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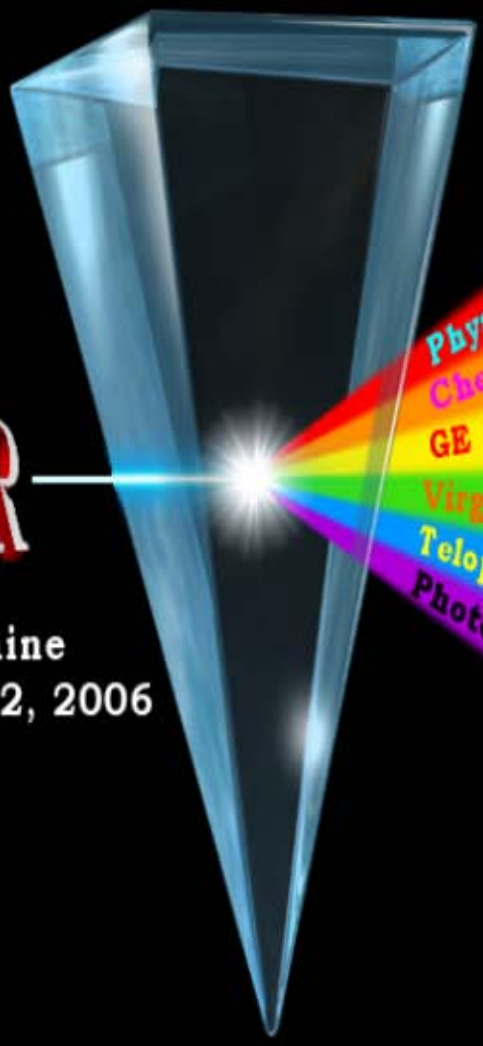

IESSR

Bar Harbor, Maine
May 29 - June 2, 2006

Physical Sciences Inc. ACT I, LLC Ocean Optics
ChemImage Physical Domains Inc. SET Inc.
GE Global Research Redondo Optics Inc. ArkLight
Virginia Diodes Inc. Scentczar Corp. L.C. Pegasus
Telops ATK Space Systems & Sensors Picometrix, LLC
Photon Systems Inc. Headwall Photonics Inc. OpthUS

Spectral Sensing Research

A Technology Event to Support the Scientific & Technical Goals of the 2006 International Symposium on Spectral Sensing Research by:

Promoting new interactions between scientists, technologists and entrepreneurs,

Providing platforms for focusing scientific innovation and technology,

Creating new technology-program networks and R&D foundations, and

Fostering new programs/funding opportunities for CB&R Defense.

Advanced Concepts and Technologies International, LLC (ACT I) Advanced Concepts and Technologies International, LLC (ACT I) provides science, engineering, and logistics services and solutions to public and private sector clients. ACT I, with our university and industry partners, is developing sample concentration and detection devices and sensors, developing waterborne CBRN contaminant treatment systems, and conducting CBRN waterborne contaminant basic research. ACT I also conducts technologies assessments and threat analyses. Our research and analytical laboratories provide complete chemical, biological and water quality research and testing capabilities and services. ACT I is ISO9001:2000 certified. Visit ACT I on the web at

Advanced Concepts and Technologies International, LLC (ACT I)
1105 Wooded Acres, Suite 500, Waco, TX 76710
www.act-i.com Ph: 254-776-9511, FAX: 254-776-3813

ArkLight is pioneering in the THz spectrometers customized for the applications of biological, biomedical and chemical sensing and imaging. Such spectrometers are based on the measurements of the transmission spectra of samples. Different from FTIR, frequency scanning is achieved by tuning widely-tunable narrow-linewidth THz sources. They are implemented by mixing two laser frequencies in the near-infrared region. Therefore, the frequency tuning is simply accomplished by scanning one of the laser frequencies in a narrow range. In the standard configuration, a bolometer is used to detect the THz radiation. ArkLight is currently exploring the possibility of utilizing the upconversion process to detect THz pulses, and therefore, making it possible to operate the THz spectrometers at room temperature.

