DESTINATION STARTUP

Resono Pressure Systems

One-Sentence Summary of What You Do: Resono provides novel unsteady pressure measurement solutions for advanced aerospace and energy applications.

Affiliated Institution: University of Wyoming

Have you formed a company yet? Yes

Funding/Financing: Grant Funding, Direct/Indirect University Support

Please describe your company and the problem you are trying to solve: Resono Pressure Systems, Inc. is a small technology startup located in Laramie, Wyoming that was spun-out of the University of Wyoming to commercialize unsteady-pressure-measurement systems developed at University of Wyoming Aeronautical Laboratories. The mission of Resono Pressure Systems is to provide innovative unsteady pressure instrumentation systems for engineering applications that depend on robust, reliable and accurate measurement solutions. Resono's underlying technology enables remotely mounted pressure sensors to be used effectively for unsteady pressure measurements. A capability that does not exist as an off-the-shelf commercial solution. This technology is currently at TRL level 5. Resono has developed several prototypes and demonstrated the technology to potential customers in different markets. As a result of customer discovery efforts, U.S. Air Force Research Laboratory has awarded Resono with a Phase II STTR contract to develop and deploy two commercial prototypes. The underlying algorithm in Resono's software is copyrighted. Certain parts of the technology are kept as trade secrets. We are preparing the necessary documents to file two patent applications, one design patent and one utility patent.

What is/was your go-to-market strategy? Pressure is an important quantity in aerodynamic characterization of many engineering systems. Accurate unsteady pressure measurement is highly critical in assessing the noise levels, performance and safety of the engineering system under development. These types of measurements are common in aerodynamics R&D in industry, academia and government research and test & evaluation laboratories across a very wide range of applications including, but not limited to, aerospace, automotive, sports, wind engineering (building aerodynamics), and wind energy. Our technology provides flexibility and robustness at a competitive price and it has particularly received significant interest from aerodynamic and propulsion research, development, test, and evaluation facilities. With a market price of $100,000 for our laboratory system, we estimate the worldwide market opportunity in the aerospace wind tunnel testing segment alone to be around $50M. At this time, we are focusing on the domestic $5M market associated with the aerospace wind tunnel testing segment. In addition to direct communication with our potential customers, Resono has partnered with two major pressure sensor manufacturers.

These manufacturers believe that Resono's technology can increase the utility of their products to market segments that have not been historically available to them. Resono is taking advantage of this opportunity to conduct customer interviews and expand its list of potential customers.

How will/do you generate revenue? Our business model relies on two revenue generating channels: single sale of our hardware and reoccurring income from subscription fee associated with our data analysis and processing software services. Initially, we are planning to fabricate our hardware system using OEM components and other custom-built elements. This approach would allow us to control the company's cost of operation until the completion of the beta-testing round (first 4 customers in each market segment). Once our systems have been fully tested by customers, and necessary features are added to the hardware components, we will seek licensing opportunities to scale our production and reduce our operating costs. For software, we will continue developing our software and maintaining it internally. Many features are in the works, and, by subscribing to our software service, we can continuously offer newer versions (and enabling add-on features) to our customers.

How will this showcase benefit your company or technology? We have validated our technology and the market for it. We have potential costumers with different industry backgrounds that are ready to purchase our product once it is launched. To take our technology from a prototype to a commercial product we seek $500K to support and grow our team by hiring key employees with needed skill sets. We seek venture capital financing since we believe it can provide our company with a valuable source of guidance and consultation. VC financing can help us with a variety of business decisions, including financial management and human resource management.

Who are the members of your team and why is this the right team to get the job done? Resono Pressure Systems' team consists of individuals with a wide range of specialties and experiences. The technology advisory and administrative team (Dr. Jonathan Naughton and Dr. Stephen Whitmore) have several decades of experience in aerodynamic measurements in wind tunnel and flight test applications, with particular experience with unsteady pressure measurements. They also have experience in managing large multi-disciplinary teams in government-funded projects. The engineering team members (Dr. Pourya Nikoueeyan, Mr. Michael Hind, Mr. John Strike, and Mr. Marvin Perry) have several years of experience in designing, conducting and analyzing wind tunnel measurement experiments and wind turbine field testing, including the measurement of unsteady pressure. Mr. Marvin Perry has extensive experience in developing and deploying instrumentation systems for customers in a wide range of industrial and scientific applications.