



Acquisition Modeling & Simulation Working Group (AMSWG) Status Brief

Phil Zimmerman

**Office of the Deputy Assistant Secretary of Defense
for Systems Engineering**

**NDIA Modeling & Simulation Committee
20 April 2011**



Agenda



- **Observations**
- **Charter**
- **Members**
- **Acquisition Process Alignment**
- **Information Sharing**



Observations



Modeling and Simulation is not consistently applied in the acquisition lifecycle

- It is not consistently recognized as a component or enabler of Systems Engineering
- It is not consistently productive for the program management team
- It is inconsistently applied in phases of the acquisition lifecycle
- It is never used as a continuum of tools, or as a supplier in a continuum of rationale and justification for analysis, evaluations, and assessments across the acquisition lifecycle
- It is not consistently represented in Service and component organizations
- It is not, as a community, organized to answer questions, fill SE gaps, or share best practices
- It has a long-standing strategy, but it does not have a current roadmap for improvement investment
- Acquisition modeling and simulation needs, capabilities, messages from PEO, PM not reaching OSD; and vice versa



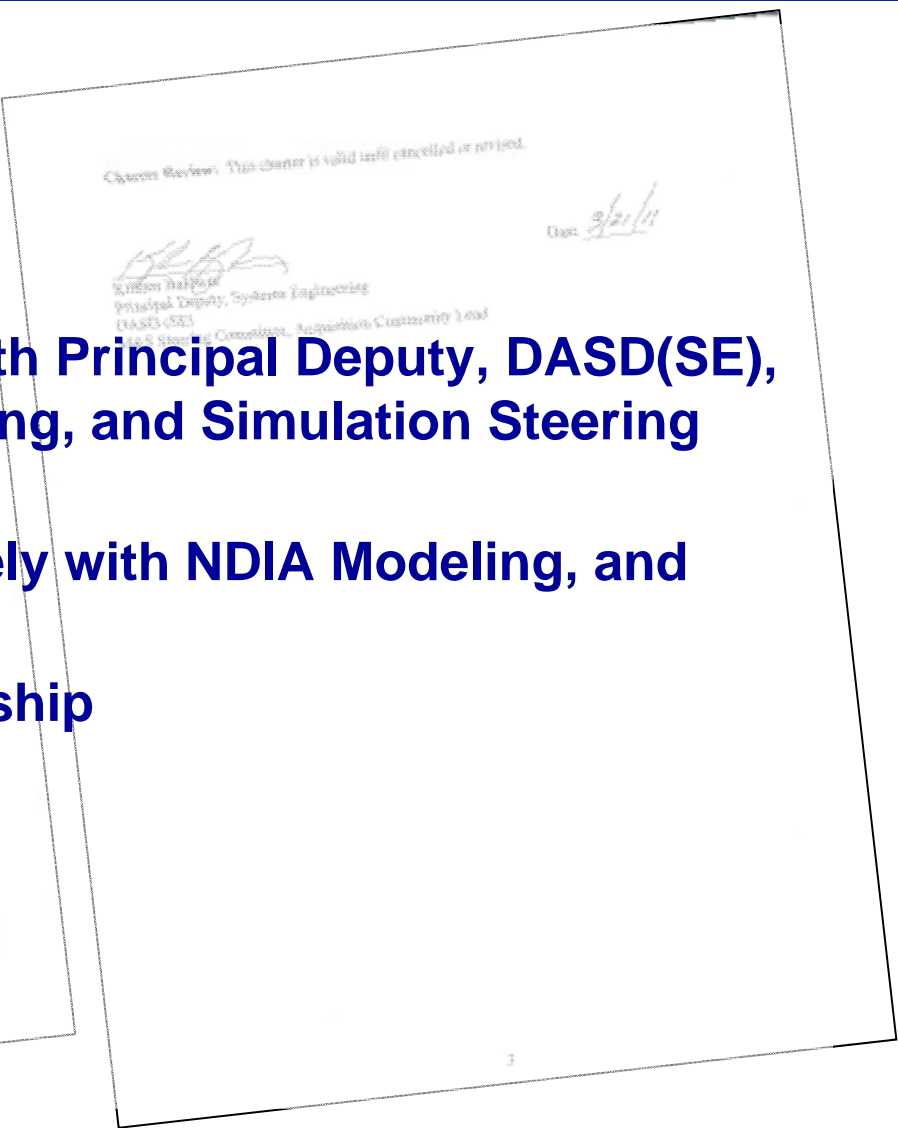
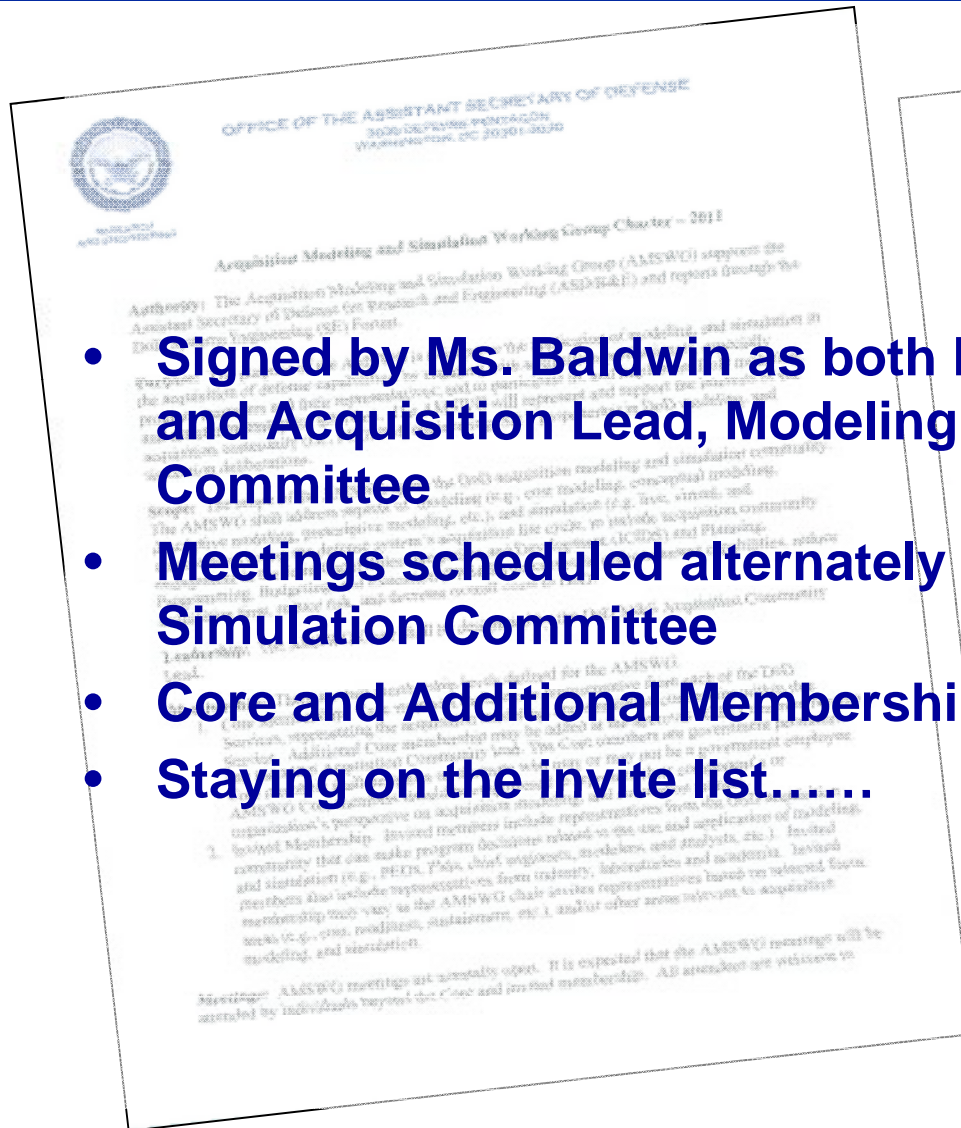
AMSWG Objectives



- **To ensure more effective support to the warfighter, reduce risk while minimizing total system life cycle cost through effective application of models, and Simulations.**
- **“Foster a robust discussion within the acquisition community (all stakeholders, not just the Modeling, and Simulation community) to create a robust vision what future modeling, and simulation based acquisition would look like”**
 - Include additional considerations, e.g. JCIDS, PPBE
- **Be user/provider group made up of people doing/using the work**
 - A main mission is communication
 - Among ourselves and our constituents, to share information, lessons learned, good ideas and concerns with peers to educate each other
 - To Identify issues that would benefit from collaboration
 - To identify enterprise items for modeling and simulation
 - Externally, to make sure our needs get pushed ‘up the chain,’ to influence Acquisition Policy and Guidance, and resource decisions
 - Perform studies, contribute to an annual Modeling, and Simulation status report, identify near and far term shortfalls (tools, standards, interfaces, interoperability, etc.)



