



# Top 5 Contest Nominations Reveal Trends in COTS, E-Commerce, and Web Services



The CrossTalk staff just completed another effort to solicit and collect nominations for the U.S. Government's Top 5 Quality Software Projects. The Software Technology Support Center orchestrated a three-tier evaluation process of 70 nominations that resulted in the final selection process.

Reviewing the nominations was both motivating and educational. Collectively, the nominations demonstrated concrete examples of trends toward rapid insertion of commercial off-the-shelf technology, use of e-commerce, and application of Web services.

A new step added to the evaluation process involved contacting users of the system. It was clear that users are becoming more sophisticated. Their comments concerned the architecture, hardware integration, and quality of the software – way beyond the “How did it work?” questions I was expecting. Users recognize the implications of the design on ease of upgrade and maintenance cost.

Adoption of industry standards for software development practices was evident in most nominations, particularly those developing systems with real-time requirements. Use of process asset libraries, requirements databases, product verification tracking systems, and collaborative development networks was common.

Several projects involved rapid development of applications and used end users in the design and test. The Navy's AutoREAD project, which allows flight-critical preventative maintenance tasks to be scheduled and downloaded to Pocket PCs is one example. Sailors collect readings using Pocket PCs that perform automated calculations, tolerance, and range checking to identify marginal and out-of-tolerance readings. The system was developed and fielded, and was in use aboard the carrier USS Harry Truman within four months. There were several other similar efforts that merged the use of Pocket PCs or Personal Digital Assistants as end-user data entry tools that communicated with distributed databases. At the other end of the spectrum in terms of size were several projects with millions of software lines of code and development spanning the years.

Some other techniques I found intriguing were embedding commercial data analysis and simulation software packages within mission software, automated software reengineering (e.g., ATLAS-to-C++, JOVIAL-to-C), and development of common security layers for Web services.

The nominations represent the wealth of knowledge and talent applied to Department of Defense software products, and show that we can learn by examining what went right. Look for the Top 5 issue of CrossTalk this July that will describe each of the winning projects.

## U.S. Government's Top 5 Quality Software Projects

CrossTalk is proud to announce the following winners of the 2002 U.S. Government's Top 5 Quality Software Projects. Thank you to everyone who submitted nominations; the quality of the entries was outstanding and is a tribute to the programs throughout the government. We look forward to presenting this year's awards at the 2003 Software Technology Conference.

- **Defense Civilian Pay System**  
Customer: Department of Defense
- **Enhanced Position Location Reporting System**  
Customer: U.S. Army, CECOM, PM TRCS
- **Joint Helmet Mounted Cueing System Software Upgrade**  
Customer: Joint Air Force/Navy Program Office, ASC/FBH Wright-Patterson AFB, OH
- **Kwajalein Modernization and Remoting**  
Customer: Space Missile Defense Command/ U.S. Army Kwajalein Atoll/Reagan Test Site
- **OneSAF Testbed Baseline**  
Customer: Program Executive Office – Simulation, Training, and Instrumentation

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