

## **Industry Cluster Initiative**

On October 20, 2004 Governor Rick Perry announced his vision of building the future economy of state of Texas. That vision, which focuses on building competitive advantage through six target industry clusters, continues Governor Perry's commitment to job creation and economic development. Job creation, one of Governor Perry's top priorities, is the only sure path to future prosperity and to funding the state's important priorities like education and health care. Furthermore, in 2003 the Texas Legislature passed SB 275 calling for the development of strategies to strengthen the competitiveness of key industry clusters. As a result, the state is required to identify these industry clusters, including a number of specified industries, and develop strategies to address economic growth and quality of life issues.

## **Texas' Target Industry Clusters**

**Advanced Technologies and Manufacturing**, including four sub-clusters:

- Nanotechnology and Materials
- Micro-electromechanical Systems
- Semiconductor Manufacturing
- Automotive Manufacturing

**Aerospace and Defense**

**Biotechnology and Life Sciences**

**Information and Computer Technology**, including three sub-clusters:

- Communications Equipment
- Computing Equipment and Semiconductors
- Information Technology

**Petroleum Refining and Chemical Products**

**Energy**, including three sub-clusters:

- Oil and Gas Production
- Power Generation and Transmission
- Manufactured Energy Systems

## **Texas Emerging Technology Fund – Investment Breakout by Industry Cluster**

### **I. Advanced Technologies and Manufacturing**

#### **Commercialization Investments (D) - Semiconductor**

Recipients Name	Website	Investment	Region
Smooth-Stone	<a href="http://www.smooth-stone.com">www.smooth-stone.com</a>	\$ 1,000,000	Central Texas
Syndiant	<a href="http://www.syndiant.com">www.syndiant.com</a>	\$ 3,500,000	North Texas
Xitronix	<a href="http://www.xitronixcorp.com">www.xitronixcorp.com</a>	\$ 500,000	Central Texas
Photodigm	<a href="http://www.photodigm.com">www.photodigm.com</a>	\$ 749,829	North Texas
Molecular Imprints	<a href="http://www.molecularimprints.com">www.molecularimprints.com</a>	\$ 3,000,000	Central Texas
Total:		\$ 8,749,829	

**Smooth-Stone, Inc.** is leveraging technologies evolving out of the cell phone platform into an innovative server system design that brings the drivers of server platform performance – compute engine, I/O, and memory – into a more power-efficient balance. Smooth-Stone will develop semiconductor and open-source software building blocks for server OEMs, with the result of a 25x improvement over today's volume server platform in throughput-performance/watt.

**Syndiant, Inc.** is commercializing their VueG8 technology. The VueG8 is a breakthrough light modulation technology that will enable “the world’s smallest media projectors” suitable to be used in mobile devices such as cell phones and digital cameras. The novel technology has successfully demonstrated its ability to provide “excellent single panel color field sequential operation required for ultra-portable projectors.”

**Xitronix, Inc.** is a leader in the development and implementation of high precision Polarization Modulation Photo-Reflectance ("PMPR") metrology equipment for the worldwide semiconductor device manufacturing process control market. PMPR technology provides process engineers the unprecedented capability to measure strain and active dopant in nanoscale silicon structures. Direct sensitivity to active electronic properties of nanostructures is a high priority need in IC manufacturing.

**Photodigm, Inc.** is an innovator in semiconductor diode lasers for precision applications. The company's products deliver unsurpassed performance for spectroscopy, non-linear optics, precision instruments, and high speed pulsed operation where single frequency operation is critical.

**Molecular Imprints, Inc.** is the technology leader for high-resolution, low cost-of-ownership nanopatterning systems and solutions in the hard disk drive and semiconductor industries. MII is leveraging its innovative technology to become the market leader in patterning solutions for storage and memory devices, while enabling emerging markets in optics, biotechnology, and other industries.

## Commercialization Investments (D) - Robotics

Recipients Name	Website	Investment	Region
Agile Planet	<a href="http://www.agileplanet.com">www.agileplanet.com</a>	\$ 650,000	Central Texas
Hanson Robotics	<a href="http://www.hansonrobotics.com">www.hansonrobotics.com</a>	\$ 1,500,000	North Texas
itRobotics	<a href="http://www.itrobotics.com">www.itrobotics.com</a>	\$ 750,000	Central Texas
Total:		\$ 2,900,000	

**Agile Planet, Inc.** will provide advanced robot control software for existing and new robotic hardware. This software will enable next generation systems that significantly reduce integration and lifecycle costs, while improving performance and the capability for human interaction. Using technology developed at UT-Austin, Agile Planet's principals have successfully demonstrated to industry leaders a proof of concept RobotLogix system that enhances the capability of a de facto advanced manufacturing controller with robot motion control.

**Hanson Robotics, Inc.** was founded for one purpose: to design, develop, produce and distribute revolutionary, interactive bio-inspired conversational robots, including the world-famous Albert-Hubo featured internationally through countless media organizations.

**itRobotics, Inc.** has developed the first autonomous, tether-free robotics crawlers to internally inspect small-diameter pipes and non-piggable pipelines. Our tools' competitive advantages also include the ability to accommodate variations in the internal diameter of the pipe & autonomy and ability to reduce speed, stop, and reverse direction to more thoroughly inspect portions of pipe with suspected damage.

## Commercialization Investments (D) - Nanoelectronics

Recipients Name	Website	Investment	Region
Quantum Logic Devices	<a href="http://www.quantumlogicdevices.com">www.quantumlogicdevices.com</a>	\$ 600,000	Central Texas
Stellarray		\$ 750,000	Central Texas
Total:		\$ 1,350,000	

**Quantum Logic Devices, Inc.** was incorporated in September 2000 to provide faster, smarter, less expensive tools for drug research and medical diagnostic applications. Over the last five years the company has developed its core technology, base on single electron devices, into a platform with the ability to electronically detect single molecule of DNA or a single antigen in a simple, rapid, and highly specific assay without fluorescent labels.

**Stellarray, Inc.** was formed to commercialize flat panel X-ray sources (FPXS) that will solve important problems in the sterilization (medical, mail and food), security and industrial imaging, and medical imaging markets. FPXS panels can solve known industry problems in conveyor belt or autoclave systems which bring the radiation close to the material for high throughput at lower, less dangerous energy levels, and self shielding from opposite panels.

## Commercialization Investments (D) - Nanocomposites

Recipients Name	Website	Investment	Region
NanoComposites	<a href="http://www.nanocompositesinc.com">www.nanocompositesinc.com</a>	\$ 1,500,000	Gulf Coast
NanoTailor	<a href="http://www.nanotailor.com">www.nanotailor.com</a>	\$ 250,000	Gulf Coast
Total:		\$ 1,750,000	

**NanoComposites Inc.** develops nanotechnology-enhanced materials for use in seals and gaskets for the energy market. Our proprietary technology is enabling practical applications of these carbon nanotubes in elastomers -- with the potential for many more applications.

**NanoTailor Inc.** is a manufacturer of single walled carbon nanotubes (SWNT), having applications in global industries such as aerospace, energy, defense, pharmaceuticals, and other consumer applications and products. By building a scalable automated manufacturing machine Nanotailor will produce a low cost consistent batch of functionalized SWNT that will not use metal catalyst and have a purity level of 90% or better.

