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Test and Evaluation Issues for Systems of Systems: Creating Sleep Aids for Those Sleepless Nights

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Abstract

In 2009, the NDIA System of Systems Committee developed a white paper describing test and evaluation issues that cause "sleepless nights". In 2010, the NDIA SoS and DT&E Committees collaborated in a joint workshop to translate these issues into strategic initiatives and collaborative go-do activities as improvement areas. The issues included future T&E for systems brought together as SoS, requirements, metrics, systems changes, and end to end testing with systems not yet available. This paper will summarize the results of that workshop and the ongoing effort to mitigate SoS T&E sleepless nights.

Biography

Dr. Beth Wilson is a Principal Engineering Fellow who earned her PhD in Electrical Engineering from the University of Rhode Island. Since joining Raytheon in 1983, she has worked as a design engineer, program manager, research scientist, functional manager, and test director on sonar, satellite, and radar programs. She is currently the staff lead for the Systems Validation Test and Analysis Directorate. Previous assignments have included Test Architect for Dual Band Radar, a character-building deployment to Shemya, Alaska as the Test Director for the Cobra Dane Upgrade, a 2-year integration effort for the Relocatable Over the Horizon Radar (ROTHR) in Virginia, and being an exchange scientist to Australia. She is the Industry Co-Chair for the NDIA Systems Engineering Division Developmental Test and Evaluation Committee.

Dr. Judith Dahmann is a principal senior scientist in the MITRE Corporation Center for Acquisition and Systems Analysis supporting the Office of the Deputy Assistant Secretary of Defense for Systems Engineering within the Office of the Under Secretary of Defense for Acquisition, Technology and Logistics, where she is the technical lead for systems engineering (SE) for systems of systems. She led the development of the "DoD Guide for Systems Engineering of Systems of Systems." Prior to this, Dr. Dahmann was the Chief Scientist for the Defense Modeling and Simulation Office for the US Director of Defense Research and Engineering (1995-2000) where she led the development of the High Level Architecture, a general-purpose distributed software architecture for simulations, now an IEEE Standard (IEEE 1516). Dr. Dahmann holds a Bachelor's Degree from Chatham College in Pittsburgh, PA with a year as a special student at Dartmouth College, a Master's Degree from The University of Chicago and a Doctorate from Johns Hopkins University.