AMSWG 2011 Charter



- Signed by Ms. Baldwin as both Principal Deputy, DASD(SE), and Acquisition Lead, Modeling, and Simulation Steering Committee
- Meetings scheduled alternately with NDIA Modeling, and Simulation Committee
- Core and Additional Membership
- Staying on the invite list.....



Core Members



PRIMARY:

- **USAF: LTC(P) John Simeoni**
- **USMC: Mike O'Neal**
- **USN: Dennis Reed**
- **USA: Monica Farah-Stapleton**

ALTERNATE:

- **Ernesto "Ernie" Gonzalez**
- **Jason Lindauer**
- **Mike LaMarche**
- **LTC Jon Ellis**

Additional Core members may be added at a later date

NDIA: Jim Coolahan/Jeff Bergenthal



Value Proposition to Members



Briefings:

- Briefings will address issues, capabilities, needs, lessons learned, and more ...
- Core members should expect to receive more briefings than they are asked to provide

Opportunities:

- Participants will have the opportunity to raise issues, highlight needs, and promote good ideas and best practices as part of an effort to influence Acquisition Policy and Guidance and demonstrate the value-added of AMSWG
- Core members should expect to have the final word on AMSWG agendas and policy/guidance recommendations

Mid-year and Annual Status to SE Forum:

- AMSWG Chair will create and brief, if possible, a Mid-year and annual status to SE Forum
- Core Members should expect to contribute to these briefings and may benefit from using them to summarize their activities to their chain of command

Annual Modeling and Simulation Activities Report:

- AMSWG Chair will develop and disseminate an annual Modeling and Simulation Activities Report to the Acquisition Modeling and Simulation Community, covering the ALC
- Core members should expect to contribute to these reports, which can be used to inform their Service Acquisition Modeling and Simulation Community



Suggested Standard Agenda



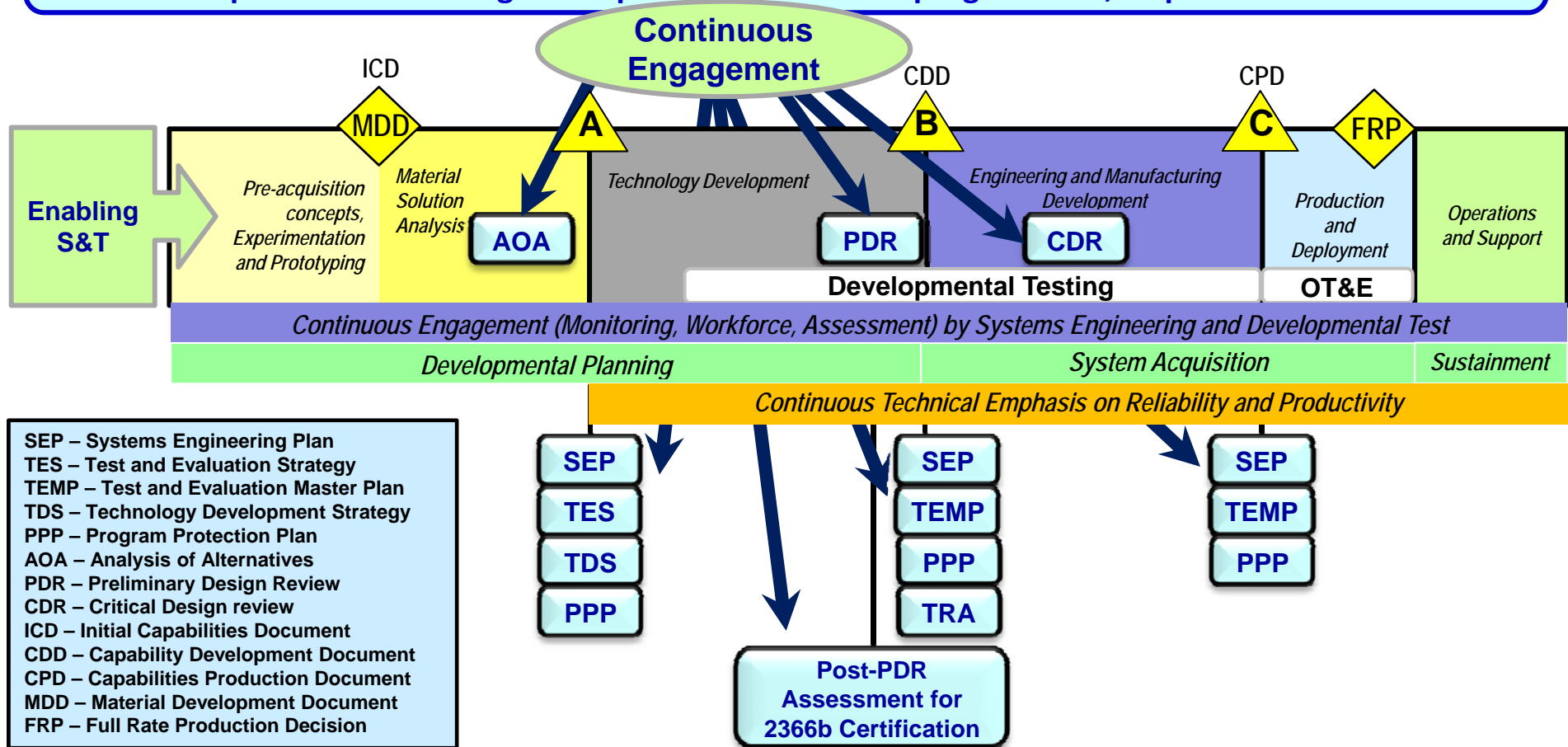
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- 0800 – 0830 Sign-in, Confirm Lunch, Coffee, Meet and Greet**
 - 0830 – 0845 Introductions (Go around the room and Teleconference participants)**
 - 0845 – 0900 Opening Remarks**
 - 0900 – 1000 First Item**
 - 1000 – 1015 Break**
 - 1015 – 1115 Second Item**
 - 1115 – 1215 Third Item**
 - 1215 – 1300 Lunch (continuing discussions)**

