

Software Project Winners Exemplify Software Development Best Practices

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CrossTalk is proud to present this series of articles featuring the winners of the 2002 U.S. Government's Top 5 Quality Software Projects. These top five projects were selected from 70 nominations in this second annual event. They demonstrate how competent software project teams go about building successful products. In the following pages, we present a brief article on each winning project, along with biographies of the judges, and brief summaries of the top nine finalists.

U.S. Government's Award-Winning Quality Software Projects

The results are in, and it is clear that the government is building many successful software packages that are top-notch examples in project management and quality control. Listed below in alphabetical order are the winners of the second annual 2002 U.S. Government's Top 5 Quality Software Projects contest managed by CrossTalk. We congratulate them and hope you enjoy reading more about their winning projects in the following pages.

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

Software affects the lives of most Americans. One example of this evidence is its use as an enabler by branches of the U.S. government. Software plays a part in communication, traffic control, U.S. census, and the Department of Defense just to name a few.

This importance is what prompted the Office of the Under Secretary of Defense (OSD) and the CrossTalk staff to sponsor the second U.S. Government's Top 5 Quality Software Projects. Dr. Nancy Spruill, former director, Acquisition Resources and Analysis, announced the contest in the September 2002 issue of CrossTalk. We are again honored by the status of the judges, including Dr. David A. Cook (Air Force), Carol A. Dekkers (industry), Robert Gold (OSD), Capers Jones (industry), Edward C. Thomas (Army), Dr. Gerald M. Weinberg (industry), and Brenda Zettervall (Navy).

The OSD sponsored this award to recognize software best practices within the U.S. government. Information from the winners and finalists is being leveraged as examples of the right way to develop software. Winners have been asked to share their nomination information with other leaders in the software community; are invited to attend the Amplifying Your Effectiveness Conference to share their expertise with others; and CrossTalk's parent organization, the Software Technology Support Center, arranged for the winners to discuss their projects and answer questions at the 2003 Software Technology Conference. Finally, CrossTalk developed this special issue to share these successes.

CrossTalk received 70 nominations for this year's award. Each project nomination, along with customer feedback, was reviewed by at least three STSC software professionals against a set of established criteria (see page 17). The users of the software that received the best overall scores in the first round of scoring were contacted for their feedback on the software. These

projects were then reviewed again and reduced to 14 finalists. These nominations, along with the customer and user feedback, were sent to the final board of judges who made the final selection of the Top 5 winners. The selection was not easy, since all of the finalists had their own special merits that had to be considered.

The winning projects were presented with their awards at the Software Technology Conference on April 29, 2003 in Salt Lake City. This award was presented by Joe Jarzombek, the deputy director for Software Intensive Systems at the OSD, in front of top ranking officials from each of the military services.

Pattern of Success

The 70 nominations featured software that conserves resources by being implemented across multiple platforms, improves morale, and saves lives. An Air Force user of one of the finalist's projects states, "The improvement was so great, that when the Navy personnel evaluated it, they immediately recommended to the Navy that they adopt this product rather than build their own. The Navy then approved its [the software's] use ... The Army has realized that this contractor did such an excellent job in the development of this product, that they now have a dialogue to address similar Army problems."

A customer of another finalist stated, "[The software is] saving hours per day off the maintenance cycle, which allows a few more hours for sailors to eat, sleep, relax, write home, etc., reducing overall fatigue and increasing general morale."

Another user stated, "More sons and daughters will be coming home as a result of the software."

"Having scored for two years, the patterns of success are becoming clear," said Capers Jones. "The overall results are adding solid empirical findings about the efficacy of peer reviews, defect prevention, and the value of climbing above Capability Maturity

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The award for the Enhanced Position Location Reporting System was accepted by Hope Miller (left) and Dr. John D. Olsen (center) of Raytheon Company.

Photos by Janna Kay Jensen of CrossTalk.



Representatives from the Top 5 projects took part in a panel discussion during the 2003 Software Technology Conference, including visual presentations and answering questions.

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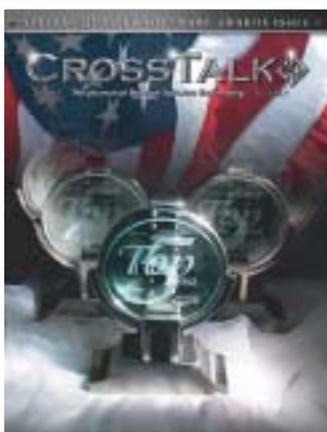
Model® Level 3. It looks like the spiral model is also proving to be a success.”

Based on these comments, I decided to review the winning nominations again. A few commonalities between the projects surfaced for me as well. The most noticeable was the close conformity to the contracted schedule and budget. This might have been a result of other commonalities such as working hand-in-hand with the users as the software was developed. With most of the projects, the users participated in the requirements

definition, answered questions during development, and often were present during all stages of the testing.

Another commonality was a focus on early defect detection. Perhaps the most beneficial commonality between the projects is their uses on multiple platforms, which saves taxpayers millions of dollars.

It seems this year’s winners show evidence that the software affecting our lives is being built with a greater degree of success and savings.◆



2003 U.S. Government's Top 5 Quality Software Projects

The Department of Defense and **CROSSTALK** will begin accepting nominations for the 2003 U.S. Government's Top 5 Quality Software Projects after July 1. Outstanding performance of software teams will be recognized and best practices promoted.

These prestigious awards are sponsored by the Office of the Under Secretary of Defense for Acquisition, Technology and Logistics, and are aimed at honoring the best of our government software capabilities and recognizing excellence in software acquisition and development.

The deadline for the 2003 nominations is December 5, 2003. You can review the nomination and selection process, scoring criteria, and nomination criteria by visiting our Web site after July 1. Then, using the nomination form, submit your project for consideration for this prominent award.

ENTER ON OUR WEB SITE AFTER JULY 1

www.stsc.hill.af.mil/crosstalk