

The following technical paper abstract information was recently submitted in connection with session DOD113, Workload, Workforce, Material Management

Offer Number: 14DOD-0041

Paper Title: eTWD Great Ideas Abstract

Author:

Louis Leontakianakos

NAVSEA

Maine

(207)438 6573

louis.leontakianakos@navy.mil

Abstract: Problem Statement: Naval Shipyard mechanics currently perform maintenance, repair, upgrades and all other forms of ship work using paper based work packages that include work instructions, drawings, process instructions, quality assurance forms, etc. This necessitated the institution and staffing of a large support structure to print and assemble the mechanic's work packages, support a work problem resolution process and review all work packages for completeness and accuracy to support final certification.

Background: In the 1990s, NAVSEA developed a Government off-the-shelf (GOTS) IT program to provide shipyards a tool to technically plan a ship's availability, author the mechanics work instructions, and track work progress. Although an improvement on paper based planning efforts was observed, the system is labor intensive. The GOTS IT program requires manual retrieval of previous availability information, additional engineers to support execution of ship work packages, and scan executed paper based work instructions to generate an electronic history record.

In June 2002, the concept of designing an IT system that would automate the paper based processes that produce, manage, and execute the mechanic work packages associated with ship's maintenance, repair and overhaul work was generated. A provisional patent was issued for the concept, and in 2003, it was one of several initiatives presented to transform Naval Shipyard Operations. In 2005, commercial software was configured and a pilot to technically plan, author, and perform actual ship repair work was executed at Portsmouth Naval Shipyard to validate usability and provide data to estimate savings. Following successful completion of the pilot, Portsmouth developed a savings estimate and Norfolk Naval Shipyard independently validated the estimate. NAVSEA then led a combined shipyard effort to develop a project plan. In 2010, eTWD was selected as one of the CNO's Reduction of Total Ownership Cost (RTOC) initiatives, with an estimated investment of \$27M and a fully implemented steady state savings of \$61M per year. The projected savings have been decremented from future fleet maintenance budgets.

Status: A Request for Proposal was posted with six vendors submitting proposals. The selection process mandated vendors demonstrate their proposed solution by executing Government provided Use Cases. A vendor was chosen based on best value to the government. The software solution will integrate work instructions, drawings, data tables, verification signatures, work control processes, etc., into an on-line certifiable electronic work package to be used by shipyard mechanics. eTWD will auto-populate required forms, enable real-time collaboration for problem resolution, auto-validate recorded data, and enable work certification to be an electronic authentication function. The content management system in the solution will automate management and retrieval of current and historical technical information. Finally, the solution, without any upgrades, will provide significant opportunity for future cost saving initiatives which will further enhance shipyard efficiencies.