

Written Statement of Craig Bandes, President & CEO of Pixelligent Technologies

Small Business & Entrepreneurship Committee Hearing

March 19, 2015

Thank you Senator Vitter and Senator Cardin for the opportunity to speak today on protecting innovation and entrepreneurship in patent reform. I believe that protecting and finding ways to accelerate innovation are critical in supporting the high tech entrepreneurial community in the United States.

My name is Craig Bandes and I am the President and CEO of Pixelligent Technologies, an advanced materials company that is leveraging nanotechnology to deliver the next generation of high index materials for Solid-State Lighting and Optical Components and Films applications. Our proprietary nanomaterials are incorporated into LED lights and OLED lighting to dramatically increase light output and into touch screens to improve scratch resistance and improve image quality. We currently have 13 issued, 2 Allowed, and 22 pending patents, 2 trademarks, and numerous trade secrets. We consider our intellectual property to be one of our most valuable and critical assets. In 2014, we spent just under \$200,000 in patent filing and legal fees and we expect to spend over \$200,000 in 2015. Pixelligent is currently commercializing our technology after 10+ years of research and development, application development and manufacturing scale up. This development has been supported with over \$23M in equity financing and \$11M in Federal grants from NIST, DOE, NSF, and DoD. We are currently recognized throughout the world as one of leading emerging electronics materials companies, working with companies such as 3M, Dow Chemicals, LG, Samsung, Sylvania Osram and 50+ others. Our main competitors are in Asia and are billion dollar multinationals.

Our competitive advantage is based on the quality of our materials, including how they are synthesized, coated, incorporated and manufactured, and in turn the patents that protect all of these processes and the resulting applications. As a company, we spend an enormous amount of time developing intellectual property strategies to protect our novel and powerful nanotechnology and rely heavily on the quality and breadth of our patents to protect our competitive advantage.

One of the biggest challenges that faces an emerging technology company such as Pixelligent, is convincing large multinationals to incorporate our technology into their products. This initially entails getting them to purchase a sample of our products where they can demonstrate the properties and value of our material for themselves. Once successful with this step, the conversation moves to our ability to provide the material at the right scale and at volume pricing. The last hurdle then comes down to the customer performing a patent search in order to make sure that if they are successful in

developing a new product around our material, that they will have the Freedom to Operate (FTO). At this stage our customers will invariably find some prior art that may or may not be relevant and/or a concern. If they are not convinced they can bring the product to market without the risk of potential patent liability, they will kill the project. This is clearly a step in the product development and acceptance process where we can exert the least amount of influence and Pixelligent cannot afford to provide the same kind of indemnities larger companies are capable of providing. It all comes down to the quality and the number of patent(s) that we have in our portfolio that enable us to defend our proprietary and competitive position and close the sale.

As with any company where intellectual property is a critical component of their overall business strategy, Pixelligent relies heavily on the PTO and the experience of the patent reviewer, the timeliness of review, and the ultimate quality of the patent issued by the PTO. There is currently a great deal of time being dedicated to the Innovation Act and patent trolls, however, I believe that the current backlog of patents to be reviewed, which as of February 2015 was just under 600,000 with an average review time of 2.3 years, is an issue that is also worthy of being explored and addressed. The vast amount of potential market and real economic value that this many potential patents represents is an enormous opportunity for this country, and one that could dramatically improve the competitive landscape for the high tech entrepreneurial community in the U.S.

Thank you again for the opportunity to speak today and I look forward to answering any questions you may have.

Craig Bandes Biography

Craig Bandes, President & CEO of Pixelligent, has over 20 years of combined experience as an entrepreneur, CEO, and Angel investor, building companies in the technology, defense, and professional services industries. Since joining Pixelligent in early 2008, he has restructured the company, enabling it to successfully emerge from a reorganization process, refocused its product strategy, and raised nearly \$23 million in equity funding. In addition, the company has been awarded over \$11 million in federal grant programs, and has entered into numerous product development partnerships with technology leaders and Fortune 100 companies. Prior to Pixelligent, Mr. Bandes was the President and CEO of Global Secure Corp, a high-tech homeland security company, which in just over four years grew from a start-up to 250+ employees, achieved revenues of over \$40 million, completed three acquisitions, raised over \$25 million, and filed for an IPO. He was a co-founder of Focus Technology Consulting, which ranked #14 on the 2008 WashTech Fast 50. Mr. Bandes has negotiated over \$300 million in financial and strategic transactions in the United States, Asia, and Europe and he sits on numerous company boards. Mr. Bandes serves on the advisory board for the Nanobusiness and Commercialization Association, the leading nanotechnology association. He is a graduate of Babson College.