

2007-2008 Alabama Launchpad entry
Thomas Walter Center for Technology Management
Auburn University

The objective of this business is to commercially develop a proprietary Electro-active Polymer (EAP) material invented at the College of Engineering, Auburn University. Electro-active polymers convert electric energy into mechanical motion or apply pressure on command. This modern-age, inexpensive material produces high-strain (i.e., high physical response) when electricity is passed through it. Its properties make this new material attractive to the actuators/sensors industry, which is worth about \$40 billion worldwide. Auburn University will license the material to PASI. The unique combination of properties of this material are: (1) displays high strain response (physical change), (2) exerts far higher pressure than competing materials, (3) works under high frequency (> 1 kHz) conditions, and (4) costs less than competing materials in the market.

EAP-based products are on the verge of revolutionizing the field of electro-mechanical actuators and sensor industry because of their extraordinary performance and superior cost efficiencies. Examples are: camera apertures, Micro-Electro-Mechanical Systems (MEMS), automotive fuel-injection systems, electromagnetic actuators, small motors, generators and sensors used in products ranging from automobiles to audio speakers. This proposed startup will commercialize the new material by developing useful products with negligible EAP-based competition. With opportunities ripe for hundreds and thousands of potential products made of this material, there is a wide open market space for newly developed products using this proprietary material. This business seeks funding from angel investors or venture capital firms for three years to convert this material into several commercially successful product lines. In the first three years it will employ several scientists and product development engineers to custom develop new products for a range of industries. The company would generate cash flow by licensing new products, or by spinning off new businesses to generate revenue from the sale of new products.

Contact: Dr. Paul Swamidass; swamidass@auburn.edu
January 2008