

# Performance Analysis and Trends in Training Enhancing Readiness Reporting for Naval Systems (Patter<sup>2</sup>ns)

NAVAL AIR WARFARE CENTER  
TRAINING SYSTEMS DIVISION  
ORLANDO FLORIDA

## EXHIBIT FACT SHEET



# Performance Analysis and Trends in Training Enhancing Readiness Reporting for Naval Systems (Patter<sup>2</sup>ns)

Escalating pressure to reduce training costs while increasing proficiency necessitates increased use of new training technologies such as Automated Performance Assessment (APM) and Trend Analysis (TA). These technologies provide a means to increase training effectiveness and efficiency to advance Fleet readiness and proficiency.

APM and TA technologies reduce operator workload by quickly synthesizing training data from both operational and simulated exercises. Additionally, these technologies provide streamlined interfaces for post-mission reporting. The Performance Analysis and Trends in Training Enhancing Readiness Reporting for Naval Systems (PATTER<sup>2</sup>NS) utilizes two component technologies that can be used separately or in conjunction to provide APM and TA capabilities. These technologies include the Optimized Real-time Common Information Display (ORCID) and Post-Mission Assessment for Tactical Training and Trend Analysis (PMATT-TA).

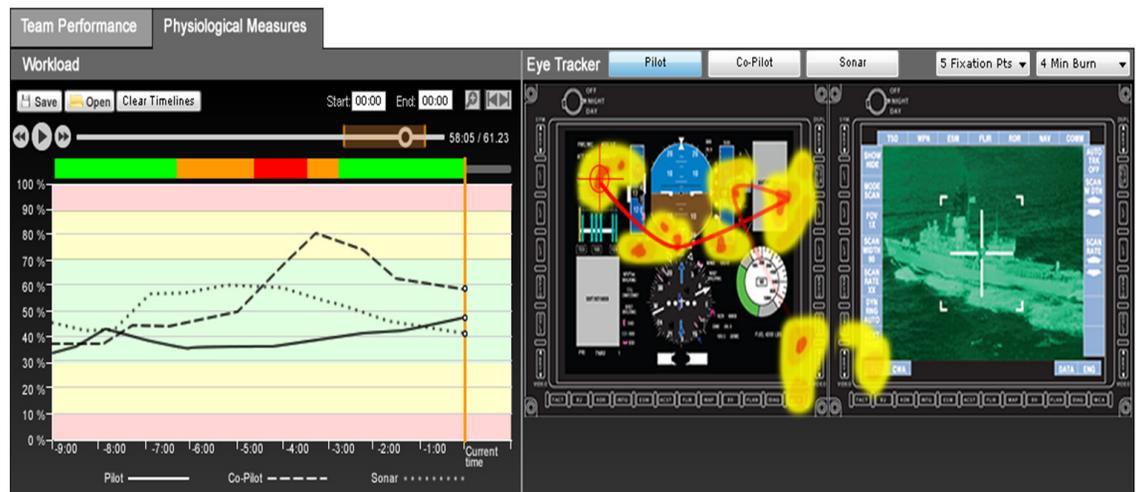
### ORCID Capabilities

ORCID is a performance measurement system used for assessing trainee task performance. This technology monitors and displays both performance

and physiological data of trainees to instructors to support real-time assessment and debrief.

ORCID utilizes the Performance Measurement (PM) Engine to configure, capture, and assess system-based measures of performance during training exercises. The PM Engine monitors data related to trainee performance and displays real-time assessments for use during-action or after-action review feedback. Training objectives provide a basis for measuring performance and skills by defining measurable behaviors specific to the training environment. PM Engine's flexible architecture allows for calculations that consider contextual factors and evaluates trainees based on pre-determined ranges of acceptable performance.

Physiological metrics including eye tracking, electrocardiogram (ECG), and respiration data are also measured and recorded to provide instructors with an understanding of individual workload. Combining system-based performance and physiologically-based workload



assessments helps operators maintain awareness of trainees' states to optimize current training as well as future outcomes.

