



# CMMI Supports Enterprise-Wide Process Improvement

Lt. Col. Joe Jarzombek  
ESIP Director



The success of a project is often dependent on the organizational processes and capabilities that cut across multiple disciplines. Several organizations already use one or more Capability Maturity Models (CMMs) to guide their process improvement efforts. However, process-related CMMs have lacked integration among disciplines, and process assessments have been known to result in inconsistent findings. Improvement efforts based on unique CMMs have resulted in suboptimization, confusion, and potentially unnecessary expenditure of process improvement resources [1]. These are some of the driving needs for the current collaborative effort to integrate CMMs (dubbed CMMI) that is sponsored by the Office of the Secretary of Defense for Acquisition and Technology, with participation by other government organizations, the Software Engineering Institute, and industry.

The CMMI team will produce a set of integrated products to support process and product improvement. It will include a framework to generate CMMI

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products, individual capability models, training and assessment products, as well as a tailoring guide, and a glossary to reflect common terminology among disciplines [2]. The CMMI team will develop a framework that will generate both staged and continuous capability models as explicitly specified in the CMMI "A" specification. The CMMI product suite is intended to preserve government and industry process improvement investments, enhance use and generation of multiple models, and accommodate considerations for consistency with Department of Defense directives and industry (Electronic Industries Alliance) standards as well as support international standards.

By integrating process areas among disciplines, the CMMI will better support the institutionalization of enterprise-wide process improvement, cutting across disciplines that are often compartmentalized within organizations. The Federal Aviation Administration has already demonstrated the value of using continuous representation of an integrated CMM with staging guidelines (<http://www.faa.gov/ait/sepg>). The use of continuous representation with staging guidelines leaves it to organizations to decide priority and ordering of pro-

cesses to improve based on business objectives. It facilitates, through staging, a summarization of organizational maturity level based on experience with successful process improvement priorities.

Industry is a major proponent and participant in this CMMI effort, and industry involvement is increasing in the number of CMMI stakeholder reviewers. There are opportunities for participation in CMMI pilot projects planned to start in January 1999 that offer benefits to organizations. Those interested in learning up-to-date information about the CMMI, reviewing CMMI frequently asked questions, or who desire to participate in CMMI pilot projects should go to the SEI Web site, <http://www.sei.cmu.edu>, and select the CMM section. ♦

## References

1. Schaeffer, Mark D., "Capability Maturity Model Process Improvement," *CROSSTALK*, Software Technology Support Center, Hill Air Force Base, Utah, May 1998.
2. Schaeffer, Mark D., Philip Babel, Jack Ferguson, et al., "Overview of the Integrated Capability Maturity Model (CMMI) Development Project," panel presentation, Tenth Annual Software Technology Conference, Salt Lake City, Utah, April 22, 1998.



## Apache Lessons in Acquisition Management

I read with interest "Slaying the Software Dragon," (*CROSSTALK*, May 1998) especially the figures that indicated an underwhelming response to the course offerings. I offer a slightly different viewpoint and analogy: Approximately 100 years ago, the U.S. Cavalry found itself unable to effectively deal with the Apache. The Army's tactical leaders (managers), having studied traditional war fighting (management), were

having trouble understanding a "different" enemy (software development). The most effective response was not to try to make each of its tactical leaders (acquisition managers) into an effective tracker, but to hire the enemy: Apache Indian scouts. Today, we call these *independent validation and verification* agents (software projects) or *validation, verification, and accreditation* agents (software models)—experienced developers hired to

search through the horse dung (documents) left by the enemy (developer) to try to fathom the enemy's intent (look for the issues, weaknesses, problems, etc., behind the smoke, mirrors, hand waving, and slideware).

Perhaps we should look at ways to use these individuals more effectively.

Joe Saur  
Fort Monroe, Va.