From the Publisher

# The Strategic Battlefield

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Chess is a game of position, material, and time. The four squares in the center of the board are the most important positions to control. However, if you cannot see where your opponent's pieces are located, your attack might proceed in traditional military style with a series of outflanking maneuvers. In the battle of Gettysburg, Gen. Robert E. Lee lost contact with his cavalry, the eyes of the army. He did not know the Union army's position or strength and was unaware of his near success in the first two attacks because he lacked communication.

Battles, like chess, are best fought with a continuous flow of accurate information.

The military understands the need for strategic battles, but building systems in the Department of Defense that effectively communicate has always been a challenge. Each service has its own way of doing business and its own set of contractors developing new and improved weapon systems. Too often the result is independently developed weapon systems that have unique methods of communication. Without an integrating strategy, interoperability is but a dream.

Computers add speed, but without an integrating strategy we merely increase the rate at which we fail to communicate. Our experience in developing computers would indicate there are infinite ways to transmit a message without really communicating. The Defense Information Infrastructure (DII) Common Operating Environment (COE) is an essential component to effective computer communications in the military.

In this issue Pamela Engert and Julie Surer (page 4) provide an introduction to building interoperable systems with DII COE as a foundation. Beginning on page 6, Lt. Col. M.J. Robillard, Dr. H. Rebecca Callison, and John Maurer outline the need and proposed approach for extending the DII COE to real-time systems. The DII COE may be viewed as "an architecture, a collection of reusable software elements, a software infrastructure, and a set of guideline and standards" used to achieve interoperability. This approach to software development can provide substantial savings in production as well as enhanced interoperability, provided the technical architecture is of good quality and continuously updated.

DII COE is an important systematic approach to the age-old problem of accurate communications in battle. The battlefield — whether military or industry — is a place where what you don't know can and will hurt you. ◆

Letter to the Editor

## A Comment on Reaching Capability Maturity Model™ (CMM) Level 2

I'd like to comment on the article in the June issue that describes how a government organization became "certified" at Level 2. (By the way, how does an organization get "certified"?)

The author asserts, and I think it's true, that getting management on board is the first and biggest step when an organization decides to start climbing the ladder of process improvement. The direction from the board governing the Department of Agriculture organization — go in 10 months from never assessed to Level 2, or lose funding — misses the point by a mile.

The resulting organizational behavior often then becomes "gaming the number." That type of behavior results in the kind of deadline-motivated personal heroics the author mentions. It also, in this case, seems to have modified Software Quality Assurance's mission from one of participating with developers and management to ensure process/product quality, to one of monitoring "to meet Level 2 goals."

Most disturbing to me in this article was the complete absence of the word "finding," which is the heart and soul of the CMM-based appraisal for internal process improvement (CBA-IPI) method. The IPI is about improvement along the continuum that leads to reliable software that satisfies its requirements, costs, and schedules that are congruent with plans, and continuous process improvement — not about achieving a level. Focusing on levels harmfully directs attention from process improvement and process maturity.

It is encouraging to see more federal government organizations beginning the walk to quality. It would be even more encouraging to see them do it for all the right reasons.

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**On the cover:** Salt Lake photographer Tom Anastasion used building tools and architectural concepts to illustrate September's theme of Defense Information Infrastructure (DII) Common Operating Environment (COE).