DEFENSE ARJ EXECUTIVE EDITOR

Welcome to the *Defense Acquisition Review Journal* (ARJ) Issue 46. Our first article in this issue is "Commercial Augmentation for Intelligence Operations: Lessons Learned from the Global War On Terrorism," by MAJ Glenn James Voelz, USA. The author identifies a number of lessons learned from commercial augmentation programs within the DoD Intelligence Community. The unprecedented operational demand of the Global War on Terrorism (GWOT) placed significant strain on a limited number of contracting officials and required a huge expansion of contracted private sector support to offset critical shortages of various intelligence services in the DoD. Defense intelligence organizations were, in general, not prepared for the dramatic increase in demand for intelligence operations. Some lessons learned discussed in this article deal with these issues: performance of out-of-scope activities, improper use of personal services contracts, inadequate oversight and record keeping, inappropriate contract-award procedures, misuse of Blanket Purchase Agreements, inadequate market research, and poorly defined Statement of Work (SOW)/task order language. Also, there was inadequate training for staff responsible for overseeing contractors resulting in a lack of knowledge of contracting basics.

The following article, "Beyond Lean and Six Sigma" by Maj Joel Hagan, USAF; Capt William Slack, USMC; Roxanne Zolin; and COL John Dillard, USA (Ret), deals with production efficiency from an organizational perspective. This article examines how the use of organizational modeling and simulation techniques reduced the F-414 maintenance time at Naval Air Station (NAS) Lemoore Aircraft Intermediate Maintenance Detachment (AIMD). The AIMD personnel have aggressively pursued reducing aircraft engine maintenance time using the established tools of the NAVAIR Enterprise Air*Speed* program. This program seeks to achieve cost/time reductions by using Theory of Constraints (TOC), Lean, and Six Sigma techniques. Furthermore, the authors discuss how a new predictive modeling technique (computational organizational modeling) was used at AIMD Lemoore to add a new dimension of efficiency when applied appropriately in parallel to other minimization techniques mentioned above. Organizational modeling does not focus on the production process, but instead on organizational structure and the information flow through that organization.

The third article, "On the Road Toward Confirming Augustine's Predictions and How to Reverse Course," by Dr. Jan Muczyk, examines the validity of Norman Augustine's predictions about future costs of acquiring high-tech weapon systems. Augustine, former CEO of Lockheed Martin and senior Pentagon official, asserted that in the future, the entire defense budget will purchase just one aircraft, and the military services would have to take turns flying it. The author explains why weapon systems are so expensive today. For example, persistent Cold War mentality of military leaders may lead to the pursuit of transformational technologies, such as those used in the F-22 program or the B-2 program, to solve our problems. There is no question that these systems have pushed technology to a new level during their extended developments, but at what cost? If we continue to pursue technological breakthroughs to counter major military threats, we will quickly reach a point where we can no longer sustain this effort. Expensive systems with advanced state-of-the-art technologies, lengthy development times, and huge support costs are generally not affordable and simply cannot be the only solution. Even with a diminished Cold War threat, the GWOT and the asymmetric nature of future warfare make our challenges much more difficult in a resource-constrained environment. Dr. Muczyk asserts that we must use a combination of acquisition strategies to shorten product development cycle times and take advantage of technological improvements.

The fourth article, "Government Contract Bundling: Myth and Mistaken Identity," by Timothy Nerenz, discusses a government purchasing strategy called contract bundling. This specific procurement practice combines two or more requirements previously purchased under separate small business contracts into one large consolidated contract that can be unsuitable for small business due to size, geographic disbursement, or specialized capabilities and capacity. Conventional wisdom supported the Small Business Administration's (SBA) position that contract bundling is detrimental to small business because these large contracts are generally unacceptable to them for various reasons. Testimony from the U.S. Senate (Committee on Small Business and Entrepreneurship) also agreed with the SBA assertion that contract bundling has forced over half the small businesses in the United States out of the $300 billion federal government-contracting marketplace. This article summarizes the author's doctoral dissertation, which challenged this generally accepted theory. Mr. Nerenz theorized that the government estimates of contract bundling were overstated, and his research clearly supported this hypothesis.

In the next article, "Translated Global Positioning System Range System Trade Study," Kyle Holdmeyer, Paul Componation, Alisha Youngblood, and Sampson Gholston summarize a trade study used to evaluate three alternatives regarding life-cycle support of the Translated Global Positioning System Range System (TGRS). The TGRS is part of a compatible family of equipment designed to provide Time-Space-Position Information for participants in DoD test, training, and operational ranges. The engineering design for TGRS is based on 10-year-old technology resulting in questionable capability to meet future deployment needs. An improved system is needed to provide more efficiency and flexibility with better performance and lower costs. In addition, many parts of the current TGRS are becoming obsolete, which may eventually lead to more problems. An "Enhanced" Translated Global

Positioning System Range System (E-TGRS) was developed and prototypes were built, but E-TGRS was recently cancelled due to budget constraints. This trade study considered three alternatives: to continue with TGRS as is (maintain status quo), to implement upgrades to TGRS, or to restart E-TGRS (to replace current TGRS). The trade study recommended the third alternative—continuing with current TGRS while restarting E-TGRS development and testing. With no serious developmental issues, E-TGRS production could begin at the end of FY 2008.

The last article, "Strategic Model for the Army National Guard Network Transformation," by LTC (P) Robert Banks, (TxARNG), and Maj Clayton Duncan, USAF, explores how an Information Technology (IT) Modernization Strategic Driver Model can be applied to the modernization efforts of Army Reserve National Guard (ARNG) Joint Force Headquarters (JFHQ) Wide Area Network (WAN). The authors then analyze the model's impact on accomplishing defense acquisition system policy objectives. The model shows that IT operational core factors can align with strategic goals and permit decision makers to integrate the acquisition program and technical planning to strategic drivers.

Dr. Paul Alfieri
Executive Editor
Defense ARJ