



Session 11A



Architecture-Centric Evolution (ACE) Working Group 2010

Working Group Preview

*Sheri Benator, Sergio Alvarado, Phil Schmidt, Eric Dashofy,
John Arcos, Mark Nixon, Scott Hendrickson,
The Aerospace Corporation; Jeff Estefan, Jet Propulsion
Laboratory*

Working Group 11A

Architecture-Centric Evolution (ACE) of Software-Intensive Systems

Chairs

John Arcos, The Aerospace Corporation

Sergio Alvarado, The Aerospace Corporation

Sheri Benator, The Aerospace Corporation

Eric Dashofy, The Aerospace Corporation

Jeff Estefan, Jet Propulsion Laboratory

Scott Hendrickson, The Aerospace Corporation

Mark Nixon, The Aerospace Corporation

Phil Schmidt, The Aerospace Corporation

ACE Working Group Goals

- **Eighth of a GSAW series**
 - ❖ Forum for software-intensive system experts, users, developers & researchers to collaborate and elucidate high-level recommendations for improving software architectures representation, development, & analysis
- **Topic**
 - ❖ *Innovative Approaches to Software Architecture Development and Analysis*
- **Presentations & panel discussions**
 - ❖ Focus on innovative approaches, both applied (including experiences and lessons learned) and in early / research stages.

ACE Invited Presenters/Panelists (1)

- **Evolving Software Architecture for Current Applications**
 - ❖ Evolution of the GPS Control Segment as Related to Software Architecture
 - Alex Polack and Mike Campbell, The Aerospace Corporation
 - ❖ Role of Software Architecture as Part of the NASA Study on Software Complexity
 - Dan Dvorak, NASA JPL
 - ❖ Evolution of a Service-Oriented Architecture (SOA) Command & Control (C2) System
 - Ryan Telcamp, The Boeing Company
 - ❖ Use of New Software Development Tools/Strategies to Enhance Ability to Deploy Ground Systems from Product Lines
 - Chris Newton, Michael Klug, Northrop Grumman

ACE Invited Presenters/Panelists (2)

- **Model-Based Engineering and Analysis Techniques**
 - ❖ Quantitative Architectural Modeling and Analysis using AADL
 - Myron Hecht, The Aerospace Corporation
 - ❖ Fault-Tolerant Architectures: Discussion of Techniques Ensuring System Operation during Periods of High Loading and/or Component Failure
 - Stephen Harrington, Booz Allen Hamilton
 - ❖ Domain-Specific Design Analysis and Code-Generation Frameworks
 - George Edwards and Nenad Medvidović, University of Southern California
 - ❖ Lessons Learned in Current Applications of Model-Driven Engineering
 - Stephanie August Loyola Marymount University
 - ❖ Survey on Model-Based Software Development Techniques
 - Yongjie Zheng, University of California, Irvine