Distinguished Lecture Series, Special Guest Speaker:
“Update on the Naval Open Systems Architecture (OSA) Initiative & Related Aspects of Better Buying Power”

By

Mr. Nickolas H. Guertin

DASN RDT&E Director for Transformation
Office of the Deputy Assistant Secretary of the Navy for Research, Development, Test and Evaluation

ASNE-SI cordially invites employees to a Distinguished Lecture by a special guest speaker Mr. Nick Guertin, Director for Transformation in the Office of the Deputy Assistant Secretary of the Navy for Research, Development, Test and Evaluation. He continues to lead the transformation of business, technical, and cultural practices for Open Architecture acquisition of national security systems as a coordinated enterprise effort.

Mr. Guertin’s experience in Open Architecture (OA) started in the Acoustic Rapid Commercial-off-the-Shelf (COTS) Insertion (A-RCI) program. During this period the A-RCI team won the Vice President’s “Hammer Award”. He was also the Assistant Program Manager for the Total Ship Monitoring System, and the chief engineer for submarine combat control. Mr. Guertin transitioned to the Program Executive Office for Integrated Warfare Systems as the Principal Assistant Program Manager for OA and Systems Engineering, and took over the leadership of a Navy/USMC OA Enterprise Team (OAET). The OAET was awarded the 2008 Acquisition Excellence Award for competitive acquisitions. He has published extensively on applying OA to Naval systems development and acquisition transformation.

Mr. Guertin served 23 years in the US Navy on submarines and was a commissioned reserve officer in nuclear power, ship construction and repair. Mr. Guertin began his civil service career at Puget Sound Naval Shipyard in nuclear power plant testing. He went on to Naval Undersea Warfare Center Keyport as a heavyweight torpedo depot engineer. Mr. Guertin then shifted to combat systems as the Sonar Participating Manager representative for Trident Command and Control System testing. Mr. Guertin is married to Maria Foderaro-Guertin. They have two children and reside in McLean Virginia.

Please join us on Wednesday 10 November, at 10:30 AM, in B 3395, Main Conference Room. Snacks and soft drinks will be served. Any other enquiries, contact Mr. Maroof Qurashi at maroof.qurashi@navy.mil ext.4230.
American Society of Naval Engineers – Southern Indiana (ASNE-SI)

Invitation
Technical Exchange Meeting
“Innovation Across the Life Cycle”

03 December, 2014 in B 3395 Main Conference room
11:00AM to 12:30PM

The American Society of Naval Engineers, Southern Indiana Section (ASNE-SI) cordially invites employees to the next Technical Exchange Meeting to be held on Wednesday, 03 December, 11 AM in B 3395 Main Conference Room. There will be technical papers presented at this meeting. The papers include a broad range of interest, including and pertaining to the technology areas of work at Crane. It may contain some improvement proposals, cost avoidance, research, or just awareness to employees about the other areas of Crane. This is an unique style of exchange meeting. It accommodates and provide a platform for all the technical and professional presenters to polish their talents and present ideas in an open forum. The members of the command and the departmental management can review what is being presented within the boundaries of Crane. This technical forum provides an opportunity to network, broaden the horizon, and know more about other areas of interest at Crane. We are all working for the same goal to “Support the Warfighter”. Employees can take one hour of DAWIA training credit for attending this meeting. Pizza, snacks and soft drinks will be served. Pizza is free to ASNE members and is $1.25 per slice for non-members.

Please join us on Wednesday, 03 December, at 11 AM, B 3395 Main Conference room. Any Questions can be directed to maroof.qurashi@navy.mil at x4230, or nova.carden@navy.mil at x1422. Be sure to mark your calendar.
In September, NEDO hosted a tour at the LINAC facility in B-3059. Two groups toured the site and learned about our linear accelerator equipment and its capabilities. Current work includes radiation hardening of guidance system electronics for the Navy's TRIDENT D5 missile, semiconductor design, hardness verification and parts testing for satellite programs, and ongoing research of radiation effects. The crew at the LINAC were particularly busy in October, participating in various projects headed by some of Crane's PhDs from the Flight Systems Division of Global Deterrence & Defense Department.

In October, NEDO hosted a tour hosted by the Electro-Optics Technology Division which provided a general overview of the division's organizational structure and Focus Area alignment, a description of primary technology areas, and an overview of the facilities and Test & Evaluation (T&E) capabilities. The overview described how the division provides engineering, acquisition, test & evaluation, logistics/sustainment, and maintenance/repair support for various electro-optic systems used by the Navy, Special Operations Forces, and other DoD components. The technology brief addressed the primary electro-optic technology areas of Visual Augmentation Systems (VAS) (also referred to as Night Vision), infrared/thermal imaging technology, and laser devices. The tour concluded with a walk-thru tour of the Bldg 3291 Test Tower, the Multi-sensor Systems Lab, and the Visual Augmentation Lab that helped the attendees understand more about of the division's T&E and repair capabilities.