## Commercialization Investments (D) - General

Recipients Name	Website	Investment	Region
Smartfield, Inc.	<a href="http://www.smartfield.com">www.smartfield.com</a>	\$ 750,000	West Texas
MicroZAP	<a href="http://www.microzap.net">www.microzap.net</a>	\$ 500,000	West Texas
ScanTech Sciences	<a href="http://www.scantechsciences.com">www.scantechsciences.com</a>	\$ 2,000,000	Rio Grande
Pronucleotein Biotechnologies	<a href="http://www.pronucleotein.com">www.pronucleotein.com</a>	\$ 1,000,000	South Texas
Animal Innovations	<a href="http://www.animalinnovations.com">www.animalinnovations.com</a>	\$ 1,000,000	West Texas
Chipotle Business Group	<a href="http://www.chipotlegroup.com">www.chipotlegroup.com</a>	\$ 700,000	North Texas
Ironbridge Technologies	<a href="http://www.ibtxinc.com">www.ibtxinc.com</a>	\$ 1,000,000	Central Texas
Mayan Pigments*	<a href="http://www.mayanpigments.com">www.mayanpigments.com</a>	\$ 750,000	Trans Pecos
RFMicron*	<a href="http://www.rfmicron.com">www.rfmicron.com</a>	\$ 925,000	Central Texas
Total:		\$ 8,625,000	

\* Represent Pre-Seed investments with \$1,000,000 encumbered; further investment is based on successful accomplishment of milestones

**Smartfield, Inc.** is developing an irrigation management system to save growers from overwatering their crops. Their product determines when a crop needs to be watered and shuts down watering operations during a storm. Using this new technology, crops will be watered only when they need to be watered, reducing expenses and eliminating water wasting.

**MicroZap** is developing a way of sterilizing food through the use of microwaves. Rather than use chemicals or heat to sterilize food, leaving either harmful residue or necessitating a greater energy input, the use of microwaves to sterilize food. The microwaves, or radio frequency waves, kill bacteria and pathogens at a lower temperature and within seconds. The use of this new technology is safer and more energy-efficient than previous methods of food sterilization.

**ScanTech Sciences** is producing irradiation equipment to disinfect produce and increase food safety. The equipment uses electron beams to irradiate the food, which can lead to a host of benefits. The use of the e-beam technology will allow growers to pick the fruit closer to ripeness, as well as cut back on the use of chemicals. The end product will also have a longer shelf-life than produce disinfected by traditional methods.

**Pronucleotein Biotechnologies** is developing a fluorescent assay system hand-held (FLASH) reader for use in the food industry. The FLASH reader uses DNA components to create a faster and more sensitive way of detecting food and water borne pathogens, including *E.coli* and *Salmonella*. The reader can detect as little as ten bacteria per millimeter. Further, the reader produces results in fifteen minutes, eliminating the delay caused by lab work.

**Animal Innovations** is producing Animal Injection Technology (AIT) machines for use in distributing medications to cattle. Upon input of the animal's weight, the AIT system calculates the correct dosage, the number of injection sites, and dispenses the correct amount. The AIT system can fill a syringe faster than other methods (in less than ten seconds) and protects the medication from heat and cold to ensure effectiveness.

**Chipotle Business Group** is developing a water testing system that will directly address one of the EPA's four key elements. Their water testing system, called Multiple Simultaneous Immunologic/Reagent Testing System (M-SIRTS), operates using concentrations of physical-chemical properties to detect reactions between the reagents and the subject being tested. The M-SIRTS can be operated by field personnel and does not require a lab technician which is novel in the marketplace.

**Ironbridge Technologies** is creating a new form of self-heating food packaging technology. The packaging consists of an insulated foil pan set atop a small amount of iron. Upon pulling a tab on the lid, air can enter the package, causing a reaction between the iron and oxygen to produce heat. The heat brings the food within the foil pan to the appropriate temperature safely and efficiently. This product addresses the growing need for fast and convenient hot meals.

**Mayan Pigments, Inc.** is an El Paso-based company introducing break-through technology to produce a wide range of innovative hybrid pigment colors that address problems in the current market. The present commercial line of Mayacrom® pigments consists of six colors; red, blue, yellow, violet, royal blue, and green. This initial set is produced by an environmentally friendly, low cost manufacturing process which involves the synthesis of organic and inorganic molecules, resulting in a hybrid pigment that exhibits exceptional physical and chemical properties. The process gives off no known hazardous waste by-products, and the products contain no heavy metals.

**RFMicron, Inc.** is producing their self-tuning Radio Frequency Identification Device circuits (RFID's). These circuits, also known as tags, will allow a more precise monitoring of companies' materials throughout the world by utilizing technology that allows RFID tags to self-adapt to the item it is mounted on, thus preventing a loss or malfunctioning of the tag and product anywhere in the world, a common problem with current RFID circuits.

## II. Aerospace and Defense

### Commercialization Investments (D) - Aerospace & Defense

Recipients Name	Website	Investment	Region
AgileMesh	<a href="http://www.agilemesh.com">www.agilemesh.com</a>	\$ 2,000,000	North Texas
1 <sup>st</sup> Detect	<a href="http://www.1stdetect.com">www.1stdetect.com</a>	\$ 1,800,000	Central Texas
Advitech	<a href="http://www.advitech.net">www.advitech.net</a>	\$ 2,500,000	South Texas
StarVision	<a href="http://www.starvisiontech.com">www.starvisiontech.com</a>	\$ 750,000	North Texas
Falcon International	<a href="http://www.falconintrnl.com">www.falconintrnl.com</a>	\$ 850,000	Trans Pecos
Total:		\$ 7,900,000	

**AgileMesh, Inc.** is focused on developing products for a wide variety of applications where video surveillance is needed on a situational basis. Their technology is easy to deploy by non-technical users and works with virtually all existing analog and digital (IP) specialty video equipment, including bomb robots, thermal imagers and negotiator throw phones. AgileMesh's gear is used in tactical, overt, covert operations, at special events for monitoring and crowd control, and anytime surveillance is needed in a location where it didn't previously exist. AgileMesh equipment is used by law enforcement (SWAT, investigative units, etc.), fire departments, VIP-protection details, OEMCs, and military entities.

**1<sup>st</sup> Detect, Inc.** offers the breakthrough Miniature Chemical Detector that revolutionizes the chemical detection market by combining the performance of mass spectrometry in a small, easily portable package. The Miniature Chemical Detector, about the size of a shoebox, provides rapid analysis time and is capable of detecting residues and vapors from a wide range of chemicals including explosives, chemical warfare agents, toxic chemicals, and volatile organic compounds. This disruptive technology comes at a significantly reduced cost, allowing for new markets and industries to take advantage of this breakthrough in chemical detection.

**Advitech, Inc.** is determined to end the problem of motion sickness and spatial disorientation (or vertigo). Advitech's X-Motion technology gives feedback to the wearer by presenting specialized visual information through a head-mounted device, which continuously reconciles disjunctive sensory input to the brain by stabilizing the inner ear, controlling abnormal eye reflexes and aiding or confirming the body's sense of position through body pressure. The device has the appearance of a pair of sunglasses, with a small display in one corner, and an attached battery about the size of an iPod.

**StarVision Technologies, Inc.** is a privately held U.S. corporation. Founded in May of 2003, the company innovates, designs, develops, and manufactures intelligent electro-optic technologies and products. StarVision delivers innovative high reliability products to unmanned vehicles, government and commercial satellite, and advanced missile systems markets.

**Falcon International, Inc.** has expertise in composites as specifically applied in the armor industry. The technology is an independently tested proprietary solution which meets National Institute of Justice standards and improves tensile strength, decreases weight and enhances ballistic protective properties while reducing costs. The solution can be formulated and applied to any military vehicle, aircraft or vessel to improve performance and safety by reducing weight.

