



Buying and Building Systems and Software Better



A lot of us are talking about systems these days, and rightly so. But this month we are focusing on the pivotal aspect of any modern military system – software. Our theme this month is software process improvement (SPI). We have featured this theme many times in the past primarily because SPI is what CROSSTALK and its parent organization, the Software Technology Support Center (STSC), are all about. CROSSTALK helps the STSC achieve its mission through publishing informative articles aimed at the software professional as they strive to buy or build software better. Whether you are designing, developing, testing, configuring, managing, sustaining, or even buying software, we aim to increase your awareness of the benefits and challenges of disciplined processes in all phases of the software life cycle.

CROSSTALK is also part of a Capability Maturity Model® (CMM®) Level 5 organization, the Ogden Air Logistics Center's Software Engineering Division OO-ALC/MAS at Hill Air Force Base, Utah. It is a privilege to be a member of a Level 5 organization as process improvement is embraced at all working levels. SPI is a major contributor to high workplace morale and customer satisfaction. MAS is currently in the midst of putting new processes in place as well as updating existing processes as they work to be in compliance with the CMM IntegrationSM (CMMI®) and prepare for a CMMI assessment later this year. Ogden's MAS division is a great example of an organization that has learned to build software better through their application of SPI techniques in all facets of software development.

We begin this month's issue with *Accelerating Process Improvement Using Agile Techniques* by Deb Jacobs. This author discusses how an organization can get the most *bang for their buck* by putting processes in place quickly while still remaining agile in a business environment. The author presents a methodology that includes a common sense, simple, step approach to developing an organization's maturity. Although processes can be put in place fast, Jacobs emphasizes that the processes become a foundation for continued improvement over time.

Next, Dr. Miguel A. Serrano and Dr. Carlos Montes de Oca bring us *Using the Team Software Process in an Outsourcing Environment*. This is a good example of using the Software Engineering Institute's Team Software ProcessSM (TSPSM) model as a method of buying software better. The TSP techniques were used to estimate a legacy system upgrade project's cost and schedule even before signing a contract. The information used to produce the cost quote was an outcome of a TSP launch. The article describes the main problems and results of using the TSP and discusses lessons learned from the experience.

Unlocking the Hidden Logic of Process Improvement: Peer Reviews, by Marilyn Bush is featured next. This author discusses how the CMM and the CMMI define necessary process tasks but the models fail to describe the logic that sequences these tasks. Bush chooses peer reviews as an example and discusses the reasons for doing peer reviews as prescribed by these models. She also offers her insights and warnings if peer reviews are attempted too early in an organization's process improvement journey.

Process documentation can be looked upon as a necessary framework or foundation for any process improvement effort. Ronald A. Starbuck expands on the importance of process documentation when it is done right in *A Beginner's Look at Process Improvement Documentation*.

In our supporting articles this month is *Common Errors in Large Software Development Projects* by David A. Gaitros. This article is a good reminder of the common mistakes made while producing software and discusses practices that when implemented can increase your project's success at developing software. In our Open Forum section, Michael West addresses this month's theme with *Applying Systems Thinking to Process Improvement*. West reminds us that process improvement should not be done if an organization just wants to be glorified with achieving a certain CMM or CMMI level as this just creates more problems for them to deal with. The author presents how systems thinking can provide a bigger picture view of commonly occurring systemic problems in organizations and further helps with resolving the problems that frequently occur in model-based process improvement efforts.

I hope this month's collection of articles provides you with helpful information as we all work together to buy and build systems and software better.

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Publisher