 - 1300 – 1400 Fourth Item**
 - 1400 – 1500 AMSWG Special Item of Interest, or Fifth Item**
 - 1500 – 1515 Break**
 - 1515 – 1525 Introduce Next Meeting's Acquisition Phase & Potential Discussion Areas**
 - 1525 – 1545 Roundtable Discussions (All Attendees)**
 - 1545 – 1555 Select Next AMSWG Top 6-8 Subtopics**
 - 1555 – 1600 Final Comments / Close Meeting**



Acquisition Process Engagement

SE has a role in all major acquisition program milestone decisions and oversees and executes critical acquisition risk management processes to reduce program cost, acquisition time and risk.



Cross Cutting Efforts:
Acquisition Workforce Management, Engineering Policy and Guidance, Advocacy for Service Competencies and Initiatives, STEM Initiatives



Thematic Agendas: NEW AMSWG Schedule / Battle Rhythm



AMSWG Meeting	Acquisition Phase Focus Area	Related Milestones	Potential Discussion Areas (Metrics, Models & Simulations)
26 May 2011	(Pre-MDD) Development Planning	MDD	<ul style="list-style-type: none"> • Prototyping • Capability Based Assessment (CBA) • Analysis of Alternatives (AoA) • Model Management • RFPs & Contracting Language • Total Ownership Cost Modeling • Life Cycle and Sustainment Data Collection Strategy/Plan • ICD, CDD, CPD, PPP • JCIDS Process • Domain Modeling • Dissemination / Release-ability • Developmental Planning
21 Jul 2011	Matériel Solution Analysis / Concept Refinement (DP)	MS A	<ul style="list-style-type: none"> • Design • Material Solution Analysis (MSA) • Oversight and Review / Contracting • Concept of Operations Modeling • Produce-ability • SoS Modeling • M&S Support Plan • Interoperability & Warfighter Integration • SEP, TES, TDS, PPP • JCIDS, Specifications • Vulnerability Modeling • RAM & Supportability Modeling • Obsolescence strategy • Document Streamlining • Certifications
15 Sep 2011	Technology Development	MS B	<ul style="list-style-type: none"> • Development • Systems Modeling • System Threat Assessment • Manpower Estimation (System manning) • M&S Support Plan • Hot Bench, WRAP Around Simulation • DAPS Methodology Improvement • Model Based Requirements • Trade Study, Cost versus Capabilities • Requirements Modeling • Economic Analysis Affordability Assessment • Environmental Safety and Occupational Health (ESOH) Metrics and Models • CDD, SEP, TEMP, PPP, TRA • System-System Interfaces • Vulnerability Modeling • HMI • Supportability • Certifications • Training • Live-Fire T&E Waivers • HWIL, SIL