### III. Biotechnology and Life Sciences

#### Commercialization Investments (D) - Medical Devices

Recipients Name	Website	Investment	Region
Palmaz Scientific	<a href="http://www.palmazscientific.com">www.palmazscientific.com</a>	\$ 3,000,000	South Texas
Patton Surgical	<a href="http://www.pattonsurgical.com">www.pattonsurgical.com</a>	\$ 3,000,000	Central Texas
DEP Shape Memory Therapeutics*		\$ 250,000	Gulf Coast
OnTrack Imaging (Ichos)	<a href="http://www.ontrackimaging.com">www.ontrackimaging.com</a>	\$ 250,000	North Texas
Bio2Medical		\$ 1,000,000	South Texas
Apaxis Medical*	<a href="http://www.apaxismedical.com">www.apaxismedical.com</a>	\$ 250,000	Gulf Coast
NonInvasix*		\$ 250,000	Gulf Coast
SeprOx*	<a href="http://www.transionics.com">www.transionics.com</a>	\$ 750,000	Gulf Coast
OrthoKinematics	<a href="http://www.orthokinematics.com">www.orthokinematics.com</a>	\$ 1,500,000	North Texas
Mystic Pharmaceuticals	<a href="http://www.mysticpharmaceuticals.com">www.mysticpharmaceuticals.com</a>	\$ 1,568,000	Central Texas
Cryopen	<a href="http://www.cryopen.com">www.cryopen.com</a>	\$ 2,000,000	South Texas
Dentlight*	<a href="http://www.dentlight.com">www.dentlight.com</a>	\$ 250,000	North Texas
Cormedics*	<a href="http://www.cormedics.net">www.cormedics.net</a>	\$ 750,000	Gulf Coast
MicroTransponder	<a href="http://www.microtransponder.org">www.microtransponder.org</a>	\$ 1,380,000	North Texas
OrthoAccel	<a href="http://www.orthoaccel.com">www.orthoaccel.com</a>	\$ 750,000	Gulf Coast
Visualase	<a href="http://www.visualase.net">www.visualase.net</a>	\$ 750,000	Gulf Coast
Laser Tissue Welding	<a href="http://www.lasertissuewelding.com">www.lasertissuewelding.com</a>	\$ 160,000	Gulf Coast
Seno Medical	<a href="http://www.senomedical.com">www.senomedical.com</a>	\$ 2,000,000	South Texas
Thrombo Vision	<a href="http://www.thrombovision.com">www.thrombovision.com</a>	\$ 1,500,000	Gulf Coast
Resonant Sensors	<a href="http://www.resonantsensors.com">www.resonantsensors.com</a>	\$ 600,000	North Texas
Monebo	<a href="http://www.monebo.com">www.monebo.com</a>	\$ 500,000	Central Texas
Endothelix	<a href="http://www.endothelix.com">www.endothelix.com</a>	\$ 1,000,000	Gulf Coast
CorInnova	<a href="http://www.corinnova.com">www.corinnova.com</a>	\$ 500,000	Gulf Coast
CardioSpectra	<a href="http://www.volcanocorp.com">www.volcanocorp.com</a>	\$ 1,350,000	South Texas
Diabetica Solutions	<a href="http://www.temptouch.com">www.temptouch.com</a>	\$ 1,000,000	South Texas
Total:		\$ 26,308,000	

\* Represent Pre-Seed investments with up to \$1,500,000 encumbered; further investment is based on successful accomplishment of milestones

**Palmaz Scientific, Inc.** has created a stent for use in medical procedures. The stent consists of high-purity metal mesh used generally to allow veins and arteries to remain in an open position following surgery. The mesh is 5 microns thin (about the size of a red blood cell), and the mesh itself prevents pieces of plaque from breaking free and traveling through the blood stream.

**Patton Surgical Corporation** was established to improve the quality of patient care through advancements in surgical instruments, and focuses on development of laparoscopic access devices. Patton's PassPort Double-Shielded Trocar represents the lead product in the Company's suite. The instrument utilizes a blunt tip-shield to cover the cutting tip immediately upon entry into the abdominal cavity. In addition to the trocar the full suite of products Patton currently sales includes a PassPort Funnel Cannula cap, Hasson H2 Cannula, and HotBlade Bipolar Coagulating and Cutting Forceps.

**Shape Memory Therapeutics, Inc.** is a medical device company founded to commercialize medical devices based on Shape Memory Polymer (SMP) materials that were developed at Texas A&M University and Lawrence Livermore National Laboratory. SMT will leverage the unique properties of SMPs, high expansion capability and a low expansion force, for minimally invasive endovascular applications. The cerebral aneurysm market is the initial application target with potential uses in ischemic stroke and vulnerable plaque treatments. SMT is first focusing on the needs in cerebral aneurysm treatments because the company's breakthrough medical device offers a potentially transformational solution to significantly improve patient outcomes.

**OnTrack Imaging, Inc.** is developing a revolutionary ultrasound camera that will allow early diagnosis of compromised soft tissue. This tool will ultimately provide veterinarians, trainers and owners detailed information about the condition of the soft tissue to help prevent serious damage and injury to the equine athlete.

**BiO2 Medical, Inc.** was co-founded by Luis Angel, director of interventional pulmonary and lung transplantation at the University of Texas Health Science Center at San Antonio. The company's device will target critically ill patients who are at risk of pulmonary embolism, the cause of more than 300,000 deaths per year, by providing those patients with the first temporary Inferior Vena Cava filter, which traps the blood clots responsible for inducing pulmonary emboli.

**Apaxis Medical, Inc.** is developing tools and techniques that revolutionize current surgical methods of implanting left ventricular assist devices (LVAD) in the heart. The technology allows surgeons to implant LVADs on a beating heart rather than putting the patient on bypass, making the procedure safer and reducing the risk of bypass-related deaths.

**NonInvasix, Inc.** is developing an optoacoustic probe that measures hemoglobin level in the blood without a blood draw. The optoacoustic probe in the prototype is placed next to the radial artery and uses short laser pulses to generate ultrasound images that display continuous hemoglobin levels in real-time on the console. The company plans to develop next generation products that will monitor hemoglobin levels in blood going directly to the brain by placing the probe on the neck.

**SeprOx, Inc.** was created specifically to scale up and commercialize a revolutionary new oxygen generator, suitable for use as a source of medical oxygen, based on this discovery by the researchers at the University of Houston's Texas Center for Superconductivity.

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**OrthoKinematics, Inc.** is commercializing its OSMIA diagnostic spine treatment technology, which uses hardware and software to analyze the function of the spine. The technology will improve the diagnosis and surgical management of severe neck and back pain, leading to better treatment outcomes and reduced cost.

**Mystic Pharmaceuticals, Inc.** is combining large and small molecule pharmaceuticals, biologic agents and vaccines with advanced proprietary drug delivery technologies to meet the expanding healthcare demands of the global population. Their ophthalmic, intranasal, optic, oral and lyophilized drug delivery technologies are designed to provide pharmaceutical and biologic products which are lower cost, non-invasive, and simplified self administration for enhanced compliance, safety and convenience.

**CryoPen, Inc.** has developed cryosurgery technology for the removal of skin lesions. The company's patented technology is designed to allow dermatologists, family physicians, pediatricians and general practitioners to perform safe and simple removal of skin lesions without the need for highly-specialized equipment, facilities, or training.

