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Tech Solutions Overview

Tech Solutions:

A new way of doing busines

A web-based e-Business to:

- **Receive *Fleet/Force (F/F)* requests**
- **Find S&T solutions to F/F issues**

Request

Tech Solutions addresses Sailors and Marines (Fleet/Force) requests that impact their Quality of Life, Quality of Service, Readiness and Training

Fleet/Force customer will be kept in the loop throughout the entire process.

Process

- Request is Validated by Science Advisor at initiating Command
- Solution Ideas Requested and Reviewed
- Proposals requested from selected subset of Solution Ideas and reviewed
- Proposal selected, funded and program initiates

Solution Ideas (SI)

- *Solution Ideas* can be either:
  - a proposal based on a center of expertise within the Naval Research Enterprise Command or other provider.
  - an existing effort that can solve the problem

Funded Projects

Tech Solutions #2: FRS Scheduler

Problem: Fleet Replacement Squadron ability to coordinate flight events. Examples of flight event considerations; student pre-req., instructor quals, range, ordnance, weather & crew rest

Solution: Develop an automated process to produce optimized flight/trainer schedule with manual intervention options to allow flexibility for daily changes that occur during execution.

TECH Solutions program:

- Funded a program between NAWC TSD and a commercial vendor to deliver software to VFA-106 in FY 02.

Tech Solutions #11: Non-Skid Deck Scrubber

Problem: Cleaning the non-skid surface on the carrier is time and labor intensive. Takes 100's of sailors with push brooms, detergent, & fire hoses working over two days.

Solution: Develop a non-skid scrubber that can adequately remove dirt, grease, and oil and restore the gripping effectiveness of the deck of aircraft carriers and large deck amphibs.

TECH Solutions program:

- Funded a program between NSWC Carderock and a commercial vendor to deliver a scrubber to CNAL in Oct '03.
- Scrubber has been demonstrated on USS TRUMAN and USS ENTERPRISE with excellent results. Continued work is proceeding on handling residue recovered in cleaning process

Funded Projects

Tech Solutions #17: Paveway Munitions Planning

Problem: Current tool does not integrate with the user's mission planning surface and does not provide a suitable description of the release point for weapons planning.

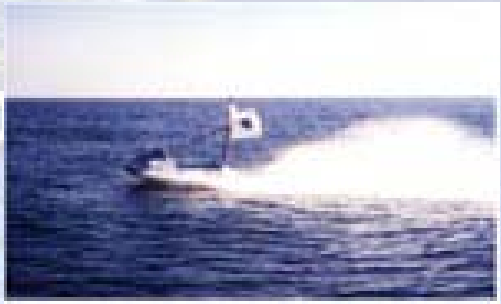
Solution: Develop the capability for the end user to present a "God's eye", or overhead view of the weapon's release point and then integrate that data with the Navy

Portable Flight Planning System (N-PFPS).

TECH Solutions program:

- Funded a program for NAWC China Lake to deliver a planning tool in FY 02 to Naval Strike
- Effort is currently undergoing certification for use in N-PFPS.

Tech Solutions #21: Small Boat Target



Problem: The need for an effective small arms (.50 cal, 25 mm chain guns, CIWS BLK 1B) training device for deploying surface ships that lack available, realistic targets.

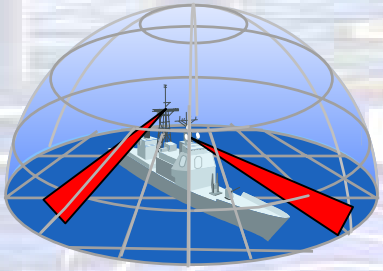
Solution: Develop a target that is deployable, expendable, and towed by a roboski with a visual / electronic means to score rounds that hit the target.

TECH Solutions program:

- Funded a program for NFESC to provide a target to COMNAVSURFLANT in FY 02.

Funded Projects

Tech Solutions #51: Aircraft Carrier Surveillance



Problem: The need for 360°° situational awareness for ship's perimeter while inport and at anchor without extensive use of manpower and effective networked communications.

Solution: Develop a system to be used when approaching inport areas, pierside, at anchor or navigating canals that would provide increased capability for ship's security forces during heightened FP conditions.

TECH Solutions program:

- Funded NSWC Crane to integrate a force protection capability using surface search radar and high-resolution laser imager aboard a CV/CVN for COMNAVAIRLANT.

Tech Solutions #15: Sub Scheduler

Problem: Growing multi-mission demands and a reduced force structure environment require increased efficiency in employing assets to conduct missions and training.

Solution: A single integrated database for submarine schedule and readiness data with a scheduling engine that can best-fit future deployments to ship configuration, training and fuel capacity, as well as best-fit current schedule questions using operational readiness indicators

TECH Solutions program:

- Funded NUWC Newport to develop a intelligent software tool to facilitate resource scheduling for COMSUBLANT.

Funded Projects

Tech Solutions #39: Wearable Wireless Computers

Problem: The need for maintainers to take voice, video, & data computing to the place of work, extending NMCI/IT-21 to the sailor on the deck plates and flight line.

Solution: The employment of Wearable Wireless Computers (WWC) to support the automation of flight line maintenance.

TECH Solutions program:

- Funded SSC San Diego to integrate a wwc network for NAS Brunswick CPRW-5 taking advantage of current S&T efforts in human systems engineering.

Tech Solutions #48: Air Quality Monitoring

Problem: Monitoring a submarine compartment after a fire takes 2 hours. Draeger tubes used to monitor 12 different species are expensive, shelf life limited, limited accuracy and subject to interference.

Solution: Provide simple hand held device(s) which provide appropriate analysis for life gases and trace species. To the maximum extent possible use common analyzers to satisfy requirements for weekly monitoring, gas free engineering, damage control and escape and rescue.

TECH Solutions program:

- Funded NSWC Card Philly to find suitable technology to replace the use of Draeger tubes in atmospheric monitoring aboard submarines for COMSUBLANT.

Tech Solutions Team

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