go back over the last couple of years, we've implemented the sensory base, we've implemented a lot of capacity planning tools. We run SAP in our factories, we've implemented a lot of planning tools around that to make sure we're appropriately staffed. Our systems are very complex, so you need bunch of different types of engineers to work on them to make sure we have the right mix of engineers for the jobs that we expect to turn in the backlog making sure we are even more fully staffing the pre-sales

activity and working with customers. So again, our sales process can run two or three years, so making sure we're working the customer doing conceptual design that we fully understand the cost of what they want us to do for them. So there's that bit.

And then once we land an order and it's in backlog, really beefing up and focusing on multi-discipline reviews the projects. So bringing engineering together with finance, with manufacturing with the supply chain guys to regularly review the highest risk projects to make sure we're trying to get ahead of the design phase or assembly phase as much as possible. Again, a large percentage of our work is custom type work meaning high unique engineering content. Historically it was over 60% of our sales for custom – what we classify as custom jobs, that's spiked up to almost 80% a couple of years ago and it's just come back down to 70% now.

So we like custom work because it raises the technology level on the industry and it differentiates us. You have to manage that risk well and make sure you're fully staffed in doing reviews. So, what we do now regular monthly reviews with all the disciplines in the business, we sit down and we look at even on the earliest days of our project how's it going? Are we on track from the schedule, performance and cost standpoint? And if not, how do we address it in the design phase rather than wait until for assembly? We'll bid us earlier this year in the second quarter, it was largely projects we had taken year and year and a half earlier that we got near the end of the assembly phase and realized that we had to tweak some design and that's very expensive. So pulling that earlier in the design phase to do adequate design reviews, make sure you're managing risk is very, very important to the business. So we're doing that much more than we did even two years ago.

<Q – Ben Hearnberger>: And then in terms of staffing, I know you intend to add service folks within your test engineering staffing levels you added in 4Q. How much runway do you have if you're growing 4% to 6% a year in that business under your current staff level?

<A – Jeffrey Graves>: We're fine. We only need modest, very modest additions mainly to deal with retirements and normal attrition in the test equipment business. So our focus in test from a hiring standpoint is really field service engineers. It's people dispersed around the world that are going to do service. Our engineering staff is fully staffed and stable and we just need to deal with normal attrition there. So we're in good shape. As many of you may know engineers are in great demand in the U.S. and it was painful a year back to get everybody – get hired and staffed and trained. They are on board now and working very well. And we may see some more headcount adds on the sensor side of business as we try to expand our product offerings and penetrate it because we expect some really exciting growth there, the test side is in good shape.

<Q – Ben Hearnberger>: Are we missing anything?

<A – Jeffrey Graves>: No I think the -- we try to be as transparent about the world as we can in this uncertain world. What I'm really pleased with as the CEO of MTS is that our revenue streams largely come out of R&D spending and that is probably the most stable spending in the world today. So we like that. We have good visibility into that. I think – and what drives that are these macro factors, these regulatory issues, the emergence of China as a consumer base for cars and planes and the increased technology for factory automation. So those macro trends where

you read in the newspaper is exactly what's hitting our customers and is driving our business. So no I think those were the right questions.

<<Ben Hearnberger, Industrial Technology Analyst, Stephens Inc.>>

Alright. Jeff, Andy, thank you very much for being here.

<<Jeffrey Graves, President and Chief Executive Officer>>

Thanks, Ben.