**DentLight, Inc.** is a medical device company focused in the field of advanced dental equipment. DentLight designs, patents, develops, manufactures, and markets dental diagnostic and treatment devices used in the dental labs and offices. They have established a strong market presence with their first commercial niche product, the FUSION Curing Light, during the past two years. They are expanding to offer other products related to further treatment and management of dental procedures.

**Cormedics, Inc.** is an early stage, medical device development company incorporated in Texas. Cormedics is developing a proprietary device, called the PerDUCER, intended to provide therapy to the heart directly through the pericardial space. The pericardium surrounds the heart and contains approximately 25 ml of fluid. There are emergency cardiac procedures that require that the pericardial space to be accessed to remove excess fluid, as well as a variety of non-emergency heart therapies that could be conducted utilizing the PerDUCER.

**MicroTransponder, Inc.** is an early stage medical device company commercializing wireless neurostimulation solutions to treat chronic pain and other neurological conditions. The company is currently finalizing a device that is more than one hundred times smaller than existing neurostimulators on the market. The device is able to be injected via hypodermic needle and is completely biocompatible. It requires no wires or implanted batteries, and instead relies on wireless signals to stimulate the peripheral nerves.

**OrthoAccel, Inc.** is developing a daily use dental device to reduce orthodontic treatment time. Pulsating or vibratory forces delivered by the device enhance the constant pressure applied by the braces. Tooth movement is accelerated via triggering cellular mechanisms of action that increase signaling pathways. The device is similar to a football mouth guard; and the patient simply bites into it for 10 – 20 minutes per day.

**Visualase, Inc.** develops, manufactures, and sells a minimally invasive thermal therapy and monitoring system that enables destruction of cancerous tumors. The patented Visualase® System employs MRI analysis software which allows a surgeon to “see” the temperature and thermal damage of treated tissue with high accuracy in real-time. The software provides users with real-time feedback on the placement and effect of the laser therapy, allowing the surgeon to target and destroy only the tumor, leaving the surrounding tissue unharmed.

**Laser Tissue Welding, Inc.** is developing three technology platforms, life-saving sutureless surgery using a laser to weld tissues with patented and proprietary biomaterials; to stop bleeding instantly and repair organs that cannot be repaired conventionally, such as the liver, spleen and kidney involved in trauma, tumors and transplantation, biodegradable transparent human albumin burns and wound dressing that can be left in place for up to 2 weeks, and biodegradable transparent human albumin sutures.

**Seno Medical, Inc.** was formed to commercialize a new modality in cancer screening and diagnosis: laser optoacoustic imaging. Unlike most screening techniques, which rely on anatomical imaging, Seno's goal is to bring functional imaging to the marketplace that can detect angiogenesis in cancerous tumors.

**Thrombo Vision, Inc.** will provide cost effective, easy to use diagnostic tools and information for healthcare practitioners. Thrombo Vision offers efficient and accurate diagnostic testing for anti-platelet therapy which provides physicians with the necessary data to individualize patient care around cardiovascular risk assessment and modification at the point of service.

**Resonant Sensors, Inc.** has developed a new class of high-throughput biosensor systems for pharmaceutical and biotech research customers. Our patented products are based on optical guided-mode resonance technology, thus requiring no chemical labels. RSI products include next-generation micro-array sensor plates and spectroscopic reader systems that quantify biochemical reactions in real time with outstanding accuracy and repeatability.

**Monebo, Inc.** is focused on providing solutions to allow patients and a physician to manage and reduce problems associated with cardiac disease, and has developed technology for cardiac monitoring, home care, and pharmaceutical cardiac safety trials. Monebo's proprietary digital signal processing algorithms, highly developed sensor technology, and wireless communication capabilities provide accurate real-time monitoring information, with increased patient mobility.

**Endothelix, Inc.** is an early-stage medical device company based in Houston Texas, employing a manufacturing facility in St. Francis, Minnesota. The company is dedicated to human vascular health, with particular emphasis on screening for and monitoring vascular endothelial dysfunction. The company's products are intended to support research in the biology and physiology of vascular function; to provide practicing clinicians with everyday tools to diagnose and monitor endothelial function, and the effects of therapy; and in future to give patients access to the same tools for self-monitoring of their own vascular health.

**CorInnova, Inc.** is a medical device company currently engaged in the development of revolutionary and innovative technologies that enhance heart recovery through the restoration of necessary mechanical stimuli.

**CardioSpectra, Inc.** is developing a novel cardiac catheter that employs fiber-optic based technology to produce high-resolution images of vulnerable plaque to reduce the risk of heart attacks and strokes. This technology gives doctors a better view of what's going on inside arteries, and could dramatically reduce the number of sudden deaths from heart attacks, the leading cause of death in the United States. The catheter will, for the first time, help cardiologists accurately identify patients at high risk for heart attack due to the presence of plaque in their arteries.

**Diabetica Solutions, Inc.** has focused on the development of innovative medical device products for people suffering with diabetes and susceptible to foot-related problems. Diabetica Solutions developed products that address the three key areas for the diabetic patient's feet; temperature assessment, friction reduction, and neuropathy or nerve damage evaluation.

### Commercialization Investments (D) – Biopharmaceuticals & Genomics

Recipients Name	Website	Investment	Region
Nano3D Biosciences*	<a href="http://www.n3dbio.com">www.n3dbio.com</a>	\$ 250,000	Gulf Coast
MIRNA Therapeutics	<a href="http://www.mirnatherapeutics.com">www.mirnatherapeutics.com</a>	\$ 5,000,000	Central Texas
LaserGen*	<a href="http://lasergen.com">lasergen.com</a>	\$ 625,000	Gulf Coast
Azaya Therapeutics	<a href="http://www.azayatherapeutics.com">www.azayatherapeutics.com</a>	\$ 1,045,000	South Texas
America Stem Cells	<a href="http://www.americastemcell.com">www.americastemcell.com</a>	\$ 2,500,000	South Texas
Pulmotect*	<a href="http://www.pulmotect.com">www.pulmotect.com</a>	\$ 1,000,000	Gulf Coast
Castle Biosciences*	<a href="http://www.castlebiosciences.com">www.castlebiosciences.com</a>	\$ 1,000,000	Gulf Coast
Gradalis	<a href="http://www.gradalis.com">www.gradalis.com</a>	\$ 1,750,000	North Texas
DNAtriX*	<a href="http://www.dnatrix.com">www.dnatrix.com</a>	\$ 500,000	Gulf Coast
Receptor Logic	<a href="http://www.receptorlogic.com">www.receptorlogic.com</a>	\$ 2,000,000	West Texas
Terapio	<a href="http://www.terapio.com">www.terapio.com</a>	\$ 1,700,000	Central Texas
Molecular Logix	<a href="http://www.molecularlogix.com">www.molecularlogix.com</a>	\$ 794,520	Gulf Coast
Total:		\$ 18,164,520	

**Nano 3D Biosciences, Inc.** has developed a method of culturing cells in 3D, which offers improved imaging from the previously used 2D models. Through the use of a magnet, the culture is grown in the center of the growing medium, rather than flat against the bottom of the dish. Grown in the center, the culture is free to grow in all directions, which allows the culture to more accurately represent actual cell growth.

**Mirna Therapeutics, Inc.** is a discovery-stage biotechnology research and development company, focused on miRNA-directed oncology therapies. Mirna is broadening its base of miRNA intellectual property, identifying new therapeutic targets, and advancing the development of several miRNA drug leads to validated drug candidates directed against prevalent cancers such as non-small cell lung carcinoma and metastatic prostate cancer.

