A Strategy for the Cost Effective Acceleration of DoD Weapon Systems

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Consistent Conference Themes

• Supporting Rapid Acquisition Through the T&E Lens
  • Strategic Collaboration to Accelerate Acquisition
  • Capabilities-based T&E
  • Role of Modeling & Simulation

• Challenges
  • System of Systems
  • Security
  • Asset Availability
  • Resources
  • Focused Live Testing
Computational Prototyping Environments
or
Computational Decision Support Environments
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or
Computational Decision Support Environments

- Consistent with SecDef’s Defense Innovation Initiative and key enabler for the 3rd Offset Strategy
  - Senior leadership decision support, war-gaming, novel concepts, innovative business practices and DIUx
  - Quantity at cost, effects at range, and autonomy
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• Consistent with DASD DT&E Vision for a Virtual Proving Ground
  • Conduct developmental test of the design before ever bending metal
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- Established to enable resilient, cost effective war-winning capability, in an accelerated timeline.
  Typically comprised of following capabilities/components
  - Trade-space analysis, environment representation, collaborative analysis and knowledge management, and capability integration and demonstration
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• Enables comprehensive characterization of system design, expected performance, and cost
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• Facilitates collaboration across the Research, Engineering, Acquisition, and T&E communities
  • Gov-industry use of high performance computing centers and OSD Engineered Resilient Systems Program (ERS) developed physics based models, linked via DREN will enable fast and efficient workflow automation
  • Addresses capability to include CONOPs, system, target infrastructure, and man-machine interface before ever bending metal or laying any composites
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• Offers cost effective means to address complexity of system of system architectures and interfaces/ conduct secure system of system assessments/ offers reduced order modeling of supporting campaign assets to offset challenges of availability/ helps determine what specific aspects of the design to prototype and what areas of live testing should to be executed