



Now More Than Ever, Software Is the Heart of Our Weapons Systems



On June 15, 2001, I took over the organizational management responsibility for the Office of the Secretary of Defense Software Intensive Systems Directorate and Steering Group from Dr. Delores Etter. I am delighted to have this opportunity to strengthen my organization's capabilities and to increase our involvement with software engineering in the acquisition, deployment, and sustainment of the critical systems supporting our warfighters. Now, more than ever, software is the heart and soul of our weapons systems. We must focus our full range of resources on meeting the very difficult challenges required to gain the vast benefits afforded us by software intensive systems. Along with my new Deputy Director for Software Intensive Systems Joe Jarzombek, I look forward to working with all of the defense software collaborators, including the Software Technology Support Center, as we continue to improve the quality, effectiveness, and responsiveness of defense acquisitions.

It seems fitting that at the beginning of a new year, one that finds all of America reevaluating priorities and facing the world with perceptions considerably changed from just a few months ago, CROSSTALK has the privilege of recognizing the Top 5 U.S. Government Award-Winning Quality Software Projects. These five projects, representing the best of our government's software capabilities, were selected from 87 nominees by a panel of highly qualified and experienced judges. The projects were evaluated on customer satisfaction as well as quality and performance.

These projects, each described in detail in articles this month, represent a variety of software challenges that benefit both government and civilian sectors. The "Standard Terminal Automation Replacement System" is a joint program between the military and the Federal Aviation Administration that will bring substantial benefits to the flying public as well as enhance safety in both civilian and military airspace. The "Higher Authority Communications/Rapid Message Processing Element" product supports the readiness and control of our nation's nuclear missile capability. The "F/A-18 Advanced Weapons Lab System Configuration Sets" provide the operating configurations and logistics support documentation for more than 10 million words of avionics, weapons, and flight control software in an environment that includes more than 40 different processors. The entire country is impacted by the "Data Capture System 2000" program that automatically processed more than 150 million multi-page census forms in 170 days. Tactical effectiveness is the goal of the "Force XXI Battle Command Brigade and Below" project that represents a revolutionary change in warfare for the Army.

Beyond congratulating successful, award-winning projects, this issue also supports beginning and ongoing projects. Dr. Barry Boehm and his Center for Software Engineering researchers describe some effective tools for implementing evolutionary acquisition in their article *Using the Spiral Model and MBASE to Generate New Acquisition Process Models: SAIV, CAIV, and SCQAIV*. It has been an honor to share the work of this outstanding group with CROSSTALK readers. *Project Recovery ... It Can Be Done* gives Walt Lipke's sage advice on what to do when software projects go awry. Finally, John Michel's update on the impact of the Clinger-Cohen Information Technology Management Reform Act, *CIO Update: The Expanding Responsibilities*, provides a context for its application to future Department of Defense systems.

This looks to be a challenging year for America, particularly for its military and government workforce. Our air traffic system is adapting to new realities in order to provide our economy with safe and efficient transportation. Our warfighters are deployed and doing the jobs they have been trained to do, so that all of us can recover our sense of freedom, safety, and security. They are using equipment and systems that we have acquired, developed, tested, deployed, and sustained. They are the best equipped fighting force the world has ever known, and our job is to make sure that they stay that way. Through new technology, agile minds, and hard work, we must provide them the capability to rapidly respond to new threats here and abroad. The projects honored here are doing just that. Congratulations to all.

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