**LaserGen, Inc.** is a start-up biotechnology company focused on commercializing novel technologies for genomics application to health benefits. Ideally situated near the Texas Medical Center, we have strong research collaborations with Baylor College of Medicine and Rice University. Through collaboration, technology, and license agreements, LaserGen has begun developing a proprietary platform for DNA sequencing of whole genomes that will provide new capabilities, significant cost savings, and efficiency gains for the research market while providing rapid, portable diagnoses of common diseases in the clinical setting.

**Azaya Therapeutics, Inc.** is an emerging specialty pharmaceutical company with a novel drug delivery system. Its proprietary Protein Stabilized Nanoparticle (PSN™) technology platform addresses the significant problems associated with delivery of water insoluble drugs. The Company is initially applying its PSN technology to produce a targeted, safer and more efficacious formulation of a marketed chemotherapy drug for the treatment of cancer.

**America Stem Cells, Inc.** is engaged in the development of stem cell enabling technologies and the key technology platforms -- ASC-101 and ASC-201 -- are designed to improve the engraftment of stem cells to target organs and increase their therapeutic potential. Hematopoietic stem cells derived from cord blood, peripheral blood, and bone marrows are used to treat 70+ diseases today. ASC-101 and ASC-201 hold the promise for increasing the efficacy of these treatments for cancer patients. Additionally, these technologies have potential for many other clinical applications such as treatment of inflammation from chemotherapy/radiation, treatment of cancer tumors, auto-immune diseases and myocardial infarction.

**Pulmotect, Inc.** is a Houston-based biotechnology company, developing products that boost the innate immune system to protect against a wide range of lung infections. The Company's technologies stimulate, within seconds, the body's natural defenses to provide safe, broad-spectrum, fast-acting protection against pneumonia (bacterial, viral and fungal) and bioterrorism agents.

**Castle Biosciences, Inc.** is developing a biomarker based cancer detection system. The technology focuses on identifying aggressive, underserved, or "orphan" cancers that have a relatively low occurrence rate, and whose course of treatment depends on swift and accurate identification.

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**Gradalis, Inc.** is a privately held biotechnology company focused on the design, manufacturing, and clinical development of highly proprietary therapeutics using RNA interference (RNAi) technology that the company believes will deliver unique targeted treatments for cancer and other human diseases. These innovative therapies target the molecular mechanisms that cause cancer. The Company is headquartered in downtown Dallas with an operational drug manufacturing facility in Carrollton, Texas. This facility is fully compliant with the regulatory requirements of the U.S. Food and Drug Administration (FDA) for Good Manufacturing Practice (GMP). Since inception of its operations in 2005, GRADALIS has developed its drug development platform to enable rapid clinical validation of targeted therapies which are expected to produce a valuable pipeline of products.

**DNAtriX, Inc.** is a Texas-based biotechnology company focused on the development of an oncolytic virus platform initially for the treatment of malignant glioma tumors. DNAtriX's lead product, delta24RGD, is a next-generation adenovirus invented by company founder Dr. Juan Fueyo and Dr. Frank McCormick.

**Receptor Logic, Inc.** is a life science company providing powerful tools for medical research, diagnostics, and treatment of diseases such as cancer. Our knowledge of the underlying science of the immune system has led to the groundbreaking discovery and development of T Cell Receptor mimic (TCRm) technology – a specialized monoclonal antibody for use in disease research, vaccine development, and treatment of cancer.

**Terapio, Inc.** is developing a pipeline of systemic and topical therapies based on the normally-occurring transport protein RLIP76 that moves free-radical toxins out of cells before significant damage can occur. Although naturally present in cells, increasing the amount of this protein available to normal cells affords them an even greater ability to deal with toxins from a variety of sources, including chemicals and radiation.

**Molecular Logix, Inc.** evaluates specific modifications of clinically-relevant proteins to create new therapeutic properties. Our efforts are focused on the development of new “Dominant Negative Ligands” for the treatment of important diseases. Primary work is devoted to the development of a new “pan-HER Anti-Cancer Ligand” to treat tumors that have become resistant to current molecular targeting therapies.

## Commercialization Investments (D) - Pharmaceuticals

Recipients Name	Website	Investment	Region
Salient Pharmaceuticals	<a href="http://www.salientpharmaceuticals.com">www.salientpharmaceuticals.com</a>	\$ 2,000,000	Gulf Coast
MacuCLEAR	<a href="http://www.macuclear.com">www.macuclear.com</a>	\$ 1,700,000	North Texas
Halsa Pharmaceuticals*	<a href="http://www.halsapharma.net">www.halsapharma.net</a>	\$ 1,000,000	Gulf Coast
Bellicum Pharmaceuticals	<a href="http://www.bellicum.com">www.bellicum.com</a>	\$ 1,450,000	Gulf Coast
PLx Pharma	<a href="http://www.plxpharma.com">www.plxpharma.com</a>	\$ 2,000,000	Gulf Coast
ZS Pharma	<a href="http://www.zspharma.com">www.zspharma.com</a>	\$ 2,000,000	North Texas
Total:		\$ 10,150,000	

\* Represent Pre-Seed investments with \$1,000,000 encumbered; further investment is based on successful accomplishment of milestones

**Salient Pharmaceuticals, Inc.** is commercializing their CASAD treatment, used for the treatment of side effects of cancer therapy. CASAD is an all natural product that will treat and may prevent gastrointestinal complications, specifically cancer-induced diarrhea. Currently there are no universally accepted or preventative treatments for serious cases of diarrhea. However, Salient is tackling this problem and is currently conducting clinical trials to become a FDA regulated product.

**MacuCLEAR, Inc.** is focused on the design and development of small molecule products for ophthalmic and other indications. We are developing innovative eye drops to treat age-related diseases, including the leading causes of blindness and vision impairment. MacuCLEAR is driving innovation with the development of an eye drop treatment for the dry form of AMD, which affects around 13 million Americans and 27 million people globally.

**Halsa Pharmaceuticals, Inc.** is a start-up biotechnology company developing therapeutics for the treatment of obesity and other metabolic diseases. Halsa Pharmaceuticals has achieved exclusive patent rights to a natural material that, when injected by a physician into an obese patient, will cause immediate and substantial depletion of body fat.

**Bellicum Pharmaceuticals, Inc.** is focused primarily on the development of next generation therapeutic vaccines and other immunotherapeutic approaches for the treatment of cancer. Bellicum's novel approach is to utilize precise knowledge of the signaling pathways that regulate the immune response to target specific factors that can influence the potency and duration of this response.

**PLx Pharma, Inc.** is a pharmaceutical company developing the next generation of non-steroidal anti-inflammatory agents (NSAIDs) that are safer on the gut. The Company is developing new formulations of currently marketed NSAIDs with enhanced safety for the pain and cardiovascular markets.

**ZS Pharma, Inc.** develops and markets oral sorbents designed to eliminate specific toxins that build up in persons with either kidney or liver failure, specifically in the treatment of hyperkalemia, Urea Cyclic disorder (UCD), hyperammonemia, and hyperphosphatemia, all of which are elevated levels of these compounds in the blood. The company's lead product is a crystalline structure of Zirconium silicate (ZS), a novel and non-systemic oral therapy for the removal of toxins associated with kidney and liver disease.

