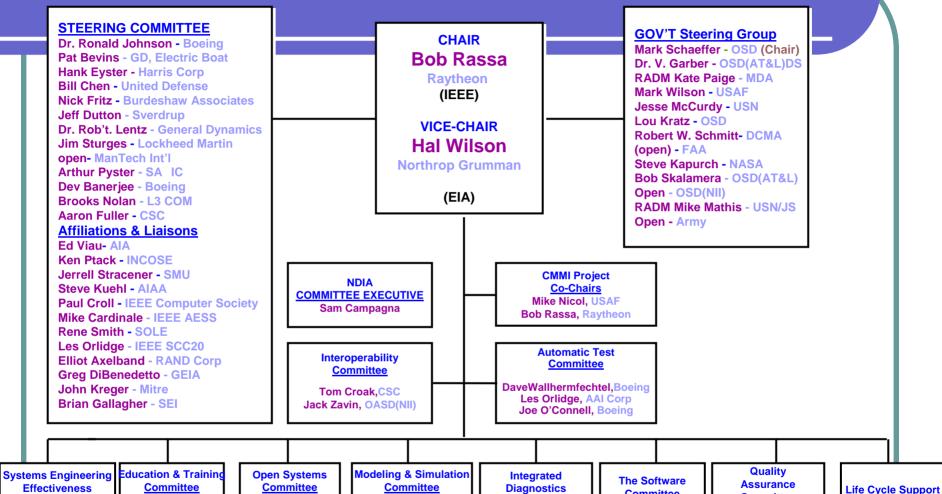
Systems Engineering Thrusts

Synopsis of Current Efforts within NDIA and IEEE

Bob Rassa

Chair, NDIA Systems Engineering Division



Effectiveness Committee Gordon F. Neary Boeing Mike Ucchino **USAF/CSE** Mike Persson

US Navv

Open

US Army

Elliot Axelband Rand Corp John Snoderly **Defense Acquisition** University

COL Ken Flowers USA (OSJTF)

Hal Wilson Northrop Grumma

Jim Hollenbach **Simulation Strategies**

> **Gary Belie Lockheed Martin**

Diagnostics Committee

Howard Savage Dennis Hecht

Committee Was Disbanded Dec 7, 2003

Committee

Cyndi Reichardt DCMA - HQ **Paul**Thornberry **NSWC - Corona Chriss Zubas** Ravtheon

Randy Baker

Boeing

Committee Joel Moorvitch Ravtheon Jerry Beck DUSD(AT&L)LP&P

8/10/04

SE Division Affiliates/Partners

- IEEE AES Society
- IEEE Computer Society
- INCOSE
- SAE International
- GEIA
- AIA
- AIAA
- Software Engineering Institute, Carnegie Mellon
- Southern Methodist University
- RAND Corp
- MITRE Corp

Top 5 Systems Engineering Issues

- Lack of awareness of the importance, value, timing, accountability, and organizational structure of SE on programs
- Adequate, qualified SE resources are generally not available within Government and industry for allocation on major programs
- Insufficient SE tools and environments exist to effectively execute SE on programs
- Requirements definition, development and management is not applied consistently and effectively
- Poor initial program formulation

OSD Interactions

- SE Div is helping OSD with the Net Centric Operations strategy
 - Global Information Grid (GIG) is key enabler
- Capability-Based Procurement is new procurement paradigm, per CJCSI-3170, JCIDS (Joint Capability Integration Development System)
 - Translates "Capability" needs to executable platforms
 - Implies systems engineering content at Joint Staff and Service chiefs
- Capability-based procurement also requires good
 SE capability at Services acquisition/PM offices

OSD Interactions - 2

- NDIA SE Div works hand in hand, literally on a daily basis, with OUSD(AT&L) Defense Systems and OUSD(DS) Systems Engineering on SE strategy issues.
 - Policy, key messages, etc.

Major Recent Activity

- NDIA SE Div serves as the Industry cooperative arm of OSD and Services for systems engineering strategy on DoD programs.
 - Assist with policy memos & policy guidance
 - Conduct Workshops on comprehensive attributes of SE, especially the ancillary aspects such as Test & Evaluation, Education, Program Performance, Quality, etc. – all of which are ingredients or have relevance to good SE
 - Education Summit, October 2003
 - Program Performance Summit, June 2004
 - BIT/Prognostics Workshop June 2004
 - Test & Evaluation in SE Summit, August 2004
 - Systems Engineering Conference Oct 2004 (7th Annual)
 - Quality Summit, November 2004

Recent Activity - 2

- Assisted with OSD Policy memos & guidance
 - OSD SE Policy, Mike Wynne, Feb 20, 2004
 - Requires SE Plan on All DoD Programs, regardless of size
 - Established OSD/Services/Agencies SE Forum
 - NDIA SE Division is a member
 - OSD SE Plan Interim Guidance, Dr Lamartin, Mar 30, 2004
 - Enclosure 10 (SE) to DoD 5000 Instruction, ongoing
 - SE Plan Template, ongoing
- Consolidated Reviewer for IEEE-STD-1220, July 04
- Performed Review of DoD Modeling & Simulation
 Strategy, submitted formal report March 2004

CMMI®

- Capability Maturity Model Integration
- Developed to cause Integration of software engineering, systems engineering, and general hardware/design engineering
- NDIA SE Div is overall Industry sponsor and CMMI Steering Group Chair
- OSD Defense Systems/Systems Engineering is DoD sponsor
- Software Engineering Inst. is designated custodian
- Released Dec 2001
- Update v1.2 in process, due for release 1Q06
- There is room for IEEE AES to play a role in v1.2

IEEE SE Council

- IEEE Societies are focused almost 100% focused on Technology and Application
- Systems Engineering is a critical activity on all major programs, commercial or defense.
- Effective SE can make the difference between success and failure
- IEEE should recognize their potential role in helping with successful technology transition and application effectiveness via an SE Council
- SE Council could bring tremendous leverage to our industry community (65% of all IEEE members are industry)

What next for AES re:SE?

- AES should be a lead Society in the formulation of an SE Council and play a lead role in its strategy, if we agree in the overall concept of an SE Council
- AES SE Panel could start looking at ways to strengthen SE within its purview areas (Radar etc)
- AES should play a larger role in the efforts of NDIA SE Division
- AES could play a role in the evolution of CMMI v1.2
- Other

Discussion