GSAW 2006 Tutorial H:

Software Acquisition Best Practices

Length: Half day

Overview:
This tutorial presents a comprehensive set of software acquisition best practices suitable for acquiring today's complex software-intensive systems. The authors developed these software acquisition best practices through a multi-year research effort, based upon experiences with numerous software-intensive space systems over many years. Dramatic changes in Department of Defense and National Security Space acquisition policy since the year 2001 provided the opportunity for identifying and implementing software acquisition best practices as part of this new acquisition environment. The tutorial covers the software acquisition best practices in chronological order through each phase of the acquisition and development life cycle, from program inception through retirement. Both pre-contract award and post-contract award best practices are addressed. Practical information is provided to the attendees to enable the immediate application of the best practices to their programs. In addition, specific software acquisition best practices for ground systems, in general, and COTS software-intensive ground systems, in particular, are described. Although the authors developed these software acquisition best practices while working in the National Security Space systems domain, the best practices apply to all large, complex software-intensive systems in domains requiring high reliability and integrity, and thus are applicable to a large segment of the GSAW 2006 conference attendees.

Instructor: Suellen Eslinger, The Aerospace Corporation

Biography:
As a Distinguished Engineer at The Aerospace Corporation, Ms. Eslinger is the Software Engineering Subdivision's specialist in software engineering and software acquisition. In 21 years at Aerospace, Ms. Eslinger has provided full life cycle support to numerous space programs. She has developed the software-related areas of Requests for Proposal and has participated in source selection evaluations as an advisor to the Air Force. She has also provided technical review and guidance in software engineering-related areas throughout the system life cycle, from requirements definition through system acceptance and transition to operations and maintenance, as part of the Government acquisition team for multiple space programs. Ms. Eslinger is currently the principal investigator of a Mission-Oriented Investigation and Experimentation (MOIE) research project to develop software acquisition guidance that can be used across multiple programs. She was previously the principal investigator of an IR&D project to define a quick response software risk assessment technique and of an IR&D project to define the software acquisition processes used by Aerospace in support of software-intensive programs for the Air Force. She has also led the development and delivery of in-depth training courses in software engineering and software acquisition through The Aerospace Institute. She is the team leader of the Software Process IPT of the SMC/NRO Mission Assurance Improvement Task Force. Previously, as a development contractor, she developed software and managed software development projects for DoD and NASA software-intensive systems. Ms. Eslinger has a B.A. degree from Goucher College and an M.S. degree from the University of Arizona, both in mathematics.

Description of Intended Students and Prerequisites:
The tutorial is targeted toward government, FFRDC, and other personnel responsible for acquiring (or supporting the acquisition of) large software-intensive systems. While it is directed toward best practices that can be applied by the government team, the tutorial will also be interesting to contractors who are seeking to learn about the best practices that their government customers might be using on current and future contracts. The participants should have some knowledge of software development and management and/or some knowledge of government acquisition practices.