### Commercialization Investments (D) - Nanomedicine

Recipients Name	Website	Investment	Region
Leonardo Biosystems		\$ 2,500,000	Gulf Coast
Ensysce Biosciences	<a href="http://www.ensysce.com">www.ensysce.com</a>	\$ 250,000	Gulf Coast
Nano Medical Systems	<a href="http://www.nanomedsys.com">www.nanomedsys.com</a>	\$ 3,500,000	Central Texas
NanoSpectra	<a href="http://www.nanospectra.com">www.nanospectra.com</a>	\$ 1,250,000	Gulf Coast
Savara Pharmaceuticals	<a href="http://www.savarapharma.com">www.savarapharma.com</a>	\$ 1,900,000	Central Texas
Total:		\$ 9,400,000	

**Leonardo Biosystems, Inc.** is pioneering a rationally designed cancer therapeutic delivery system, which utilizes inputs such as cancer type, location, gene expression, vascular pathology, and therapeutic characteristics to optimize a systemic delivery solution for a specific chemotherapeutic and tumor target. Leonardo will provide a service to pharmaceutical companies by employing its system to facilitate drug delivery, enable new emerging technologies, and potentially revive former pipeline drug candidates that were previously undeliverable.

**Ensysce Biosciences, Inc.** is developing fullerene carbon nanotubes for applications in cancer treatment. The use of fullerene carbon nanotubes has the goal of solving two important problems for cancer therapeutics, that of delivering through natural barriers within the body into cancer cells where these molecules normally do not enter, and of protecting normal tissue from the active agent during delivery. This is the first human application of this kind for carbon nanotubes and will transform cancer treatment.

**NanoMedical Systems, Inc.** has developed a new form of drug delivery using devices that are injected just under the skin. Once inserted, a silicon chip inside the device regulates the drug flow. This system of drug administration has improved the overall effect of the drug while decreasing side effects. The system results in better patient mobility and less time spent in clinics.

**Nanospectra Biosciences, Inc.** is commercializing a particle-based therapy for the selective and precise thermal destruction of solid tumors while minimizing damage to healthy adjacent tissue and preserving critical structures. This medical device, AuroLase™ Therapy, is broadly applicable to most solid tumors, and we have an open Investigation Device Exemption (IDE) to conduct the first clinical trial in patients with head and neck cancer.

**Savara, Inc.** develops respiratory drugs utilizing a nanotechnology aerosol formulation process to deliver therapies and contrast agents for deep-lung deposition without the need for particle additives. This novel approach will accurately screen stages of cancer in lungs and lymph node regions during imaging and will allow further uses and testing of commonly known commercial pharmaceutical compounds.

#### IV. Information and Computer Technology

##### Commercialization Investments (D) - IT

Recipients Name	Website	Investment	Region
Veros Systems	<a href="http://www.verosystems.com">www.verosystems.com</a>	\$ 250,000	Gulf Coast
Device Fidelity	<a href="http://www.devicefidelity.com">www.devicefidelity.com</a>	\$ 3,000,000	North Texas
Varaha Systems	<a href="http://www.varaha.com">www.varaha.com</a>	\$ 1,500,000	North Texas
Enthuze	<a href="http://www.enthuze.net">www.enthuze.net</a>	\$ 1,650,000	South Texas
Axelo	<a href="http://www.axelobat.com">www.axelobat.com</a>	\$ 250,000	Central Texas
Merkatum	<a href="http://www.merkatum.com">www.merkatum.com</a>	\$ 1,000,000	Central Texas
Net Watch Solutions	<a href="http://www.netwatchsolutions.com">www.netwatchsolutions.com</a>	\$ 500,000	North Texas
Secure Origins	<a href="http://www.secureorigins.com">www.secureorigins.com</a>	\$ 2,000,000	Trans Pecos
Total:		\$ 10,150,000	

**Veros Systems** is developing a Smart Electrical Interface (SEI) technology to eliminate unreliability among machines. Their product measures the electrical signals from the machine's power supply, to monitor its activity and prevent machine downtime. Their use of the virtual machine Window (vmWindow) allows measures to be taken in order to prevent lost production, maintenance service, or excess energy usage.

**Device Fidelity, Inc.** was founded by smartcard, wireless and banking experts in 2007. The company produces a flexible platform for delivering value added applications to mobile devices. The platform makes it possible for consumers to use their mobile phones for secure transactions and simplifies the delivery and provisioning process for issuers such as financial institutions and transit authorities.

**Varaha Systems, Inc.** is a leading provider of fixed-mobile convergence solutions for enterprises and small and medium-sized businesses through channels and service providers. Varaha's comprehensive uMobility solution works with today's most popular business telephone systems to let you make/receive office phone calls directly from your cell phone, while seamlessly roaming between enterprise and cellular networks. With uMobility, businesses can extend their essential applications and communication capabilities to their mobile workforce while controlling and reducing operational costs.

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**Enthuze** is developing an innovative multi-platform consumer research and social networking system. Aspects of this platform include a multi-query search engine used to significantly enhance search results, which are ranked by relevance and are displayed in a 3D fashion, and a research tool which studies written text to draw indirect conclusions regarding consumer attitudes. Enthuze will be able to accurately measure opinion trends that have never been able to be measured by traditional research companies including product placement and integrated marketing in film/TV as well as “long-term” consumer product usage and satisfaction.

**Axelo, Inc.** develops advanced movement detection technology enabling innovative devices for Home Entertainment. Axelo's premiere technology, the Axelo BAT advanced gaming controller, is engineered to become the universal controller across multiple platforms. The controller tech is based on a highly advanced integration of sensing devices with state-of-the art signal processing that optimizes responsiveness and reliability while providing a heightened 3D experience.

**Merkatum** is developing biometric identity systems that effectively determine, interpret, and manage the identity of individuals in order to deter identity fraud and safety/security risks. Merkatum’s product searches and compares the identity of individuals in databases and on the field by utilizing fingerprint, facial, and/or biographic recognition algorithms leveraged by an open, scalable, and business process driven system.

**Net Watch Solutions, Inc.** was established in 2002 to deliver results-oriented business solutions in infrastructure management. We demonstrate how IT-related changes and investments contribute over time to improved business performance, competitiveness and economic growth. We do this with products, services, metrics and business methodologies that quantify value.

**SecureOrigins, Inc.** uses an emerging technology called ISAs to deliver end-to-end visibility and vigilance of all vital logistics and supply chains for North America. Uniquely integrating leading tracking systems with revolutionary turnkey software that thrives with a minimum of human intervention, SecureOrigins provides excellent multimodal security while it enhances and expedites trade via sea, rail and ground.

## Commercialization Investments (D) - Software

Recipients Name	Website	Investment	Region
Qcue	<a href="http://www.qcue.net">www.qcue.net</a>	\$ 1,000,000	Gulf Coast
iLearning Gateway	<a href="http://ilearninggateway.com">ilearninggateway.com</a>	\$ 500,000	North Texas
2Cimple	<a href="http://2cimple.com">2cimple.com</a>	\$ 1,500,000	North Texas
Bynari	<a href="http://www.bynari.net">www.bynari.net</a>	\$ 1,500,000	North Texas
Interoperate.biz	<a href="http://www.interoperate.biz">www.interoperate.biz</a>	\$ 700,000	North Texas
Net.Orange	<a href="http://www.ndorange.com">www.ndorange.com</a>	\$ 1,900,000	North Texas
Modria	<a href="http://www.modria-inc.com">www.modria-inc.com</a>	\$ 500,000	North Texas
Smart Imaging Technology	<a href="http://www.smartimtech.com">www.smartimtech.com</a>	\$ 230,000	Gulf Coast
Codekko	<a href="http://www.codekko.com">www.codekko.com</a>	\$ 1,500,000	North Texas
Image Trends	<a href="http://www.imagetrendsinc.com">www.imagetrendsinc.com</a>	\$ 1,000,000	Central Texas
Bauhaus	<a href="http://www.bauhaussoftware.com">www.bauhaussoftware.com</a>	\$ 500,000	South Texas
Total:		\$ 10,830,000	

**Qcue, Inc.** is integrating elements of airline pricing and NASDAQ trading into current selling platforms, providing primary sellers the ability to dynamically price-to-market while hosting a seamlessly integrated secondary market. Qcue's white label software applications can be easily integrated into existing box offices and websites, enhancing the functionality and transforming them into efficient markets. Qcue only hosts the backend technology on the servers, thus avoids disrupting existing relationships and converts Qcue's largest potential competitors, primary ticketing companies, into partners and clients.

