Human Performance Metrics Ontology

PROGRAM DESCRIPTION

The Human Systems Performance Assessment Capability (HSPAC) was a joint effort across the Naval System Commands focused on developing tools and techniques to support human systems integration research and practice. One of its goals was to develop a comprehensive set of human performance metrics that is applicable for system engineering and a data repository for accessing those metrics and test results.

HSI CHALLENGE

Naval System Commands typically conduct independent, individual and system-level human performance assessments. Although these assessment efforts often have common goals, the lack of coordinated data collection across organizations makes it hard to develop a baseline or to compare alternative systems, training methods, concept of operations (CONOPs), and organizational structures. As a consequence, the Navy has not realized the potential benefits of standard measures and metrics for network-centric warfare.

SOLUTION

PSE developed a shared measurement repository - a metrics ontology - for storing three types of HSI-related information: human performance measures, data collected using those measures, and guidance on applying each measure. This ontology is organized into a taxonomy that categorizes measures into those for individuals, teams, and systems. Accessible via a web-based user interface, the ontology provides a means for browsing the comprehensive set of standardized human performance measures, tracking performance measures, retrieving previous assessment results, and sharing assessment results across HSI organizations. The Metrics Ontology provides the Navy with a standardized set of measures and metrics for assessing human performance in both developing and fielded systems. It continues to be used to support lab and field experiments as well as developmental and operational testing for a variety of systems.