## PMATT-TA Capabilities

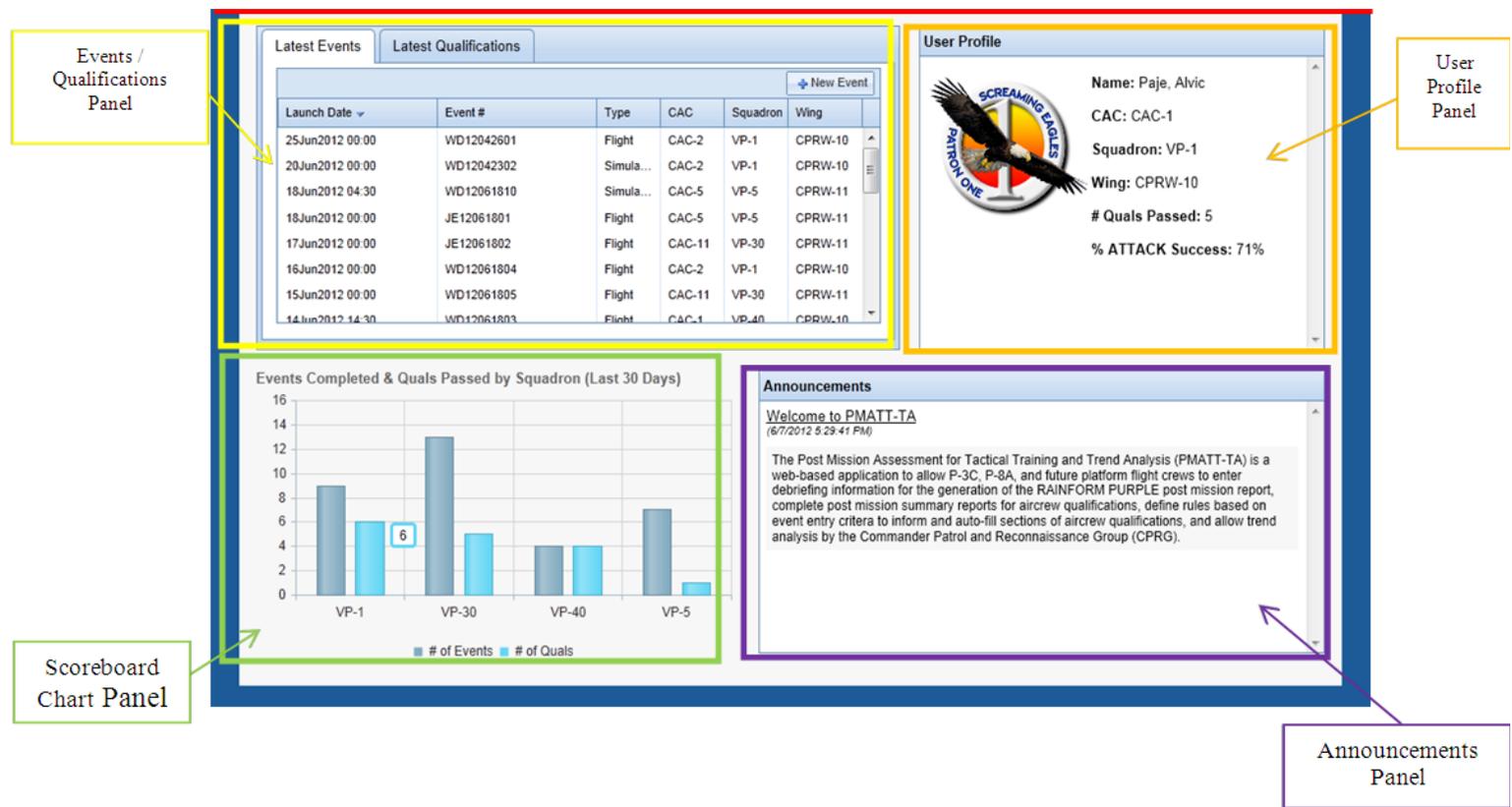
PMATT-TA provides a centralized performance measurement capability to capture and provide training awareness to identify potential aircrew/squadron/wing or force problem areas and optimize resource allocation.

The PMATT-TA is a centralized, performance-based, data analysis and archive tool that is web accessible. This technology supports force-wide assessment of maritime aircrew tactical performance by providing a single interface for capturing post-mission reporting data (i.e., live/simulated training operations) based on the Capabilities Base Matrix. The goal of this technology is to reduce operator workload through a user friendly interface and combining redundant data entry (e.g., mission summaries, qualification sheets). Additionally, future development seeks to leverage data from the PM Engine to further automate data entry.

Archived post-mission results and performance data will support trend analysis calculations to understand force proficiency. Additionally, this data can provide instructors with longitudinal diagnostic feedback, increasing the quality of briefs/debriefs and identification of training inefficiencies. To increase transition opportunities, PMATT-TA is scalable to new mission areas, training scenarios, and platforms.

## Partners

This effort incorporates technologies from several programs of research including the Office of Naval Research (ONR), Small Business Technology Transfer (STTR), Small Business Innovation Research (SBIR), PMA-205, and PMA-290.



For further information on this exhibit, or on business opportunities with NAWCTSD, please contact our Business Support Team by telephone at (407) 380-4763, by e-mail at orlo\_businesssupportteam@navy.mil, by fax at (407) 381-8744, or by mail at Business Support Team, NAWCTSD, 12350 Research Parkway, Orlando, FL 32826