

Driving Job Growth: Small Business Innovation and Research

U.S. Senate Committee on Small Business & Entrepreneurship

Field Hearing
Museum of History and Industry (MOHAI)
Microsoft Lakefront Pavilion
860 Terry Avenue North
Seattle, WA 98109

April 24, 2014

Testimony of
Robert Afzal

Lockheed Martin Aculight

Hello. My name is Robert Afzal and I am a Senior Technical Fellow at Lockheed Martin Aculight Corporation and formerly the Vice President of Research & Development at Aculight Corporation in Bothell, WA.

In 1994 Aculight Corp. was founded by 5 scientists after being laid off from another company following the Fall of the Berlin Wall and the end of the SDI Program. Not wanting to leave the beautiful Pacific Northwest they started a company to focus on Research and Development on Lasers for Aerospace and Defense but with an eye to one day commercializing laser technology. They started off by doing studies and analysis and slowly but surely their business grew as they continued to secure contracts from the US Government and from the Primes. As they hired more scientists, engineers and technicians, they secured more contracts and were able to establish development laboratories to build hardware and prototypes to validate their ideas.

Their core business was creating and generating new ideas in lasers and electro-optics to be demonstrated in experiments and prototypes to serve the US Government and prime contractors. They were able to focus their core laser technology to the applications for Infrared Counter measures (defeat of heat seeking missiles) 3-D airborne lidar mapping for generating high resolution maps for geospatial information systems and for Directed Energy Lasers for next generation weapons capability. These are still core applications we are working today.

The SBIR Program played a crucial role in the development of Aculight and the development of the technology in two tangible ways. First was the SBIR call for topics. This was a way for the US Government departments to communicate their needs so small innovative businesses could bring their ideas forward and established relevancy. This method helps ensure the innovative ideas brought forward, are related to a national need. Second and most importantly, it provided the funding to develop the ideas further and in the cases of Phase II and Phase III funding demonstrate the ideas in tangible proof of concept demonstrations. Although the SBIR Program did not provide sufficient fund to fully develop a product for production it did enable the product to be developed to a point where the

risk of product development was significantly reduced for further investment paths such as equity capital or from a large corporation funding. That said, at Aculight there we 2 examples of how SBIR Programs lead to Products that were developed and sold to the market. First, leveraging an Air Force SBIR for a pulse fiber lasers for target identification, Aculight was able to develop and sell a similar laser for the airborne laser mapping market. These lasers are sold throughout the world and are helping generate foundational data for Geospatial Information systems. Second, leveraging an SBIR from the Missile Defense Agency, Aculight developed a product which is still being sold to Universities and Research Labs world-wide for ground breaking scientific research in the area of spectroscopy including to Nobel Prize winning Research labs.

As successful as those examples are, as Aculight continued to mature its concepts and technology, its targeting for acquisition by Lockheed Martin is an even larger measure of its success. In September of 2008 Lockheed Martin acquired Aculight and now the innovative small company has the strength and resources to bring those ideas and technology to bear to address our pressing National needs. We have continued to develop and advance those core technologies, but now have the opportunity to bring them to support our warfighters. At that time, Aculight was 85 people and has now grown to over 120 and we continuing to hire. Lockheed Martin Aculight has brought in ten's of millions of dollars in contracts that are feeding the economy for jobs in Washington State, but also supporting work at other Lockheed facilities throughout the Country. Now as a Prime, we are looking back into the SBIR Program and looking at those new small innovative businesses developing the next generation of solutions that we can utilize.

The SBIR Program helped enable our growth. It provided a playing field where small innovative companies could respond to National needs and where the market place of ideas can bear them out. It provides an additional funding pathway that's not tied to equity investment and more importantly some patience in advancing technology with a longer development timeline.

Thank you.