ArkLight
3210 Bay Hill Drive, North, Center Valley, PA 18034
Ph: 484-547-5375

ATK Space Systems and Sensors, Optical Systems Group specializes in the development of electro-optical, radiation, and chemical agent sensing systems and test instrumentation. We have designed and delivered a wide variety of electro-optical sensors, optical test and evaluation systems, gamma and neutron radiation detectors, chemical agent sensors, and cryogenic optics for a diverse range of applications.

Our delivered sensor systems range in complexity from our HyHATs hyper-temporal spectrometer to our hand-held Solstice radiation sensor and ChemID point detector. Test instrumentation includes low background dynamic optical scene projection systems and chemical agent spectral projectors. Our technologies span electro-optics, cryogenics, atmospheric turbulence compensation, coherent optical data links, and custom LIDAR applications. Our unique mixture of scientists, engineers and technicians is coupled with our Mission Research corporate heritage of solid technical depth to provide our customers with the skills and resources to turn their program requirements into working solutions.

ATK Mission Research
PO Drawer 719, Santa Barbara, CA 93102
www.mission.com Ph: 805-963-8761, FAX: 952-351-3009

ChemImage is a revolutionary imaging company bringing modern imaging technology to pharmaceutical, forensic, biomedical and bio-threat applications. Our focus is on solutions that enable our customers to gain competitive advantage, by speeding products to market and seamlessly enabling projects to flow from the lab through scale-up and into production. Call or visit us to see how modern imaging can benefit you.

ChemImage develops the world's most advanced high performance scientific instrumentation to analyze materials at the molecular level. Since our founding in 1994, we continue to deliver valuable analytical information to our clients with unprecedented speed and clarity. Our efforts are targeted in areas including pharmaceuticals, biomedicine, forensics, polymers, chemical and biological detection, food safety and environmental remediation.

ChemImage
7301 Penn Avenue, Pittsburgh, PA 15208

www.chemimage.com Ph: 412-241-7335, FAX: 412-241-7311

GE Global Research is one of the world's most diversified industrial research labs, providing innovative technology for all of GE's businesses. Global Research has been the cornerstone of GE technology for more than 100 years, developing breakthrough innovations in areas such as molecular imaging and diagnostics, energy conversion, nanotechnology, advanced propulsion, sensors and security technologies. GE Global Research is headquartered in Niskayuna, New York and has facilities in Bangalore, India; Shanghai, China, and Munich, Germany.

For any industrial lab, technical diversity is key. GE's diverse set of six businesses naturally creates the most diverse industrial lab in the world. From aircraft engines to plastics to energy generation to our financial businesses and even our television network and movie studios, GE Global Research can leverage technology across industries and across scientific disciplines. Our strength lies in our robust set of core technologies and how we apply our breakthroughs to our businesses.

GE Global Research
1 Research Circle, Niskayuna, NY 12309

www.ge.com/research, Ph: 518-387-6120, FAX: 518-387-5449

Headwall Photonics, Inc. designs and manufactures advanced optical solutions that manage wavelengths for customers requiring application-specific performance. Our strength is in the manufacture of precision spectral modules and original holographic diffraction gratings.

Headwall was established in 2003 through the management buy-out of Agilent's Holographic Grating Operation (formerly American Holographic) and is a world leader in optical engineering and high volume nanostructure manufacturing.

Headwall Photonics, Inc.
601 River Street, Fitchburg, MA 01420

www.headwallphotonics.com Ph: 979-353-4100, FAX: 978-348-1864

Ocean Optics, a diversified electro-optics technology firm is the leading supplier of optical sensing and spectroscopy solutions. Our vision is to expand the frontiers of optical sensing and to make it the foundation on which innovative, life-changing ideas are built. With diverse applications in environmental monitoring, chemistry, and biological research, our extensive line of technologies include open-air pathogen monitors, LIBS systems and Raman solutions. We also have a comprehensive line of spectrometers, spectrofluorometers, chemical sensors, excitation sources, and optics.

