Tutorial and Workshop for Human Systems Integration (HSI) in Semantic Computing (TWHSISC 2013)

Human Systems Integration (HSI) is an interdisciplinary discipline emerging along with Semantic Computing for projects that require sophisticated integration. HSI simply put is the relationship between humans and their environment and how systems are design and used relative to that relationship. HSI includes three elements: Humans in their different roles in the system (as operator, maintainer, trainer, designer, etc.), Systems of hardware, software, and processes (including the acquisition process and the design process), and Integration of all of these elements to optimize the performance and safety of the whole. The principle goal is to ensure a safe and effective relationship between the human and the system to satisfy the mission requirements. This includes integrated and comprehensive analysis, design and assessment of requirements, concepts and resources for the system via the HSI Domains of manpower, personnel, training, safety and occupational health, habitability, personnel survivability, and human factors engineering.

There are three Case Studies we are considering. The first case study in training efficacy, Human System Integration Metrics (HSIM), delivered a prototype system, methods, and procedures for an extensible mark-up language (XML) data warehouse to meet FORCEnet HSI requirements. It facilitates the assessment of human performance improvement opportunities that can enhance operational readiness with less preparation time. The second case study, HSI-Joint Advanced Distributed Language 2012 Integrated Prototype Architecture (HSI-JADL2012), simulated the system engineering scenarios needed for evaluation. The third case study, Ontology Development via HSI, looked at the interdisciplinary focus of HSI in Semantic Computing.

The Tutorial and Workshop for Human Systems Integration (HSI) will explain the concept of HSI and how it is being used in Semantic Computing via case studies in Ontology development, integration, and training. TWHSISC 2013 consists of a half-day tutorial and a half-day workshop to be held in conjunction with the 7th IEEE International Conference on Semantic Computing (ICSC2013) on September 19, 2013.

Main Topics
1. What is HSI?
2. HSI Domains
3. HSI-M - Human Systems Integration Metrics Project - A case study of training efficacy
4. HSI-JADL – HSI simulated system engineering review of the Joint Advanced Distributed Language (JADL 2012) Integrated Prototype Architecture
5. Ontology Development via HSI - An Interdisciplinary Integration Case Study

Tutorial Speakers
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