Thematic Agendas: NEW AMSWG Schedule / Battle Rhythm



AMSWG Meeting	Acquisition Phase Focus Area	Related Milestones	Potential Discussion Areas (Metrics, Models & Simulations)
10 Nov 2011	Engineering, Manufacturing & Development	MS C	<ul style="list-style-type: none"> Developmental Test and Evaluation (DT&E) Model Based Test Planning Systems Security Engineering Manufacturing Readiness Levels Live-Fire T&E Waivers (Save money?) Threat Representation Interface with CAD/CAM Product Support Modeling / Logistics Affordability Assessment M&S Feedback, Sustainment, and ECP Assessment Improve Feedback of Test Data into Models (VVA) (Modeling, and Simulation) Reuse and/or Modeling of SW Reuse
26 Jan 2012	Production & Deployment	FRP	<ul style="list-style-type: none"> Operational Test & Evaluation (OT&Es) Model Based Test Planning Supportability Assessment Product Support Modeling / Logistics Risk Modeling Manufacturing and Logistics Modeling M&S Feedback, Support Plan, Statement, and ECP Assessment Ground Testing (combined with real-time simulated interfaces saves money) Improve Feedback of Test Data into Models (VVA)
22 Mar 2012	Operations & Support	LCS	<ul style="list-style-type: none"> Transition Sustainment and Cost Modeling Logistics, Sustainment & Supportability Modernization Cost estimating and other issues Training Contract closeout



Crosscutting Topics Relevant to Acq Modeling, & Simulation



- **Human Capital Capacity and Capability Models**
- **Modular Open Systems Approach (MOSA) Metrics and Models**
- **Non-traditional acquisition practices**
- **Successful Application of LSS / CMMI to Model Improvement**
- **SoS Modeling**
- **Architecture Modeling**
- **Steering Committee (SC) High Level Task (HLT) Updates**
- **Use of Industry and Governmental Models that may be Proprietary; Intellectual Property Rights**
 - Government -> Industry
 - Industry -> Government
 - Government -> Government
- **Model Reuse – Acquisition through Training, e.g., Damage Control**

**Are there other topics?
Of course!**



During AMSWG: Survey Community for Relevant Activities per Phase



- **Will be run as ... Roundtable Discussion (All Attendees):**
 - What's going on related to the Acquisition Phase Focus Area for the next AMSWG Meeting:
 - OSD Policy and Guidance activities?
 - What are the Services doing within their MDAPs, MAISs, Special Oversight Programs, and others (Program Offices, PEOs, Labs)?
 - Exemplar Programs
 - Goods and Others
 - What's going on in Academia (Universities, FFRDCs, UARCs)
 - What is Industry doing (Practitioners, Vendors, NDIA)?
 - What are the Professional Organizations doing (INCOSE, IEEE, MORS, etc.)?
 - What are the DoD IACs and Agencies doing?
 - What Cross Cutting Topic or Related S&T Priority area is ripe for discussion

This is your Meeting !



Information Sharing

- **All meeting announcements will be directly sent to the AMSWG Invitation List, with encouragement to distribute widely within your organizations**
 - If you are here in person today, you're on the List
 - To receive a direct invitation to the next AMSWG, please send a request to: Amar.Zabarah.CTR@osd.mil
- **For those who can't attend in person, a dial-in number will be used and briefs will be viewable in real-time on Defense Connect Online (DCO)**
- **Working Group materials, once approved for public release, will be posted to the AMSWG Space on the DAU website**

QUESTIONS?



Questions?



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(Pre-MDD) Development Planning – MDD: **AMSWG DATE: 26 May 2011**



Potential Discussion Areas:

- Prototyping
- Capability Based Assessment (CBA)
- Analysis of Alternatives (AoA)
- Initial Capabilities Document (ICD)
- Capability Development Document (CDD)
- Capability Production Document (CPD)
- Joint Capabilities Integration and Development System (JCIDS) Process
- Domain Modeling
- Program Protection Plan (PPP)
- Establish Life Cycle and Sustainment Data Collection Strategy/Plan
- How is modeling, and simulation treated in RFPs; how should it be treated?
Contracting Language (Pre-Milestone A)
- Issues: dissemination and release-ability
- Developmental Planning
- Model Management
- Total Ownership Cost Modeling

Any Changes or Additions ?