Ocean Optics,
830 Douglas Avenue, Dunedin, FL 34698

www.oceanoptics.com Ph: 727-733-2447, FAX: Fax 727.733.3962

OpthUS, Silicon Valley' company, is a commercial R&D Lab focused on developing Terahertz Technologies for imminent applications and commercialization in bio-chemical defense, homeland security, and environmental/industrial monitoring. *OpthUS'* multidisciplinary experienced team, world recognized and successful in product delivery, is carrying out work from theoretical conceptions, through virtuous experiments, data processing, IP and prototype development up to system implementation and applications. *OpthUS* develops advanced methods and products by utilizing convergence of THz-electronics, Photonics, Semiconductor Physics & Nanotechnology, Computer Modeling, Networking, and Data Transmission & Clustering. *OpthUS* leads in R & D of semiconductor nano-material & component development to create compact, highly efficient & tunable detectors and generators for portable THz inspection systems.

Welcome to our technical presentation "Terahertz Detectors for Portable Supersensing Systems", Friday, June 2, 2006 at 11:20 at Belmont Room.

OpthUs
P.O. Box 20042, Stanford, CA 94309-0042

www.opth.us Ph: 408-918-3032

L.C. Pegasus Corporation was incorporated in the State of New Jersey, in June, 1998, as a high-technology services and consulting company. It specializes in providing software engineering consulting services in telecommunication and Internet related businesses, optical and microwave based on sensing devices for chemical and biological weapons and concealed explosives, as well as hardware design of specialty optical sensors and optical and wireless communication equipment/apparatus. The staff of L.C. Pegasus has extensive experiences in these high-tech and engineering fields, as well as in wireless communications and fiber optic communications network design, monitoring, and management.

The company currently has five full-time employees and several part-time and non-direct employees. In the eight years since incorporation, it has provided commercial software and scientific and engineering services to clients such as AT&T, Bellcore (now Telcordia), and Panasonic Technology Center, US Army, US Navy, the municipal governments of the City of Shanghai, the province of Shandong, China, as well as oil service industry and coal mining industry in China.

L.C. Pegasus Corporation
10 Bedford Drive, Basking Ridge, NJ 07920

www.lcpegasus.com Ph: 908-781-0393, FAX: 908-781-0167

Photon Systems develops and manufactures deep UV lasers, accessories, and instruments enabled by these lasers. Present laser products emit at 224nm, 248nm, and 270nm. Future products include semiconductor devices emitting in the same spectral range. The instrument technologies developed by Photon Systems include laser induced native fluorescence and resonance Raman spectroscopy employing the many advantages of operation in the deep UV.

Application of the deep UV lasers and instruments include: detection and classification of trace levels of biological and chemical contamination on surfaces and in water; industrial and manufactured food and pharmaceutical product quality control; industrial and municipal waste and potable water quality; LINF detectors for CE and HPLC; semiconductor testing and inspection instruments; and other applications.

Products to be shown at ISSSR include Photon Systems Targeted Ultraviolet Chemical Sensor 1000W for use in detection and classification of trace levels of contamination in water and on surfaces, and stand-alone deep UV lasers.

Photon Systems, Inc.
1512 Industrial Park Street, Covina, CA 91722-3417
www.photonsystems.com Ph: 626-967-6431, FAX: 626-967-5813

Physical Domains is a small business engaged in the research and development of several types of RF and photonic systems and related technology. Since its beginning in 2002 Physical Domains has been both a prime- and sub-contractor on several Government Programs, ongoing and completed. In 2002 Physical Domains was awarded a Phase I STTR with the Army Research Office to develop a 400 GHz differential absorption radar. Upon successful completion of Phase I, the Army awarded a Phase II contract in 2003. Physical Domains has also successfully completed a seedling contract with DARPA on a new radar concept for microwave frequencies - the retrodirective noise-correlating (RNC) radar - and has been awarded a follow-on contract. Other contracts include a frequency hopping THz spectrometer for the Army and DTRA, and an SBIR Phase-I contract with NIST to develop GaAs THz photomixers.

