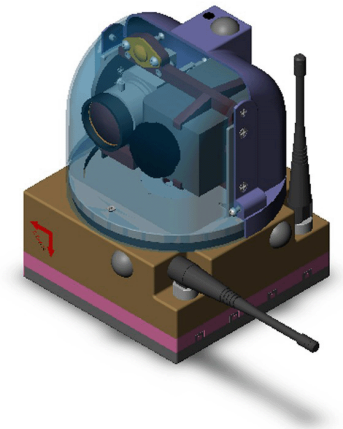
MARINE CORPS
WARFIGHTING
LABORATORY

VISUAL INTELLIGENCE, SURVEILLANCE AND TACTICAL ALERT SYSTEM

fact sheet



The **Visual Intelligence, Surveillance, and Tactical Alert System (VISTAS)**, formerly Local Area Security System (LASS) is a tactical, man-portable, unattended ground sensor system that extends the eyes and ears of a small unit by aiding in the observation of tactical objects and danger areas beyond the unit's line of sight. VISTAS will provide real-time, "around-the-corner" imagery directly to the small-unit leader to increase situational awareness for both short and extended periods of time. VISTAS is a complementary set of unattended ground sensors to be used with the Dragon Runner mobile ground sensor system, providing both a mobile and stationary suite of remote devices Marines can rely on to provide critical and timely information.

Background: Tactical, small units rely on their eyes and ears for situational awareness and reconnaissance, surveillance and target acquisition information. In today's modern battle spaces, where potential enemies understand the U.S. strengths and capitalize on the asymmetric nature of urban areas, small unit leaders will increasingly enter these hostile environments and encounter life-threatening situations. The Warfighting Lab recognized that tactical units need a small, low-risk capability to conduct RSTA, and enhance small unit situational awareness to reduce danger to Marines operating in these environments. VISTAS aims to address a number of these requirements.

VISTAS is managed and funded by the Marine Corps Warfighting Lab. The prototype system is being developed at the National Robotics Engineering Consortium, Carnegie Mellon University's Robotics Institute, Pittsburgh, Pennsylvania.

Description: VISTAS will be a lightweight and ready-to-use-as-delivered sensor system, requiring little formal operator training. A complete prototype system consists of three sensor heads and one Operator Control System (OCS) that includes a Handheld Controller. It should be noted that the same OCS used for Dragon Runner mobile ground sensor, will be the same OCS used for operating/monitoring VISTAS. Marine units will have the flexibility to use either mobile or fixed sensors depending on their mission profile. VISTAS sensor heads are comprised of video, audio, and motion sensors and will have the ability to pan, tilt and zoom. Sensor heads will possess day and night imagery capability with real-time video. The system will be small and rugged, designed for quick deployment and carried in the same custom backpack used for Dragon Runner

The VISTAS will enable a Marine to remotely see and hear, both day and night, and receive audible and tactile alerts when the sensor is triggered. The entire VISTAS system will be battery-powered and configured to accept additional battery power for extended monitoring missions. Future development for the VISTAS system may include a remote, fixed, extended period monitoring station, integration of other sensing devices used in conjunction with the electro-optical VISTAS sensor to extend overall sensing coverage, and the integration of lethal/non-lethal devices.

Deliverable Product(s): A prototype VISTAS system consisting of three sensor heads and a corresponding OCS will be used for initial concept validation and experimentation in fiscal year 2004.

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3255 MEYERS AVENUE
QUANTICO, VA 22134
WWW.MCWL.QUANTICO.USMC.MIL