**iLearning Gateway** is assisting the national education system by offering a software alternative for tutoring. Students and educators often have difficulty finding effective and affordable tutoring help, as existing tutoring solutions are highly expensive, unreliable, and provide inconsistent quality. iLearning's solution is an artificial intelligence software product, TeachingBOT, which teaches like a highly qualified human tutor and can be accessed by millions of students. This helps schools, parents, and students across the nation with their daily tutoring needs at a highly affordable price.

**2Cimple, Inc.** has developed an innovative software technology that allows interactivity within the online video thus allowing quick call-to-action within the video. The technology is very versatile and scalable and has great commercialization potential such as online video based ecommerce, advertisement, market communications, lead generation, viral marketing, mobile coupons, etc., The key value proposition of this interactive video technology is a new way to monetize online video assets. Some other application areas of this technology include e-learning, sports, and enterprise applications such as CRM, ERP, etc.

**Bynari, Inc.** is a messaging software company that has developed a technology platform targeting the growing market for standards-based email and collaborative software. One of the company's key intellectual properties allows seamless interoperability with all versions of Outlook (98-2007) and various 3rd party email clients. Bynari is the only platform whose technology is capable of providing client access to and interaction with all MAPI objects on the Outlook platform using standard IMAP connection.

**Interoperate.biz** is developing rapid language translation technology licensed from the University of Texas at Dallas. The technology permits the translation of programs written in one language to another language very rapidly and reliably. The main application of the technology is to convert/migrate programs/codes developed for legacy, obsolete or end-of-life system to a modern system. Interoperate has developed a translation technology that is based on programming language semantics techniques and rule based languages to program the translator, which allows a reliable translator to be developed in approximately 4 man months, even for the most complex languages.

**Net.Orange** is a healthcare informatics company that is developing a “clinical operating system” (cOS™) which is used by medical providers and healthcare administrators to improve the effectiveness of their patient care by integrating medical best practices within an informatics framework to help providers analyze a patient population, monitor actionable events and alert appropriate systems and roles for corrective actions. This solution will provide immeasurable cost relief to the National and State chronic disease care burden.

**Modria** is pioneering software-building technology that uniquely caters to each customer on the source code level, without increasing the total cost of ownership, specifically in the area of supply chain management. Further, Modria is able to provide software at up to 60% reduction in total cost of ownership and up to 50% reduction in time to implement compared to other software sources.

**Smart Imaging Technology** is pursuing the development of a hardware/software system that will automate the identification of Cryptosporidium and Giardia, two common waterborne pathogens. This automated system, which replaces human experts, would greatly decrease the cost of testing water supplies while significantly increasing productivity. Further, this software will be capable of expanding to test other microbiological hazards in water, food, or air.

**Codekko Software, Inc.** is an end-to-end network optimization solution that improves the performance of Web-enabled applications and improves the end-user experience. The power behind Codekko solutions lies in the advanced Ekko technology, a unique Web-application optimization platform that reduces the number of servers needed to run Web applications. CODEKKO’s revolutionary software utilizes proprietary and patent-pending optimization techniques, which include pre-compiling and intelligent optimization of web-enabled application source code.

**Image Trends, Inc.** was formed by a select team of former Applied Science Fiction (ASF) founders and employees. The primary goal of this talented group of product innovators was to continue the invention and development of creative tools and products that enrich our lives through improved digital imagery.

**Bauhaus Software, Inc.** provides global content creators with a free platform to share their original animations, artwork, and games with animators, enthusiasts and fans worldwide. Combining high-quality video file streaming with best-in-class social networking for animators, MyToons.com showcases the greatest variety of independent and studio animation anywhere. MyToons.com allows artists to share their techniques, discuss their thoughts and ideas, and explore their commonalities in a robust visual environment.

## Commercialization Investments (D) - Telecommunications

Recipients Name	Website	Investment	Region
Advanced Receiver Technologies	<a href="http://www.receiveitec.com">www.receiveitec.com</a>	\$ 250,000	North Texas
Wham!	<a href="http://www.whaminc.com">www.whaminc.com</a>	\$ 1,000,000	North Texas
SNRLabs	<a href="http://www.snrlabs.com">www.snrlabs.com</a>	\$ 750,000	North Texas
PrincipleSoft	<a href="http://www.quantumxtel.com">www.quantumxtel.com</a>	\$ 750,000	North Texas
Total:		\$ 2,750,000	

**Advanced Receiver Technologies, Inc.** is developing a new digital receiver for handsets that solves the wireless interference problem that limits network capacity and restricts user connections to the network. ART's receiver goes into a principal electronic chip within handsets, called the 'baseband' chip, which is the 'modem' that links the cellphone to the network. The interference problem is solved by replacing the current receiver in the baseband chip with ART's 'interference cancellation' receiver.

**Wham!, Inc.** is building a revolutionary wireless, video product with a friends and family value proposition. Wham!'s product and services will enable consumers to visually communicate with one another even though they may be separated by large distances, and is built to be used in and around the home. The commercialization of Wham!'s product is enabled by technological advances in video compression, wireless networks, high-speed data networks and high-definition televisions. Wham!'s solution is designed for ease of use by all age groups.

**SNRLabs, Inc.** patent-pending handset software, Convergence Manager, makes smart phones and mini laptops that have multiple signals (such as 3G + WiFi) work seamlessly as the user moves around between coverage areas of each signal, while at the same time significantly reducing the battery power consumed. This technology opens up a wide range of mobile services that take advantage of the ubiquity provided by cellular and the high speed localized connectivity provided by wireless broadband opportunity-based content delivery, one phone (one number, one contact list) per user across multiple networks, and advertisement driven mobile services.

**Principle Soft, Inc.** through its subsidiary Quantum xTel, offers an enhancement to QAM modulation that unleashes the bandwidth allowing an order of magnitude increase in spectral efficiency. This technology is applicable to all types of wireless (WAN, LAN, PAN), fixed or mobile, as well as all types of wireline (twisted pair, Cable, fiber). Since it uses QAM modulation, it can work with all types of multiple access techniques.

