

SBIR

SANTA BARBARA INFRARED, INC.

a HEICO company

2007 SPIE Defense & Security Symposium

The annual SPIE Defense & Security Symposium is changing venues this year and will be held at the Marriot Resort & Convention Center in Orlando, Florida from April 9–12, 2007.

SBIR will be presenting technical papers during the symposium and displaying our extensive line of EO test instrumentation in Booth #1801 of the exhibition hall. We will be conducting live demonstrations of automated sensor testing using our industry-leading IR Windows™ Software System that is used for automating tests of IR, visible and laser systems.

Come by and see us at booth #1801 to receive information about all that SBIR has to offer.

SBIR Technical Papers Include:

- Radiometric Calibration of Infrared Target Projector Systems in Uncontrolled Environments
- LFRA: Developments in Large-Format Resistive Arrays and Advanced IRSP System Technologies
- OASIS: Cryogenically Optimized Resistive Arrays and IRSP Subsystems for Space- Background IR Simulation



MPETS Update

Under contract to Boeing, the Man Portable Electro-optical Test System (MPETS) has been developed by SBIR in support of the U.S. Navy's next generation of EO Automatic Test Equipment. This state-of-the-art EO test system will be capable of testing FLIRs, TVs, Laser Designators, Laser Rangefinders and DVOs in multiple environments from factory to field. The Engineering Development Model has been completed. Design Verification Testing will begin in March with delivery to Boeing—where MPETS will be integrated with RTCASS—scheduled for April 2007.

VIPER/T Update

DMC Corporation contracted SBIR to redesign the EO portion of the Third Echelon Test Systems (TETS)—now known as Virtual Instrument Portable Electronic Repair/Test (VIPER/T)—EO (or VEO-2). The USMC requested a lighter, smaller and more portable unit. The VEO-2 achieves this by reducing the footprint by over 60% and the weight by nearly 50%. The first two production units are complete. First article testing will begin in March with deliveries starting in April 2007.

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IRWorld by Alan IRWin

IR Testing: Prehistoric



IRSP Production in Full Swing at SBIR

Five years of intense engineering development has culminated in the delivery of six "MIRAGE XL" infrared scene projection (IRSP) systems in support of the Large Format Resistive Array (LFRA) program, and four cryogenic IRSP units in support of the Optimized Array for Space-background IR Simulation (OASIS) program. Funded by the Tri-Services and AFRL respectively, LFRA and OASIS are providing the dynamic IR scene projection community with upgraded capabilities necessary for today's demanding requirements.

The MIRAGE XL has demonstrated breakthrough performance and features including a high-resolution 1024 x 1024 image format, up to 200 Hz frame rate, apparent MWIR temperatures up to 750 K, high pixel operability (> 99.98%), and fast temporal performance (9 ms/5 ms rise/fall time). A host of advanced features such as windowing, real-time DSP, an all-digital interface, convolution, translation/rotation capabilities and a user-friendly sophisticated software interface makes MIRAGE XL the most advanced and largest format IRSP in the world.

OASIS—a 512 x 512, 50 K background IRSP designed for challenging cryogenic scene simulation applications—has demonstrated apparent temperatures greater than 650 K, with temporal performance and pixel operability on par with that demonstrated by MIRAGE XL. OASIS provides unprecedented flexibility to the IRSP user, from allowing high-performance simulation at ambient temperatures—where system setup is verified—to cryogenic temperatures where full performance simulation is conducted. A user-selectable analog/digital video input allows OASIS to be easily retrofitted into legacy HWIL installations, while directly supporting digital video interfaces for the future—thereby providing great long-term value to the simulation community.

With MIRAGE XL and OASIS production now in full swing, SBIR is ready to support the user community with state-of-the-art advanced IR scene projection.