

Cyber Acquisition Professionals Need Expertise

(But They Don't Necessarily Need to Be Experts)

Michael Cook

Cyber acquisition professionals need to develop a wide range of expertise, not strive to become experts at any one discipline. The concept of subject matter experts (SME) that permeates the government information technology (IT) profession today must shift to nurture the concept of encouraging the workforce members to diversify their experience. It is more important than ever to develop diverse expertise through a rapid paradigm shift in thinking.

I realize this way of thinking certainly will alienate some IT professionals, many of whom take great pride in their respective specialties. I also realize that they have spent an enormous amount of time in learning their craft. However, it is a paradigm shift that I believe is needed to secure better the cyber systems and capabilities that acquisition professionals field for the Department of Defense (DoD).

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The reason I say develop expertise versus becoming experts is that the technology we rely on is advancing so quickly that it is nearly impossible to become an expert at any one aspect. Take networking for instance. The cyber systems hardware, protocols and vulnerabilities known today will be obsolete tomorrow. As a result, striving to become an expert in any one IT discipline might render one less effective compared with those who focus on gaining expertise in a wide range of disciplines.

This is not to say IT professionals should not seek to develop the traditional skills that have become the foundation of the profession. Learning the knowledge and developing the skills needed to be system administrators, network administrators

The Defense Acquisition University (DAU) has superbly developed the programs that for years have trained acquisition professionals. Unfortunately, there are government employees in IT positions involved with cyber acquisitions that are not members of the Defense Acquisition Workforce and who lack the benefit of DAU training.

It is important to identify and transition individuals to the Defense Acquisition Workforce, where they can benefit from the DAU training opportunities in IT and program management. The expansion of the acquisition workforce is especially important for IT specialists, in order to better protect the systems we field for the warfighter. These training opportunities are



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and field technicians are essential to IT professionals. However, it also is important to expand outside of these areas, to diversify experience in order to keep up with the profession's development as technology advances and cyber systems become more robust and integrated via convergence and interoperability.

The paradigm shift toward general expertise versus SMEs is especially important for IT professionals selected to plan and develop information assurance (IA) for the cyber systems fielded to meet our warfighters' requirements. An important aspect of fielding defense cyber capabilities is to design and implement the technology's IA when the requirement emerges and throughout the system's acquisition life cycle. IA professionals must possess wide expertise to perform this critical task. Unfortunately, due to staffing and professional development shortfalls, there is a dearth of talent to perform the necessary diligence on the myriad cyber acquisitions that our warfighters require.

So, how can we develop the experienced information assurance professionals with the breadth of expertise needed to do the job effectively? We must identify the expertise needed and how we provide it in a cost-effective manner in an austere budgetary environment. I believe the acquisition community is realizing that our IT professionals need knowledge and experience not only about the traditional IT foundations of networking, systems administration and programming, but about defense acquisition, project management, program management and cyber security.

The Defense Acquisition Workforce Improvement Act (DAWIA) has been a great asset for acquisition professionals.

developed and funded for the acquisition professionals and must be leveraged to the fullest to ensure that the professional growth and development of cyber IA professionals is attained, as well as to get the greatest return on the taxpayers' investment in DAU.

A second area that acquisition professionals supporting IA requirements need to develop is cyber security. What the DoD has determined over time is that cyber is everywhere and often is overlooked. In today's acquisition environment, supervisory control and data acquisition systems, embedded software and firmware are a few examples of what is becoming associated with cyber. As a result the threat has moved from the traditional focus on hardware and software we acquired in the past. The sphere of what must be protected to secure our technology and field capabilities for the warfighter is much greater, and requires greater diligence and expertise.

