

CROSSTALK would like to thank 309 SMXG for sponsoring this issue.

From the dawn of the modern age, technological advances and innovation have been sustained and further enhanced by our educational systems. With the backdrop of globalization, rising economic pressures and emerging foreign powers, the need for our education system to maintain a position of preeminence in the fields of science and technology have become more pressing than ever before. Educators, industrial leaders and governmental officials often advance differing opinions on the most effective way to ensure continuation of our country's dominance in a plethora of areas or suffer a real and palpable economic and societal loss in mere decades. The current state of our academic institutions is especially pertinent to military departments who must ensure a security and national defense posture, now and into the future. As the pace of technological innovation continues to increase, so has the perceived disconnect between academia and industry in preparing our graduates for immediate real-world integration in the science and technology industry. It is for that reason that we have chosen to highlight the topic of software education to begin the year. Here we will attempt to highlight both the perceived challenges industry faces with recent graduates as well as provide perspective into the difficulty academia faces in adjusting to the rapid pace of technological innovation in curriculum.

In this issue, we will explore the perceived need to further align academic curriculums of our higher educational institutions to face the needs of both research and development organizations as well as illustrate methods to allow those organizations to be more productive through educational concepts. We begin with an collaborative article focused on the software industry entitled "Missed Expectations: Where CS Students Fall Short in the Software Industry" illustrating a perceived lack of essential skills and the need for further specialized training, as the author highlights recommendations to educators and graduates. We continue the discussion with Nary Subramanian's article entitled "Challenges in Academia in Producing Prepared IT Workforce" discussing the difficulty that academia faces with allotments for specific technical coursework associated with traditional computer and information technology degrees. Nary explores a perceived adequacy and potential misalignment of coursework within college curriculums and suggests possible solutions.

Another pressing issue that frequently dominates nightly newscasts is the emerging success of cyber-attacks within both domestic and governmental systems. It is no surprise that securing our systems from intrusions and vulnerabilities could not be pressing. To that end, we have an excellent article from Commander Michael Bilzor entitled "Seeking Balance in Cyber Education" which discusses the need to balance and maximize

the potential of the education provided to our future technologists who will be protecting and safeguarding assets against malicious intent.

Those of you that work within the DoD need no introduction to the Defense Acquisition University (DAU) and the educational role this institution provides to government professionals. The article entitled "Training the Department of Defense Software Acquisition Professional" examines the current state of education provided to the software acquisition cadre and the discusses the expansion of software within all DoD systems and career fields and how the University will attempt to address these future needs. Likewise, another software profession of critical importance is that of the Program Manager. Lawrence Peters offers an article entitled "Training Software Project Managers" discussing perceived success criteria and the need to provide this profession with the competencies to overcome potential pitfalls through proper training.

Finally, we turn our attention to the fact that education must be applied by individuals in real-world settings, arranged into groups, working effectively together. Our last two articles address the potential synergy attainable by the cohesion of teams and applying standards to enhance performance. The article entitled "Increase Team Cohesion by Playing Cooperative Video Games" provides us results of a study that explores how collaborative team building activities can contribute to improved performance. While the article entitled "A 'Thinking Framework' to Power Software Development Team Performance" provides us a new comparative software standard applicable to software development teams with insight into why many previous performance improvement efforts may have failed.

As we begin the New Year, we are also beginning our 27th year of **CROSSTALK** publication as well. I would like to express my sincere thanks to all of you who have made the continuation and excellence of **CROSSTALK** possible. To our Co-Sponsors, thank you for providing your generous support and active involvement, which makes our continued efforts possible. To the authors, we appreciate your continued loyalty and for sharing such valuable information to the software community. And finally, to our readers, thank you for your continued subscriptions and readership to which I sincerely hope we continue to exceed your expectations.

From all of us at **CROSSTALK**, we wish you the best for the New Year!

Justin T. Hill
Publisher, **CROSSTALK**