## V. Energy

### Commercialization Investments (D) - Energy

Recipients Name	Website	Investment	Region
SolarBridge Technologies	<a href="http://www.solarbridgetech.com">www.solarbridgetech.com</a>	\$ 1,500,000	Central Texas
Photon8	<a href="http://www.photon8.com">www.photon8.com</a>	\$ 650,000	Rio Grande
ActaCell	<a href="http://www.actacell.com">www.actacell.com</a>	\$ 250,000	Central Texas
21-Century Silicon	<a href="http://www.21-centurysilicon.com">www.21-centurysilicon.com</a>	\$ 3,500,000	North Texas
Solarno*	<a href="http://www.solarno.com">www.solarno.com</a>	\$ 250,000	North Texas
EQMA*		\$ 250,000	North Texas
BetaBatt*	<a href="http://www.betabatt.com">www.betabatt.com</a>	\$ 500,000	Gulf Coast
Sunrise Ridge Algae*	<a href="http://www.sunrise-ridge.com">www.sunrise-ridge.com</a>	\$ 250,000	Central Texas
TXL Group*	<a href="http://www.txlgroup.com">www.txlgroup.com</a>	\$ 500,000	Trans Pecos
Texas Micropower*	<a href="http://www.texasmicropower.com">www.texasmicropower.com</a>	\$ 750,000	North Texas
Xtreme Power	<a href="http://www.xtremepowerinc.com">www.xtremepowerinc.com</a>	\$ 2,000,000	Central Texas
OptiSense	<a href="http://www.optisense.net">www.optisense.net</a>	\$ 1,500,000	North Texas
Terrabon	<a href="http://www.terrbaon.com">www.terrbaon.com</a>	\$ 2,750,000	Rio Grande
Faradox Energy Storage	<a href="http://www.faradox.com">www.faradox.com</a>	\$ 600,000	Central Texas
Turbo Trac USA	<a href="http://www.turbo-trac.com">www.turbo-trac.com</a>	\$ 2,000,000	West Texas
Total:		\$ 17,250,000	

\* Represent Pre-Seed investments with \$1,000,000 encumbered; further investment is based on successful accomplishment of milestones

**SolarBridge Technologies, Inc.**, formerly SmartSpark Energy Systems, was founded in 2004 to commercialize power electronics technologies created at the University of Illinois. In early 2009, we launched a new corporate strategy to focus exclusively on the solar industry with microinverter and monitoring solutions. SolarBridge Technologies has a major research and development site in Champaign, Illinois and has recently expanded to include a new corporate headquarters in Austin, Texas. Led by industry veterans and academic professionals, our mission is to reduce the Levelized Cost of Energy (LCOE) for solar installations by dramatically improving reliability, increasing energy production, and simplifying installation.

**Photon8, Inc.** primary mission is to develop a commercial algae growth and oil production process design tuned to the specific site resource conditions, area resource conditions, and partnerships available in the Rio Grande Region.

**ActaCell** is developing and commercializing their high power, rechargeable lithium ion batteries. Developed by Professor Ram Manthiram, ActaCell's technology advances current rechargeable battery chemistry by creating Lithium ion batteries at a lower cost while improving their efficiency and safety. The new battery technology will improve the quality of current electric vehicles such as electric cars, electric bikes, and military vehicles.

**21-Century Silicon, Inc.** core manufacturing technology is based upon a proprietary furnace design that achieves solar-grade polysilicon manufacturing at ½ the cost of conventional methods. Combined with our patent-pending protected methods, 21-Century Silicon's manufacturing process is a revolution within the industry, and will position the company as a major player within the solar supply chain. Known in the industry as 6N Silicon, our final product meets the specifications of photovoltaic supply companies. As opposed to our competition, we manufacture silicon at a low cost, with minimal production time and with virtually no environmental hazards. We are focused on meeting the supply needs of the solar industry while maintaining our environmentally friendly manufacturing process.

**SOLARNO Inc.** is developing novel solar cells, which are based on nanostructured materials and nanoarchitectures. These solar cells access the power of the full solar spectrum, in contrast to existing silicon-based solar cells that use only small fraction of sunlight. Solarno is opening the door to global-scale, cost-effective, flexible and light weight third generation photovoltaics for the 21st century. Working with partners like the University of Texas at Dallas (UTD) and Alan G. MacDiarmid Nanotech Institute to achieve the Company's vision.

**Environmental Quality Management Associates (EQMA), Inc.** has developed a process to transform industrial wastes and manure from domestic livestock into ethyl alcohol that can be mixed with gasoline and sold as an automotive fuel. Using animal waste significantly lowers production cost of the ethanol and does not rely on corn and other small grains used in traditional ethanol plants. The primary market is targeted to CAFO and industrial waste generators as a way to manage their waste streams. An additional market is created as a result of the waste management; the sale of ethyl alcohol to the gasoline and octane fuel markets.

**BetaBatt, Inc.** is a Houston-based company in the business of developing long-lasting reliable power sources. The Company has researched and patented a novel 3D energy conversion architecture named the DEC™ Cell, based on nano-scale porous silicon. The DEC™ Cell is able to convert decay electrons to electricity 10 times more efficiently than conventional 2D devices using standard semiconductor manufacturing methods. The company's first commercial product, a quarter size battery with a 12-20 year lifespan and mission critical reliability, has performance characteristics that address current problems faced by medical implant, oil and gas, and remote sensing industries, as well as military and space organizations.

**Sunrise Ridge Algae, Inc.** a private Texas corporation engaged in research, development and commercialization of algae biomass technology for reduction of water and greenhouse gas pollutants and production of renewable fuel feed stocks and animal feeds. Targeting large potential markets, including bio-diesel and ethanol feed stocks, animal feed supplements, waste water cleanup (nitrogen, phosphorus) and greenhouse gas emission reduction. Sunrise Ridge Algae's strategy is to focus on production system scaling and cost issues while harnessing the superior productivity and yields of select algae strains.

**TXL Group, Inc.** is a Texas Corporation directed at the research, development and production of the next generation of thermoelectric (TE) devices. Located in El Paso, Texas, the Company has developed a proprietary approach for the construction of TE elements that exhibit an enhanced conversion of thermal energy into electrical energy. This allows a flexible configuration of TE devices that minimizes the irreversible heating effects that represent the majority of losses in conventional thermoelectric systems.

**Texas Micropower, Inc.** (formerly known as Texas Piezoelectric) designs and builds integrated low cost energy harvesting systems to serve today's critical need of "green" energy for portable and remote electronics. The company is currently developing solar and vibration energy harvesting solutions in a variety of applications including personal electronics, wireless sensors, and active RFID tags. On-going research and development work include integrated thin-film harvesters and high efficiency power management circuits.

**Xtreme Power, Inc.** is a Power Systems company with sophisticated technology to deliver efficient solutions. Xtreme Power Solutions is a manufacturer of power systems from the small sized, (2kW) generator replacement, through large scale Megawatt load leveling & power storage applications.

**Optisense, Inc.** is on mission to create a leading sensor systems company. Company technology provides a new approach to primary power measurement that does not require the sensors to contact the energized conductors. The sensors are the enabling technology that will be added to existing software and communications technologies to provide a total smart grid solution.

**Terrabon, Inc.** uses an advanced bio-refining technology to convert materials such as municipal solid waste, sewage sludge, forest product residues and non-edible energy crops into a wide array of chemicals and secondary alcohols that can be further refined through separate, well-established processes to produce renewable gasoline, jet fuel or diesel. The gasoline produced through the technology is not ethanol, it has a higher energy value than ethanol, and can be blended directly with gasoline produced from hydrocarbons.

**Faradox Energy Storage, Inc.** is developing the next generation of high energy density capacitors capable of operating in high temperature environments. These capacitors will have 10x the energy density of standard capacitors and can operate at temperature exceeding 350C. Applications include high value products such as down-hole tools, satellites, defense weapons systems, medical devices, and electric cars.

**Turbo Trac USA, Inc.** is commercializing an energy conservation technology, an infinitely variable mechanical transmissions combined with self-adapting control software that is based on traction technology and, when applied to industrial systems, such as fluid handling systems, can provide a projected 20% reduction in energy consumption as well as significant operating benefits.