Department of the Navy SBIR/STTR Transition Program

SPAWAR SR-2017-295

Topic # N121-106
Tactical Troubleshooting Tool (T3)
Fuse Integration, Inc.

WHO

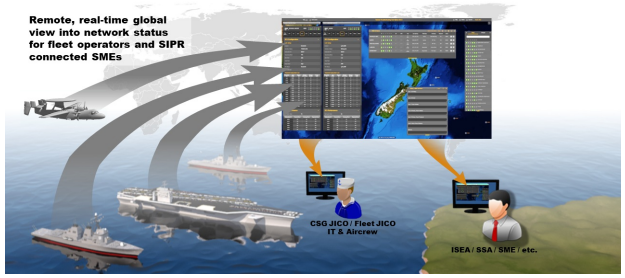
SYSCOM: SPAWAR

Sponsoring Program: Navy Command and Control Program Office (PMW 150)

Transition Target: Command and Control Processor (C2P)

TPOC:
(858)537-0652

Other transition opportunities: The Fuse T3 system can reach out anywhere and extract user-defined data from any source and display integrated data in one centralized user interface. This can be used for almost any tactical mission that requires remote access to real-time data such as law enforcement agencies, maritime industry, U.S. Coast Guard, and other DoD platforms such as the Automated Digital Network System, Maritime Patrol and Reconnaissance Aircraft, and unmanned aerial vehicle platforms.



T3 Operational View; Copyright, 2017, Fuse Integration, Inc.

Notes: Fuse understands the needs of tactical data link users, and develops systems that enable TDL data to be shared across Internet Protocol (IP) networks. Decoupling TDL information from rigid hardware architectures gives the DoD new ways to work with near real time tactical information coming from the tactical edge and provides visibility into real-time network status.

WHAT

Operational Need and Improvement: Communications systems used in the Navy are very complex and therefore, may become unreliable due to the difficulty in properly configuring network settings to remain operational. U.S. Navy Joint Interface Control Officers (JICOs) and engineering subject matter experts (SMEs) require a system that enables a global view of network connectivity along with remote insight into individual ships' tactical data link (TDL) configuration settings.

Specifications Required: Requirements include: global view of ship's network status, user-tailorable displays, identified relevant data for 'big picture' display, user-created groups to compare a specific set of ships' configurations, home page displays an overall indicator of system status for each link, within each link category have a display of the data fields most likely to be referenced in troubleshooting for each link. These 'top priority issues' will be displayed on a quick view screen under each link's indicator.

Technology Developed: System components include a Bridge Tactical Router (BTR) that interfaces directly with the Common Data Link Management system (CDLMS) through the Human Machine Interface (HMI) computer. The BTR will create a secure Internet Protocol (IP) network connection and enable a distribution framework sending data to a secure TDL web server ashore.

Warfighter Value: The Fuse Tactical Troubleshooting Tool (T3) distributes configuration data across a secure network allowing authorized Secret Internet Protocol Router Network (SIPRNet) connected users to rapidly diagnose network configuration issues using a browser based interface to view shipboard configurations and recommend corrective action, increasing multi-TDL readiness and improving communications across the fleet.

WHEN

Contract Number: N00039-15-C-0226

Milestone	Risk Level	Measure of Success	Ending TRL	Date
Internal Acceptance Test	Low	Internal development completed	7	February 2017
System Design Document	Low	Completed design	7	June 2017
IAT	Low	Certification and accreditation complete	7	August 2018
IV&V	High	Fleet ready	8	August 2018

HOW

Projected Business Model: Fuse's balance of experience in operations and systems engineering, blended through our Fuse Process, helps to ensure that the solutions we develop are on target for the environment in which they will be employed. Fuse has developed a software based solution that can be licensed to other commercial organizations to run on any system.

Company Objectives: Identify other potential DoD applications for this capability/technology. Explore opportunities with other agencies/commercial applications that have similar network needs.

Potential Commercial Applications: The Fuse T3 system can reach out anywhere and extract user-defined data from any source and display integrated data in one centralized user interface. This can be used for almost any tactical mission that requires remote access to real-time data such as law enforcement agencies, maritime industry, U.S. Coast Guard, and other DoD platforms such as the Automated Digital Network System, Maritime Patrol and Reconnaissance Aircraft, and unmanned aerial vehicle (UAV) platforms.

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