

NAVY Transition Assistance Program

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NEED & CUSTOMER REQUIREMENT

Need: There's a strong need for tagging, tracking, locating (TTL) of assets and activities of interest for numerous asymmetric and irregular warfare scenarios. Also needed are degradable taggants that prevent tagged areas from becoming "polluted" with old signatures, enhance detectability, and can provide a time identification component to tagging.

Value to the Warfighter: A powerful tool to tag, track, locate, and identify assets/activities of interest for enhanced intelligence acquisition, surveillance, and situational awareness. It will also enable near-real time detection of movement through or intrusions into sensitive areas (digging, foot traffic, vehicular tracks, and indications of IED threats), potentially saving American lives.

Operational Gap: Current taggants have limited functionality and are non-degradable. Taggants that do not degrade over time make tagged areas "polluted" with old taggant signatures and hamper detectability. Further, customizable optical taggant detector and tagging systems that can provide automated interrogation, detection, and alert to the warfighter, are not available.

Customer Specifications: Key functions desired are: (1) TTL of assets/areas/activities to provide situational awareness, intelligence data gathering, and detection of movement/intrusions, (2) Taggants whose optical signal degrades over time (e.g., ~50% reduction over 2 weeks), (3) near real time change detection based on taggant intensity images, and (4) a time identification component to tagging.

Technology Description: Customizable degradable covert taggants, detector, and integrated tagging system are being developed. These tags are designed to degrade (lose optical signal) controllably over time. The customizable, multi-platform-capable taggant sensor can provide automated interrogation, detection, and alert to the warfighter. This technology will provide new and enhanced capabilities to the TTL user community, will be widely applicable, and can be customized and integrated according to specific user needs.

TECHNOLOGY DEVELOPMENT MILESTONES (SBIR/STTR)

Milestone	TRL	Risk	Measure of Success	TRL Date
Demonstration of Feasibility of Designing Degradable Taggants	2	Moderate	Ability to Degrade Optical Signal	12/07
Feasibility of Controlling Taggant Degradation; Basic Taggant Detector Design	3	Moderate	Ability to Control Taggant Degradation via Formulation Design; Ability to Detect Taggants Via Our Detection Approach	09/08
Taggant and Detector Development; Laboratory and Outdoor Taggant Detection at Short Range in Daylight	4	Moderate	Ability to Make Particulate Taggants and Detect Tagged Entities in the Laboratory and in Daylight at 1-10 m	11/09
Outdoor Taggant Detection and Change Detection at Medium to Long Range in Daylight	6	Moderate	Reliable Outdoor Detection of Tagged Entities and Changes (e.g., footprints) in Tagged Areas from 50-100 m in Daylight	11/10

Open contract: N00014-09-C-0259 ending November 2009

N07-072 - TIAX LLC

Degradable Taggants

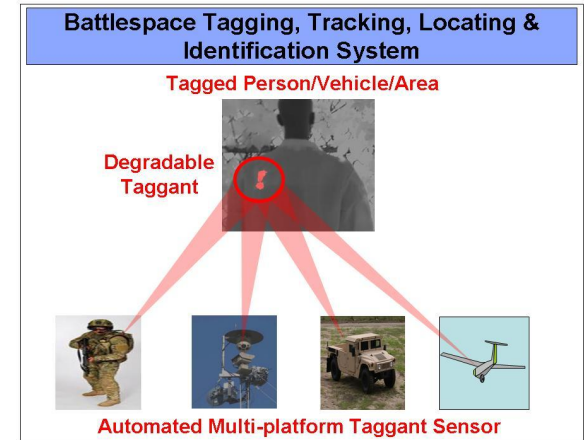
SPONSORSHIP of original SBIR/STTR Topic

SYSCOM: ONR - SBIR

Transition Target: USSOCOM, PEO-SRSE (Special Reconnaissance, Surveillance, and Exploitation)

Original Sponsoring Program: Marine Corps Intel, Tactical Remote Sensor System (TRSS), ACAT IV

TPOC Phone Number:
(703) 696-5349



TECHNOLOGY TRANSITION OPPORTUNITIES (PHASE III)

Other Potential Applications:

The technology is applicable to Intelligence, Surveillance, and Reconnaissance (ISR) in all areas of the DoD, with an initial thrust in the Expeditionary Maneuver Warfare and Combating Terrorism Department at ONR. It will benefit USSOCOM PEO-SRSE (Special Reconnaissance, Surveillance, and Exploitation) as well as the US Air Force. It will provide enhanced TTL capabilities to the warfighter, and it can be customized and integrated as per specific user needs and application scenarios.

Business Model:

TIAX will license this technology to system integrators and support them in developing customized and integrated system solutions, and in transitioning them to the field. TIAX is an ISO 9001 certified company and has extensive experience in working with government agencies in both, prime contractor and sub-contractor roles.

Objective:

We wish to identify relevant primes and military groups that will assist in the continued development of this TTL technology and its customization and integration as per specific user needs and application scenarios.