



TOPIC NUMBER: N08-006

SBIR INVESTMENT: \$2,728,110

PHASE III FUNDING: \$8,342,666

DEPARTMENT OF THE NAVY

NAVY SBIR/STTR SUCCESS



ACTS
AIRCRAFT COMPONENT TRACKING SYSTEM

ACTS provides improved quality and access to component data, high reliability, and on-demand documentation as required by all stakeholders.

Technical Data Analysis, Inc.
Engineering & Software Support

POC: Scott Bradfield
703-237-1300
Falls Church, VA 22042
www.tda-i.com

THE TECHNOLOGY

As a web-based tool with no user installed software, ACTS has been designed to provide immediate access to component data throughout operational squadrons, maintenance facilities, and engineering support activities 365 days a year, 24/7. ACTS provides users the ability to update carded information in a single database and then print those cards so that they may still travel with the component as outlined in the Naval Aviation Maintenance Program (NAMP). This works to reduce and eliminate data inconsistencies associated with missing cards and erroneous data, as well as preserve the entire component service history.

"ACTS IS A USER FRIENDLY SYSTEM THAT HAS GREATLY IMPROVED ACCOUNTABILITY AND ACCURACY WITH SRC, EHR AND ASR CARDS. WE HERE AT FRCSW ARE VERY GRATEFUL TO YOU AND YOUR TEAM (PMA-299 AND TECHNICAL DATA ANALYSIS, INC.) FOR PROVIDING SUCH A GREAT PRODUCT. NOW INSTEAD OF HARASSING EACH SQUADRON FOR CARDS IT'S AS EASY AS TYPING IN A S/N. ANY ISSUES THAT I'VE HAD WITH THE SYSTEM WERE IMMEDIATELY CORRECTED BY THE ACTS HELP TEAM. THANK YOU AGAIN."

AZ1 Thomas Clemens, FRCSW

THE CHALLENGE

Software was needed to take the data generated by the individual aircraft's Health Usage Monitoring System (HUMS) and analyze it to determine how the aircraft was flown. By knowing the regime and the amount of time spent in each regime, the associated damage incurred could be determined, but in the process of trying to match this damage with the dynamic components, it was determined that the configuration of the aircraft in legacy component tracking systems was not

very accurate. Given this inaccuracy, the benefits expected of a HUMS and flight-by-flight tracking were lessened. A faster and more accurate component tracking system was needed if the full benefits of HUMS were to be realized.

THE TRANSITION

PMA-299 H60 Helicopters is transitioning the ACTS program in order to replace the incumbent Joint Configuration Management Information System/Aeronautical Time Cycle Management (JCMIS/ATCM) legacy system. PMA-299 and TDA have completed rolling out ACTS to the entire H-60 fleet, where the ACTS program is operating on USN servers behind the electronic demilitarized zone (eDMZ). This includes all CONUS east and west coast squadrons, as well as OCONUS squadrons stationed in Hawaii, Guam, and Japan. The H-60 In-Service Support Center (ISSC) team at FRC Cherry Point is using ACTS for tracking and managing all H-60 components that were previously tracked via JCMIS.

THE NAVAL BENEFIT

By having an accurate and reliable component tracking system in place, military assets can be readily deployed with components that will meet mission needs and reduce unplanned downtime once deployed. Electronic part tracking greatly reduces imposed penalties for unknown usage histories, reducing the amount of imposed penalties and decreasing total ownership cost. The adoption of ACTS will reduce sustainment costs through optimum asset life management and proper maintenance planning.

THE FUTURE

The next step for ACTS is to develop an enterprise version covering all Navy and Marine Corps aircraft. Already the cost savings to date for just the H-60 type model series is in excess of \$121 million. Incorporating the other rotary and fixed wing aircraft is estimated to increase the NAE savings to over \$125 million each year until ACTS is fully implemented.