Topic: N152-122

Tactical Edge

In-Transit Visibility Module for Lifts of Opportunity Program (LOOP) & Transportation Exploitation Tool (TET)
Tactical Edge is a SDVOSB that uses software engineering to solve real-world problems for our DoD and commercial clients using emergent and proven technologies, best practices, and innovative thinking. Its Total Visibility Anywhere (TVA) Data Service leverages the Position Location Information (PLI) data made available through current Government owned Authoritative Data Systems (ADS), and in combination with their custom machine learning algorithms, provides DoD Logisticians with contextual information about where shipments of interest are NOW, displaying those locations on a map, and providing estimated arrival dates to stakeholders who need to know how the shipment will affect their mission. TVA has been verified to work in tactical environments and to be interoperable with government-hosted systems. For a Phase III transition partner, Tactical Edge is targeting government PMOs that specialize in Logistics-focused information, as well as data dissemination platforms.

Technology Category Alignment:
Human Computer Interfaces (HCI) for Decision Making
Information Collection/Management
Synthesis/Analytics/Decision Tools

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SYSCOM: ONR
Contract: N68335-17-C-0054
Corporate Brochure: https://navystp.com/vtm/open_file?type=brochure&id=N68335-17-C-0054

Department of the Navy SBIR/STTR Transition Program

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WHO

SYSCOM: ONR

Sponsoring Program: ONR Code 30

Transition Target: Seeking Transition Partner

TPOC:
Mr. Billy Short
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Other transition opportunities:
USMC Portfolio Manager Logistics Combat Element Systems, USMC Logistics Command, Deployment US Army's Process Modernization Office, US Army's Military Surface Deployment and Distribution Command, US TRANSCOM, and the Defense Logistics Agency

Notes: Tactical Edge's Total Visibility Anywhere (TVA) is used to track images from factory to foxhole. The image shows shipments getting loaded on a truck, going from truck to plane, the plane flying to its destination, and the finally servicemen unloading.

Image courtesy of Tactical Edge, Copyright 2018. Includes Photos courtesy of US Navy and Marine Corps

WHAT

Operational Need and Improvement: Logisticians for the Department of Defense have a notoriously difficult job. According to a GAO High-Risk Series report to congress in February 2015, they noted that in secondary inventory items alone, they manage more than 5 million items with a reported value of approximately $98 billion. That report goes on to note that, while progress is being made, the DoD still has weaknesses in their ability to maintain visibility in cargo movements, materiel distribution and inventory management.

Specifications Required: Monitor in near-real-time the transportation of critical end items, predict time the arrival of, and any potential hazards to, the mission, and provide decision support tools including mission performance metrics and automatically generated alerts if human intervention is required.

Technology Developed: Our technology will provide the DoD with better insight into the current location of a shipment and estimated time of arrival by leveraging historical data and using Machine Learning algorithms to evaluate the current delivery cycle against historical benchmarks. To do this, we have built a data service that leverages the current Authoritative Data Sources, including submitted Service Requests, RFID tag reads, and Federal Logistics database attributes. And then we align that data using the latest Semantic Data technologies and graph databases to provide additional context to the end users.

Warfighter Value: Our system provides value to the warfighter by providing additional context to the information they are already getting. This additional context will come in a variety of forms. Our system will augment the RFID tag reads (last known locations) when estimated time of arrival, so our Soldiers, Sailors, Marines and Airmen can more confidently plan a mission knowing what resources will be at their disposal. We will provide visual context by putting last known locations on a map, so logisticians will have a visual representation of where something is instead of relying on latitude/longitude grid coordinates. Finally, our notification system will alert commanders, mission planners and other stakeholders the moment a shipment is going to miss its arrival window so that they may make contingency plans sooner.

WHEN

Contract Number: N68335-17-C-0054   **Ending on:** October 31, 2019

Milestone	Risk Level	Measure of Success	Ending TRL	Date
Phase I Kickoff	Low	Team has a complete understanding of what is being asked of them	0	1st QTR FY16
Phase II Kickoff	Low	Team the has demonstrated lessons learned from Phase I, and is ready to develop the prototype	1	3rd QTR FY17
Demonstration Event - Agile Bloodhound 2018	Med	Demonstrate the ability to read in environmental information	3	4th QTR FY17
Demonstration Event - ITX-3 2018	Med	Demonstrate the ability to build shipments and convoys	4	3rd QTR FY18
Demonstration Event - Trident Juncture	High	Demonstrate the ability to track a shipments delivery in Disconnected, Intermittent and Limited (DIL) bandwidth environments	5	1st QTR FY19
Phase II Complete	Low	Have an initial prototype ready for transition to a program of record	5+	1st QTR FY20

HOW

Projected Business Model: For the DoD, we would look for a services support contract in order to continue tailoring our product to our transition partner's needs, harden it to achieve IA approval, and to handle future maintenance of the system. For commercial partners, we would establish a paid Software-as-a-Service approach where we hosted and maintained a central data service, and then used proceeds to build and refine the required shipment sensors and mobile applications.

Company Objectives: Our goal is to become a recognized, ethical, and innovative software solutions and services leader for the Department of Defense. Our focus is to deliver the right solutions, the right people, and the right technology that will support our clients needs both today...and tomorrow. In our short seven years of existence, our company has received multiple awards; including being recognized as one of Inc.'s 5000 Fastest Growing Companies in 2016 as well as being appraised at CMMI Level 2 DEV for our software development methodologies. Past clients include Headquarters Marine Corps Installations and Logistics, the Office of Naval Research, and the Army's Logistics Support Activity.

Potential Commercial Applications: Our data service has the ability to support multiple needs for commercial logistics firms. Similar to the DoD, commercial delivery firms need help finding shipments within a warehouse / depot lot, they need to be able to track shipments as they are being delivered, and they are now being asked to provide the purchaser with an estimation of when the shipment will be arriving. Our service has the ability to provide all of that, as we have previously demonstrated during the Office of Naval Research-hosted Agile Bloodhound 2017 demonstration event and Integrated Training Exercise - 3 in 2018.

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