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The Honorable Michael Duffey
Under Secretary of Defense for Acquisition and Sustainment
1010 Defense Pentagon
Washington, DC 20301-1010

Subj: Mystic Bench Approach to Evaluate and Benchmark Digital Engineering Tools

Dear Hon. USD (A&S) Michael Duffey:

This letter augments my letter dated December 25, 2026, Subj: Recommended Best Practices for the Use of Digital Engineering (DE) Tools.

The previous letter cites the NDAA for FY 2026 Section 221—Review and Alignment of Standards, Guidance, and Policies Relating to DE. Section 221 requires:

- (A) A review of the reference architectures, standards, and best practices for the use of DE tools (including digital twins and digital threads) as in effect at the time of the review, including standards for the use of such tools at all stages of program design, development, and testing.
- (B) Identification of the current standards guiding the use of such DE tools, at all stages of program design, development, and testing.
- (D) Identification of best practices for DE within each such Armed Force.
- (E) Recommendations for improvements to the use of DE tools in each such Armed Force.

Mystic Bench Approach

For selecting DE tools to be used in each such Armed Force, please apply the approach used in the Mystic Bench solicitation to seek an evaluation harness and government-specific benchmarks that together enable rigorous, reproducible, vendor-agnostic assessment of any DE tools against government-defined criteria. The envisioned architecture would include a model interface, execution engine, measurement and scoring system, output and reporting layer, and a continuous monitoring and analytics capability that automates DE tool evaluation.

The Mystic Bench approach will:

- Support the DE Capability Requirements of DoDI 5000.97 to iteratively develop a DE capability that supports the direction provided in Section 231 of Public Law 116-92. This approach will leverage DE capabilities from the DoD, the DoD Components, and program offices.
- Enable the program manager to meet objectives, in DoDI 5000.98, to leverage mission engineering, DE, digital twins, smart documentation, and other available digital tools and technologies to increase Test & Evaluation (T&E) efficiency. Effectively communicate program changes and risks to cost, schedule, and DoD system's operational performance to the T&E integrated product teams/integrated test teams as close to real time as possible.

Yours truly,



Paul Solomon

Hon. Adam Smith, HASC
Hon. SECAIRFORCE Meink
Hon. Roger Wicker, SASC
Hon. Russell Vought, Director, OMB
Hon. SECNAV John Phelan
Hon. Gen. Saltzman, U.S. Space Force
Hon. Dan Driscoll, SECARMY
Hon. Ken Calvert, HAC
Anthony Capaccio, Bloomberg News
Jon Ludwigson GAO
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Eric Fanning, AIA

Hon. Mike Turner, HASC
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Hon. Pete Hegseth, Sec. Of War
Hon. Dep. Sec. of War Stephen Feinberg
Hon. USD Emil Michael
Hon. Michael Duffey USW(A&S)
Hon. Mike Rogers HASC
Hon. Michael Payne, Dir. CAPE
Hon. Robert Wittman, HASC
Shelby Oakley, GAO
Moshe Schwarz, Etherton & Associates, Inc.

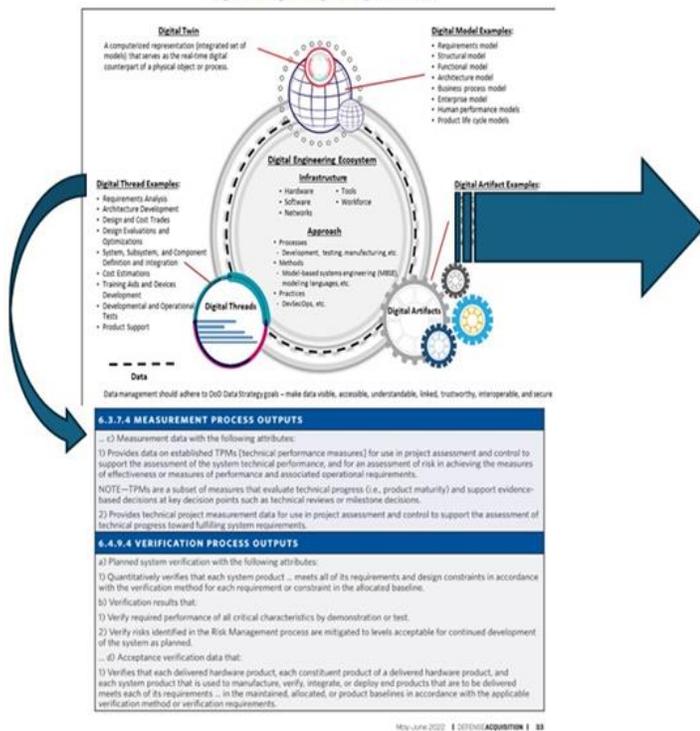
It cites the revised white paper, *Integrating the Embedded Software Path, Model-Based Systems Engineering (SE), MOSA, and Digital Engineering (DE) with Program Management*, 12/25/25. The white paper was revised to be consistent with the final NDAA for FY 2026, including the following sections:

