



Global Engineering Management Conference

Tackling today's global management challenges.

GEMC 2010 Interview Series:

Delores Etter

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Your professional background is both impressive and instructive, especially in light of two transitions from academia to becoming a member of senior management in the Department of Defense (DoD). In your first DoD position as the Deputy Under Secretary for Defense for Science and Technology, did you find it challenging to employ your engineering expertise in management functions?

In my first DoD position as the Deputy Under Secretary of Defense for Science and Technology, my engineering background was helpful in a number of ways. For example, challenging issues (whether technical or not) need to be addressed by breaking them down into a set of simpler issue so that you can begin to understand both the big picture and the components, and then develop options.

Did your time spent as a faculty member at the US Naval Academy augment the experience gained from your first DoD position and bring additional management expertise to your second DoD position as Assistant Secretary of the Navy for Research, Development, and Acquisition?

My time spent as a faculty member at the US Naval Academy was very helpful in my second DoD position as Assistant Secretary of the Navy for Research, Development, and Acquisition because I had a better understanding of the background of many of the flag officers in senior positions. This allowed me to interact in a more credible way with them as we worked together to solve the problems that we faced.

How important would you say effective engineering management skills played in carrying out your role during your time at DoD from 2005-2007, particularly with US armed forces actively engaged?

Effective engineering management skills were very helpful to me in my role as the Assistant Secretary of the Navy for Research, Development, and Acquisition because many of the challenges in our acquisition programs directly related to management issues. For example, understanding the trade-offs between performance, cost, and schedule was necessary in order to determine which programs needed more of my attention from a management/leadership role.

In your plenary session focusing on challenges in engineering education, will you highlight any particular trends that you have observed that would underscore the need for engineers to undertake professional development in management, such as courses or certification?

Today's engineers enter a global world with many more challenges than the world of a decade ago. Our universities have only four years to prepare engineers so we have to decide how to provide the technical fundamentals and still have time to address the challenges of global communications, teaming, and leadership. We start new engineers on this path, but they must understand that it is a path that requires a commitment to life-long learning. Additional academic programs, courses and certification are an important part of that development that continues throughout a career.

As the Director of the Caruth Institute of Engineering Education at Southern Methodist University, you play an invaluable role overseeing important initiatives to support science, technology, engineering, and mathematics programs in middle and senior high schools. Given the interdisciplinary nature of global engineering work, are today's aspiring engineers more aware of the need to enhance their technical knowledge with management skills when it comes time for their first jobs?

Today's aspiring engineers understand that engineers work in teams, and that the more opportunities that they have for team experiences, the better prepared they will be for an engineering career. The Caruth Institute for Engineering Education at SMU is helping to provide some unique team experiences through our partnership with Lockheed Martin's Skunk Works programs. Together we are providing immersion design experiences that students can participate in starting with their freshman year. These experiences allow students to participate in various roles within the team, working on a prototype for a real system, with time, budget, and performance constraints.

Dr. Delores Etter is a Distinguished Chair in Engineering Education at SMU. For GEMC 2010, Dr. Etter will be presenting a plenary talk on the subject of Challenges in Engineering Education. More information on her session is available at <http://asmeconferences.org/gemc10/tracks.cfm>