An excellent avenue open for acquisition professionals to acquire the essential knowledge is through the Cyberspace Professional Development Program (CPDP). Under this program, Air Force cyberspace professionals get professional development through classes offered at the Air Force Institute of Technology (AFIT). Specifically, the Cyber 200 and Cyber 300 courses are available to the Air Force enlisted ranks, junior officers and Air Force civilian employees serving in the Core Cyberspace Occupational Series of 301, 335, 343, 391, 801, 854, 855, 856, 1550, and 2210. In addition, classes are available to members of other Services. Having completed the Cyber 200 course, I can testify that the experience develops the knowledge and skills of cyber security professionals.

I believe project management is a third area of expertise that must be developed by the acquisition professionals who field cyber systems. Learning and understanding project management methodology is important to the development of cyber professionals and the acquisition workforce because it encourages the most efficient method for project planning, management and completion. Formal project management education also builds the foundation that acquisition program managers need to field a system. It provides the IT specialists who support the IA requirements of a cyber acquisition a way to develop techniques to identify, plan, implement and manage the IA safeguards required for cyber systems.

A number of options can be exercised to gain the project management knowledge needed by acquisition professionals. The Computing Technology Industry Association (CompTIA) offers an excellent avenue to acquire the basic project management knowledge through the CompTia Project+ certification. For those professionals considering project management as a career, the Project Management Institute offers the very challenging Project Management Professional program. DAU also offers courses that focus on developing project managers.

Developing expertise across disciplines has become essential for other reasons. We find that technology grows faster than we can implement it in the systems we field. The rate of expansion has far exceeded our government's ability to field systems quickly as well as industry's ability to design, engineer and build them. This comes at a time when we are continually told to "do more with less" in budgets and personnel.

Simply put, the expectation has quickly arisen that IT specialists and acquisition professionals grow and develop to take on more responsibilities, even those that have traditionally fallen outside their respective fields. Judging from readily apparent indicators and projections, this will remain our work environment for quite some time. Therefore, it behooves everyone within the acquisition workforce to embrace the paradigm shift to developing expertise rather than becoming expert in any one field.

It is important to note that the diversity of expertise will not come easily. It will come at a certain cost in money, time and effort, all of which will fall on individual shoulders. Government organizations lack the training funds they had in the past. Even though a great deal of training and education is readily and freely available online through DAU, individuals will have to assume the cost of gaining certain expertise. In addition, the time away from work can seldom be afforded as more responsibilities are thrust on fewer employees. I believe that, more than ever, the motivated individual who is willing to accept the cost to gain expertise will excel in the acquisition workforce.

Workforce members should diligently seek training opportunities offered within their organizations. This would include taking part in project teams or working groups that provide

opportunities to learn project management disciplines the employee currently lacks. Workforce members should explore college programs and other educational opportunities. There may be opportunities within one's organization to cross-train with other departments, such as system administrators working in a network operations center rotating into the IA office for 6 months to develop IA skills.

It is important to realize that the path forward requires us to develop expertise and not focus on merely developing as SMEs in one discipline. Adopting this paradigm shift now will allow us to develop the skills needed within our profession as well as afford us more opportunities in the workforce. It also will enable us to perform the highly essential task of providing our warfighters with the capabilities they need to do their job, a job that is important to us all. 

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MDAP/MAIS Program Manager Changes

With the assistance of the Office of the Secretary of Defense, *Defense AT&L* magazine publishes the names of incoming and outgoing program managers for major defense acquisition programs (MDAPs) and major automated information system (MAIS) programs. This announcement lists recent changes of leadership, for both civilian and military program managers.

Army

(No new program managers this period.)

Navy/Marine Corps

Capt. Joseph Kan relieved **Capt. Paul Ghyzel** as program manager for the Navy Communications Satellite/Mobile User Objective System (MUOS) Program on Nov. 25, 2013.

Capt. Beau Duarte relieved **Capt. Jaime Engdahl** as program manager for the Unmanned Carriers Aviation Program on Oct. 17, 2013.

Air Force

Lt. Col. Robert J. Toren relieved **George Beck** as program manager for the Integrated Strategic Planning and Analysis Network (ISPAN) Increment 4 program on Aug. 28, 2013.

Fourth Estate

(No new program managers this period.)