- SEC. 218. ALTERNATIVE TEST AND EVALUATION PATHWAY FOR DESIGNATED DEFENSE ACQUISITION PROGRAMS (digital twins)
- SEC. 221. REVIEW AND ALIGNMENT OF STANDARDS, GUIDANCE, AND POLICIES RELATING TO DIGITAL ENGINEERING.
- SEC. 1832. MODIFICATIONS TO REQUIREMENTS FOR MODULAR OPEN SYSTEM APPROACH.

The NDAA for FY 2026 includes Section 221—Review and Alignment of Standards, Guidance, and Policies Relating to DE. This section would require: (A) A review of the reference architectures, standards, and best practices for the use of DE tools (including digital twins and digital threads) as in effect at the time of the review, including standards for the use of such tools at all stages of program design, development, and testing. (B) Identification of the current standards guiding the use of such DE engineering tools, at all stages of program design, development, and testing. (D) Identification of best practices for DE within each such Armed Force. (E) Recommendations for improvements to the use of DE tools in each such Armed Force.

The white paper now includes Figure 1 in Appendix T, the DE framework that includes the digital twin, digital threads, and digital artifacts. Excerpts from Appendix T follow.

Figure 1. Digital Engineering Framework



(4) Digital Artifacts:

Examples of digital artifacts:

- (a) Design specifications.
- (b) Technical
- (c) Design documents.
- (d) Interface management documents.
- (e) Analytical results.
- (f) Bills of material.
- (g) Software source code.
- (h) Work breakdown structure.
- (i) Production or machining instructions.
- (j) Test planning and cases.
- (k) **Schedules.**
- (l) Product support strategy.
- (m) Data flow diagrams.

Digital Thread examples from SE Guidebook

6.3.7.4 MEASUREMENT PROCESS OUTPUTS

... c) Measurement data with the following attributes:

- 1) Provides data on established TPMs [technical performance measures] for use in project assessment and control to support the assessment of the system technical performance, and for an assessment of risk in achieving the measures of effectiveness or measures of performance and associated operational requirements.

NOTE—TPMs are a subset of measures that evaluate technical progress (i.e., product maturity) and support evidence-based decisions at key decision points such as technical reviews or milestone decisions.

- 2) Provides technical project measurement data for use in project assessment and control to support the assessment of technical progress toward fulfilling system requirements.

6.4.9.4 VERIFICATION PROCESS OUTPUTS

a) Planned system verification with the following attributes:

- 1) Quantitatively verifies that each system product ... meets all of its requirements and design constraints in accordance with the verification method for each requirement or constraint in the allocated baseline.
- b) Verification results that:
 - 1) Verify required performance of all critical characteristics by demonstration or test.
 - 2) Verify risks identified in the Risk Management process are mitigated to levels acceptable for continued development of the system as planned.

... d) Acceptance verification data that:

- 1) Verifies that each delivered hardware product, each constituent product of a delivered hardware product, and each system product that is used to manufacture, verify, integrate, or deploy end products that are to be delivered meets each of its requirements ... in the maintained, allocated, or product baselines in accordance with the applicable verification method or verification requirements.

Please note that schedule performance, TPMs, and verification results are elements of the DE ecosystem.

Finally, the website, www.pb-ev.com, has a new tab, “Digital Engineering,” with links to the white paper and the *Defense Acquisition Magazine* articles.

Please advise each Secretary of a military department to consider the best practices for the use of DE tools in those publications when developing their best practices for the use of DE tools and recommendations for improvement.

Yours truly,



Paul Solomon

CC:

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Meg O'Keefe SAE G-47 SE Committee