Physical Domains has teamed with numerous companies including: Emcore (photomixing technology), Jet Propulsion Laboratory (terahertz radar), Rockwell Scientific Company, (submicron fabrication), Goodrich Corporation (photomixing spectrometer) and MicroAssembly Technologies, Inc. (RF testing and design of ultra-low insertion-loss RF MEMS switch).

Through the NIST Phase I SBIR Program Physical Domains has started the process of commercializing GaAs photomixers for THz applications. Devices have been delivered to several different commercial partners as a first step toward applying photomixers in real THz instruments and systems. Of greatest interest is the THz sweep oscillator that can continuously tune from under 100 GHz to over 2 THz with no cryogenics or large electric/magnetic fields.

Physical Domains, LLC.
3700 Cedarbend Drive, Glendale, CA 91214
Ph: 818-795-3247

Physical Sciences, Inc., established in 1973, provides integrated experimental and analytical research capabilities to government and industry, with the ultimate goal of technology commercialization. Our 120 person staff is highly interdisciplinary and includes professionals with degrees in electromagnetics and plasma physics, physical chemistry, applied physics, aeronautical and electrical engineering, fluid mechanics, computer sciences, mechanical, electrical and chemical engineering, and electrochemistry. Approximately half of our personnel are at the doctoral level.

Our combined operations occupy over 70,000 square feet of office and laboratory space. The administrative, computational, and experimental facilities are designed to be fully responsive to contractual requirements and supportive of sensor design and testing, systems analysis, modeling, and experimental research efforts as well as prototype product and process development.

Physical Sciences, Inc. (PSI)
20 New England Business Center, Andover, MA 01810
www.psicorp.com Ph: 978-689-0003, FAX: 978-689-3232

Picometrix, LLC (an API company) is a global supplier of high speed receivers and terahertz instrumentation. We are a leader in the development and manufacturing of advanced optoelectronic components for the telecommunication and test and measurement markets. Our solutions are based on GaAs and InGaAs semiconductor technologies and Telcordia qualified hybrid semiconductor packaging for custom and standard products.

The terahertz sensor product line is targeted to the non-destructive testing, on-line manufacturing quality control and application development laboratory markets. Picometrix introduced the world's first commercial T-Ray instrument, the T-Ray 2000Ô, which is ideally suited to applications requiring spectroscopy and/or imaging capabilities. Applications include gas, liquid, and solid spectroscopy; non-destructive materials inspection; and medical/biological imaging research. Picometrix also introduced the QA1000 for quality control applications, which is contained in a 19" industrial rack. Its ultralong umbilical allows the fiber-coupled sensor to be freely positioned up to 30 meters away.

Picometrix, Inc.
2925 Boardwalk, Ann Arbor, MI 48104
www.picometrix.com

Redondo Optics, Inc. (ROI) is a world leader in cutting-edge optical materials, nanotechnology, optical instrumentation, integrated optics and fiber optic sensing technologies based on the unique integration of advanced optics, opto-electronics, and software. The company's core technologies address specific markets in advanced materials, optical sensors and instrumentation, telecommunication components, U.S. security, environmental monitoring, bio-medicine, security, and aerospace. The company has made fundamental breakthroughs in optical materials, optical elements, optical instrumentation, and sensing technology, resulting in five U.S. and worldwide patent applications, with major emphasis in optical materials, security, visualization, and monitoring instrumentation.

Currently, ROI has a staff of 10 highly skilled employees, 2 of whom hold Ph.D. degrees. They perform research and production activities in 1,500 sq. ft. state-of-the-art facilities. ROI's rapid growth has been achieved through a successful commercialization strategy based on in-house RD&D and pilot manufacturing, contract manufacturing, corporate alliances, licensing, and joint ventures. This strategy positions ROI to become a major player in the rapidly growing chemical and biochemical sensor instrumentation, security, and sensing markets.

