



RebellionPhotonics

Allison Lami Sawyer
Chief Executive Officer
www.rebellionphotonics.com
@RebellionPhoton
Houston, TX

STATEMENT FOR THE RECORD

MRS. ALLISON LAMI SAWYER

BEFORE THE HOUSE COMMITTEE ON SMALL BUSINESS

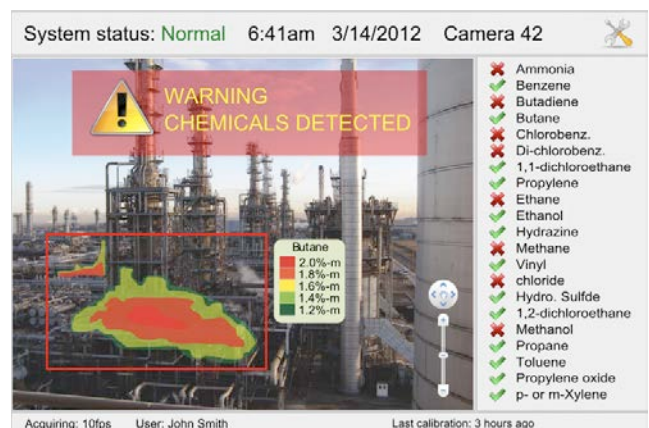
NOVEMBER 20, 2013

Members of the Committee, on behalf of Rebellion Photonics, I want to thank you for the opportunity to speak to you today.

My name is Allison Lami Sawyer and I am the CEO/co-founder of Rebellion Photonics, an optics startup out of Houston Texas. Rebellion Photonics' specialty is, as you would expect, Photonics, which is any engineering concerned with light and Rebellion's mission is to solve some of the world's toughest problems.

Rebellion Photonics was recently named 'Startup of the Year' by Wall Street Journal for our work in Oil and Gas safety.

Explosive gas leaks on oilrigs and refineries are one of the largest problems facing the Energy industry today. Leaks, when not detected early, accumulate into dangerous clouds that can ignite when they reach a certain concentration. Current leak detectors are grossly inadequate. Furthermore, the alarms are too often ignored by the crew, who are desensitized by daily false alarms. In an age where a single explosive accident can cost billions, the leak detection market required an entirely new way to monitor explosive gas leaks.



Rebellion Photonics was named Wall Street Journal ‘Startup of the Year’ because we have created the world’s first Gas Cloud Imaging (GCI) camera. The Gas Cloud Imaging (GCI) camera offers full scene coverage at a fraction of the cost of other services and with a display that will not be ignored by the crew. The GCI continuously monitors, quantifies, and displays gas leaks in real-time video with automatic alarms. Rebellion began full-scale installation earlier this year with companies such as, BP.

The Gas Cloud Imaging camera is a game-changing product that showcases how startups are capable of revolutionizing even the stodgiest industry.

Current procurement process hurts startups and the government

Rebellion Photonics is capable of creating a game-changing camera that would revolutionize the drone space while also lowering the costs of the industry.

Currently drones need to be piloted by highly trained (i.e. expensive) professionals that cannot be sure of what they are seeing with regular drone cameras. Using our real-time chemical imaging technology, Rebellion could create drones that actually know what they are looking at. This would mean fewer mistakes, which could help American foreign relations and therefore the world.

For example, a terrorist is identified getting into a vehicle. Rebellion’s camera could automatically track that specific vehicle forever, even if the vehicle went under a tunnel or was hidden from view for a time. Rebellion’s drones would also be able to tell the difference, automatically, between friendly fire and enemy fire. Essentially we could open up a whole new age of drone applications that would drastically cut down on the current drawbacks to using drones.

We at Rebellion would love to create this product for our country, but unfortunately we cannot for one main reason – a failed procurement process.

America owes much of its success to free market capitalism and yet the U.S. Government has boxed itself out of the free market due to the extremely complex procurement process.

The main problems with the U.S. procurement process are:

- There is little motivation for vendors to finish jobs early. In fact, they are typically paid more when they drag out the contracts.

- The process practically demands that the vendors only work for the U.S. government. This added infrastructure rules out the vast majority of possible suppliers.
- The current potential contracts are not well advertised, so most non-government vendors do not know of the possibility.
- The additional accounting and infrastructure fees that are associated with government contracts are unnecessarily high.
- Government officials are not required to go actively search for the best possible vendor, like a normal company, but passively wait to see who applies.

Everyone would benefit from a drastically streamlined procurement process:

- *Large defense contractors* are currently set up to only do defense because the procurement process basically forces them to be. If they could act like normal companies, then defense contractors would be able to more easily diversify. Therefore they would be able to handle the inevitable swings in the defense budget without massive layoffs that affect hundreds of thousands of U.S. citizens.
- *The government* would be able to cut defense costs without sacrificing quality. Startup and non-defense companies are generally leaner because they do not have the excess infrastructure required by the current procurement procedures. By opening up the playing field, the government would benefit from vendors bidding in a free market setting.
- *Start-ups* would finally be able to sell to the world's largest customers and have the opportunity to fix some of the world's largest problems.

The failed rollout of Obamacare is an excellent example of the flawed procurement process. Dozens of US-based companies could have done a better job, but they did not even apply for the job because the procurement process only allows for government-only vendors.

SBIR research grants are one part of the process that are successful

It is not always obvious what will come of a federal research grant. Would you expect that a federal research grant from the National Institute of Health for “Image Slicing Spectrometer for high resolution sub-cellular microscopy” would eventually revolutionize oilrig and refinery safety? The researchers themselves could not have guessed how far their invention would go, but go it did.

Over three years ago, Robert Kester and I founded Rebellion Photonics around the technology he and his colleagues created using a federal research grant. Within the past two years we have created 7 jobs, raised \$1.1 million in venture funding, become cash flow positive, and created products that truly make the world a safer place.

Rebellion Photonics produces video cameras that can identify and quantify chemicals- essentially our video cameras 'see' chemicals, not just colors. While this type of technology, called hyperspectral imaging, has been around since the 1980s, researchers were forced to wait minutes, even hours to see results. Our cameras take milliseconds and therefore allow the first true real-time chemical imaging video.

The technology was initially invented to see live chemical reactions within cells for medical research. We do sell cameras for researchers, but with the help of grant funding for basic R&D we have been able to expand our product range.

Critically, the company won \$1.6 million in competitive federal grants through the Small Business Innovation Research (SBIR) program, which provides \$2.5 billion in annual seed-stage funding for small businesses meeting national research needs.

Grant funding has allowed our company to do high-risk R&D to create high impact products such as our Gas Cloud Imaging camera for the oil & gas market. Instead of traditional point detectors that are notorious for false alarming, rig and refinery workers will actually be able to see the leaks on their site.

Thank you.

Allison Lami Sawyer
Chief Executive Officer
(832) 274-6950
Allison@rebellionphotonics.com
www.rebellionphotonics.com