

Integrated Testing Efficiencies: Real or Imaginary?

A case study from the F/A-18 Community

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ABSTRACT

One of the simplest and most often overlooked methods for finding efficiencies and improving effectiveness is to do more than pay lip service to the concept of “Integrated Testing.”

Integrated Testing as defined and mandated by the DoD 5000.02 is far more than simply inviting Operational Testers and intended users to observe Developmental Test planning sessions or early Design Reviews. True Integrated Testing is a “collaborative planning and collaborative execution of test phases and events to provide shared data in support of independent analysis, evaluation and reporting.”¹ SECNAV, NAVAIR, and COMOPTEVFOR all provide their overarching notion of what IT&E is, but without more than a “Coalition of the Willing”, the true benefits of IT&E are not being fully realized.

Truly achieving the efficiencies intended by this definition may involve a substantial effort to assess historic data collection methods, evaluate familiar test techniques, and overcome substantial institutional roadblocks to meaningful collaboration, but this effort is best accomplished early in the design life and when total cost of change is expressed in extra manpower and wasted paper rather than later when it is ultimately realized in expensive retooling, unplanned regression testing, and tremendous schedule risk.

The brief will include examples, good and bad, of attempts at Integrated Testing as well as suggested best practices to improve it in the future. Assuming IT&E is more efficiently utilized, a top-level assessment of quantitative cost and schedule savings will be presented. Additionally, a qualitative look at the benefit of the “improved product” the warfighter receives at IOC will be considered.

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The brief will be given by CAPT Brett Pierson (Member), Commanding Officer of VX-9, the Navy's Operational Test and Evaluation Squadron for Strike Aircraft and Weapons and CDR Andrew McFarland (Member), Chief Test Pilot of VX-31, the Navy's Developmental Test Squadron for Strike Weapons.