Redondo Optics, Inc.
2803 Faber Street, Redondo Beach, CA 90278

Ph: 310-292-7673

Scentczar Corporation is a Small, Woman-Owned Business that develops sensors, provides testing and vendor interface for government, and hosts symposia for government, academia, and industry in the Chemical, Biological, Radiological and Nuclear, and Explosive (CBRNE) arena. Scentczar has provided services for over 10 years.

Scentczar developed and patented a Residual Life Indicator (RLI) that allows soldiers or First Responders to determine the remaining life of activated carbon beds. Scentczar's RLI, called the Miniature Passive Indicator (MPI), has been extensively tested in the laboratory and in the field and is anticipated to begin Low Rate Initial Production (LRIP) in calendar year 2006.

Scentczar organizes and hosts four symposia for the Defense and Homeland Security communities that cover the four CBRNE threat areas. These symposia allow federal, state, and local government purchasers to interact with equipment developers and representatives of the medical and toxicology communities to improve CBRNE defense strategies.

Scentczar Corporation
10979-A Leadbetter Road, Ashland, VA 23005

www.scentczar.com Ph: 804-550-9770, FAX: 804-550-9965

Sensor Electronic Technology, Inc. is a world leader in developing and manufacturing of new III-Nitride based light emitting diodes (LEDs). Currently the company is marketing deep ultraviolet LEDs with peak emission wavelengths in the range from 247 nm to 365nm. These novel devices are expected to replace currently used bulky ultraviolet lamps such as mercury lamps and create new markets that need fast, compact, low-cost ultraviolet source with low power consumption. Deep UV LEDs find numerous applications in military, homeland security and commercial markets such as bio-agent detection, covert communications, water/air/surfaceand tissue disinfection and sterilization, optical sensors, bio-analytical and medical instrumentation, drug discovery and delivery, protein analysis and sequencing, UV curing. The company also develops high-power, high-frequency AlInGaN-based heterostrucure field effect transistors for RF and power electronics, generation and detection of terahertz radiation.

Sensor Electronic Technology, Inc.
1195 Atlas Rd., Columbia, SC 29209

www.s-et.com Ph: 803-647-9757, FAX: 803-647-9770

Telops, Telops specializes in the development of sophisticated opto-electronics solutions for its international clients based in the defense and aerospace markets. We thrive on high expectations and great challenges. Our technical experts understand your business: Their diverse backgrounds represent a powerful source of innovation. Whether you call on us for equipment, expertise or outsourcing, we will turn your high expectations into success.

Telops
100-2600 St-Jean Baptiste Avenue, Quebec, Quebec, Canada G2E 6J5

www.telops.com Ph: 418-864-7808, FAX: 418-864-7843

Virginia Diodes Inc. *(VDI)* designs, manufactures, and sells millimeter wave and terahertz devices, components, and systems. Our Mission is:

"....*to make the terahertz region of the electromagnetic spectrum as useful for scientific, military and commercial applications as the microwave and infrared bands are today.....".*

VDI's primary products are detectors, mixers, frequency multipliers, and integrated systems for reliable operation at frequencies between 18 GHz and 2 THz. All *VDI* components include in-house fabricated GaAs Schottky diodes and microelectronic filter structures. Other products include mesh filters, comb generators, and radiometers for applications above 100 GHz. The Company was founded in 1996 by Professor Thomas W. Crowe, President, and Mr. William L. Bishop, Vice President, originally of the University of Virginia. In 2001 the company restructured with the addition of two principals, Drs. Jeffrey Hesler and David Porterfield. Since then the company has continued to grow the number of product offerings and the employees needed to satisfy a broad range of terahertz and millimeter wave customers. Today, VDI's technicians, engineers, and executives form the world's strongest millimeter wave and terahertz component supplier team.

Virginia Diodes, Inc.
979 Second Street S.E., Suite 309, Charlottesville, VA 22902-6172

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