Department of the Navy SBIR/STTR Transition Program

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Topic # N201-050
Real-time Insights for Combat System Integration and Testing Innovative Defense Technologies

WHO

SYSCOM: NAVSEA

Sponsoring Program: PEO IWS 5.0

Transition Target: AEGIS + SQQ89

TPOC: (202) 781-4233

Other Transition Opportunities: Other tactical interfaces with AEGIS, submarine platforms.

Interface Traffic Evaluation

Monitoring

Assessment

- REAPER Analysis
- DSAL Analysis
- Machine Learning

Interface Traffic Evaluation

Visualization

- Real-time Results
Dashboard

- REAPER Analysis
- Machine Learning

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Notes: REAPER: Recording, Extraction, Automated

Playback, Event Reconstruction - Provides live data recording and provisioning to automated analysis

subsystems

DSAL: Data Science Analysis Library - Executes model-based analysis in real-time

WHAT

Operational Need and Improvement: The Navy requires a real-time integration analysis tool to perform combat system interface testing to reduce testing time and cost associated with integration.

Specifications Required: A real-time monitoring, visualization, and assessment software tool to detect interface errors.

Technology Developed: Interface Traffic Monitoring and Evaluation (IT-ME) software tool capable of performing interface monitoring, visualization, and assessment of combat system applications.

Warfighter Value: The IT-ME will perform interface monitoring, visualization, and assessment in real-time so root-cause analysis can happen in real-time, reducing the cost and time associated with integration, test, and certification efforts .

WHEN Contract Number: N68335-22-C-0098 Ending on: Jan 25, 2024

Milestone	Risk Level	Measure of Success	Ending TRL	Date
Demonstration of integrated system in unclassified environment	N/A	Verified correct operation of data pipeline and subsystem interfaces	4	3rd QTR FY23
Integration of system in classified environment	Low	Demonstration of analysis execution on real- time data from tactical subsystems	5	1st QTR FY24
f Option exercised, fit-for-use certification in classified environment	Medium	Verification and refinement of automated analysis in conjunction with government and SME stakeholders	6	TBD

HOW

Projected Business Model: Given the close relation of the IT-ME solution to tactical hardware, a partnership with appropriate prime contractors will be needed. IDT is currently working with Lockheed Martin as we work towards our transition target.

Company Objectives: Develop an innovative, rapid, iterative capability to monitor, visualize, and assess combat system interface traffic in real-time during integration and testing of combat systems.

Potential Commercial Applications: IT-ME is easily tailored commercial applications with complex but well-defined interfaces. IDT is planning to conduct a SWOT analysis to identify target systems.

Contact: Brandon Hogge, Software Engineer bhogge@idtus.com (757) 812-9392