

**National Defense Industrial Association
Systems Engineering Division
Modeling and Simulation Committee**

**Prepared for the NDIA Systems
Engineering Division Meeting
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Chris Schreiber
Lockheed Martin Corp.

David Allsop
The Boeing Co.

- **The mission of the NDIA SE M&S Committee is to advance the understanding and use of modeling and simulation in the practice of systems engineering**
- **2019 meetings (continue to be scheduled for the day before the NDIA SE Division meeting)**
 - 06 February (LM GVC – Crystal City)
 - 09 April (LM GVC – Crystal City)
 - 05 June (LM GVC – Crystal City) [Cancelled]
 - 20 August workshop (LM GVC – Crystal City)
 - 21-25 October Conference
 - December Planning



Model-Centric Source Selection

NDIA Modeling and Simulation Subcommittee

***Al Hoheb, Aerospace
Nathaniel Norwood, NAVAIR***

August 2019





Model-Centric Source Selection Agenda

- Welcome and self-introductions: Allsop, Schreiber
- Workshop agenda – Hoheb, Norwood
- Model Centric Source Selection Vision – Norwood
- Framing the problem – Norwood, Hoheb
 - *Gov't and industry problems – presentation and workshop input*
- Choosing to work on problems we can make progress on
 - *Topic selection; 3 proposed topics and workshop emergent topics*
 - *Choosing sub-team leads and balancing the teams*
- Break into teams – take a break to reform into teams
- Teams work
- Lunch
- Teams to prepare “outbriefs” – target 20 minute outbriefs; 4-5 content slides
- Break
- Teams outbriefs
- Follow-on possible actions: Norwood and Hoheb
- NDIA M&S possible actions: Allsop, Schreiber

Breakout 1: Defining a Gov't “DE Standard”



- **The concept for a Gov't Digital Engineering Standard is to provide a standard for the gov't and industry to tailor in the pre-award process**
 - Levied in the RFP and complied-with in the proposal and model contract
 - Defines the modeling requirements such as model structure, data, coverage and depth of model, as well as model V&V
 - Drives the modeling management requirements; roles, accountabilities, access, configuration and data management, etc..
- **The workshop breakout team task is to review the candidate document/artifact tree and descriptions and make recommendations to ensure they are comprehensive, aligned, and are fully described**

What can be done now, what needs to be done to close on a standard?

Breakout 2: Defining Gov't “DE Pre-Award Guidance”



- **The concept for a Gov't Digital Engineering Pre-Award Guidance Document is to identify the pre-award steps a government acquisition program should take to coordinate the modeling approach**
 - Identify pre-award steps and products to enhance with modeling
 - Conduct the gov't engineering and DE readiness to accept contractor DE data
- **The guidance document may include define specific inputs to specific products; for example (next slide, “Pre-Award Process” can be updated)**
 - Program modeling objectives as part of the sources sought synopsis that signals that a potential acquisition is starting
 - Candidate modeling objectives, models, and model management approaches as part of the government acquisition strategy, driving the gov't needs for modeling environments, tools, qualified personnel, and training
 - Availability of a government reference model for the potential bidders to examine
 - Bidder's conference
 - Draft RFP
 - Final RFP
 - Source Selection
- **What are pre-award timelines that are acceptable/why?**

What can be done now, what needs to be done to close on an instruction?

Breakout 3: Defining Source Selection Criteria for Models/Modeling that are Discriminators



- **Assuming that all bidders comply with instructions and provide model(s) in the right format and with acceptable content, what discriminators may be applied to increase the range of responses?**
- **As a rule of thumb, evaluation criteria should reflect areas *necessary* to determine the merit of a proposal, *pertinent* to the Government's stated requirements, and *measurable* to permit qualitative and quantitative assessment against the rating plan**
- **What may work?**
 - Are completeness criteria/standards necessary? Eg. Ensuring that all parts of the proposal comply with the proposal preparation instructions for modeling relevant items?
 - Can a set of candidate modeling metrics be applied?
 - Can the ideas of cost evaluation be applied for models? See next page.
 - Can model evaluation standards be identified along with the modeling criteria?
- **What may not work? May not work well?**
 - Having independent criteria on modeling efforts and architecture/engineering efforts

- **2019 INCOSE IS**
 - Briefed current status of products
 - **DEIXPedia**
 - Logical Architecture
 - **Standards**
 - **Digital View Model**