Looking forward to November, NEDO will be hosting a tour relating to Platform & Launch Systems. Additionally, as we come into the holiday season, watch for information about NEDO opportunities to support our local communities.
American Society of Naval Engineers – Southern Indiana (ASNE-SI)

Distinguished Lecture Series, Special Guest Speaker
Dr. JAMES C. CONWELL
PRESIDENT
Rose-Hulman Institute of Technology

“STEM Education and the Future Engineer”

The American Society of Naval Engineers, Southern Indiana Section (ASNE-SI) Naval Surface Warfare Center, Crane Division (NSWC Crane) hosted an event at B 3395 in honor of Dr. Conwell, the President of Rose-Hulman Institute of Technology's on Oct. 07, 2014. He was the guest speaker for the Distinguish Lecture Series with a topic “STEM Education and the Future Engineer”. The program was attended by NSWC Crane’s former Technical Director, Mr. David Reece, and Crane management and employees. Dr. Conwell also toured NSWC Crane facilities, highlighting the technical work performed within the Strategic Missions and Special Missions focus areas.

Applied Science & Demand Management Deputy Department Director Mr. Greg Reece, a Rose-Hulman graduate, provided closing remarks and hosted Dr. Conwell throughout his visit to Crane. “As an Alumni of Rose-Hulman it was an honor to host Dr. Conwell and discuss future collaborations between our organizations,” said Mr. Reece.

Dr. Conwell discussed Rose-Hulman Institute of Technology, its student body and his goals for education offered at the school. He also emphasized the value of STEM education and the academic outreach efforts of Rose-Hulman.

Dr. Conwell mentioned that Rose-Hulman remains at the cutting edge of customized education opportunity. He spoke about Collaborations/Communications/Diversity and how to pull a team together. Continuous learning is a lifelong process. He shed some light on preparation for diversity for collaboration. He spoke about the history of Rose-Hulman, and how it ranks number one in the nation. He mentioned that 500 are admitted out of 4000 applications to Rose-Hulman.
From left: Ms. Rachael Wiseman (ASNE-SI Publicity), Mr. Daniel Horstman (ASNE-SI Membership) Mr. Arthur Mullins (Code JXQR), Mr. Greg Reece (Deputy QX), Ms. Angela Conwell, Dr. James Conwell, Mr. David Reece (former TD of Crane) and Mr. Maroof Qurashi (ASNE-SI Chair)
The American Society of Naval Engineers – Southern Indiana (ASNE-SI), Special Guest Speaker

“Radio Frequency Research Overview at Ohio State with a focus on Small and Conformal Ultra Wideband Antennas”

By

Chope Chair Professor: Dr. John L. Volakis
Director, Electro Science Laboratory at Ohio State University (OSU)

On Wednesday October 22, 2014 ASNE-SI, Naval Surface Warfare Center, Crane Division (NSWC Crane) hosted Chope Chair Professor and Director of the Electro Science Labs, Department of Electrical and Computer Engineering, at the Ohio State University (OSU) Dr. John L. Volakis. He was accompanied by the Assistant Director Dr. Greg Creech. Mr. Bryan Mitsdarffer, the DoD Microwave technologies Exec Agent at NSWC, Crane provided the introduction. Dr. Volakis has numerous publications including 8 widely used books. He has mentored nearly 80 doctoral students/post-docs, with 26 of them received awards at international conferences. His credentials and services to professional societies and awards are too numerous to list. The ASNE-SI Chair stated that “This was an extremely important lecture”. The Crane Chief Engineer stated it was a “very good brief on technologies we are interested in”. ASNE-SI is planning to invite Dr. Volakis again sometime in the future. The following pages of the newsletter includes slides from the presentation with the permission of the author.

What is Chope Chair: The Roy and Lois Chope Chair in Engineering is funded by a gift from the estate of Lois Chope in memory of her husband, H. Roy Chope, a 1948 graduate of Ohio State in electrical engineering. The gift will allow the dean of the College of Engineering to name a distinguished faculty member as chair holder. Preference will be given to electrical engineering faculty due to Roy Chope's lifelong interest and professional accomplishments in that field.
From left: Dr. Greg Creech, Dr. John L. Volakis, Mr. Maroof Qurashi and Mr. Bryan Mitsdarffer
ElectroScience is one of the oldest, largest and most historic EM/RF laboratories in the country. It is credited for numerous innovations.
Key areas of research

RF Integrated Circuits
Millimeter Wave and TeraHertz
Micro & Nano Fabrication
Cognitive Sensing
Antennas and Arrays
RF Measurements
Remote Sensing
Textile Electronics
Multiphysics Computations/Design
Integrated Optics/Photonics
Medical Sensing

Example Facilities: Anechoic Chamber, RFICs, Photonics & MicroFabrication

- ElectroScience offers an unmatched set of facilities for RF/RFIC testing, evaluation and fabrication
  - Largest University Anechoic Chamber ($5M)
    (300GHz to 110GHz with recent upgrades);
  - Clean Room for LTCC fabrication/3D RFIC component fabrication ($1M);
  - Wireless and RFIC laboratories for commercial cell phone component evaluations---upgraded to 115GHz ($1.5M);
- RF-Optics Laboratory
- Remote Sensing Laboratory
- Cognitive Sensing Laboratory
- RFID system testing/evaluation
  (container tracking; inventory, product information)
- HELIOS Millimeter wave
  & TeraHerz Lab
- ~8000ft² of new Lab space
- ~$4M in new equipment
ElectroScience Profile: History

Established in 1942 with a vision to become a multidisciplinary institute (as stated in Sinclair’s historical article).

How it all started: Prof. William Everitt obtained contract to measure antenna patterns on aircraft and tanks. Everitt was subsequently recruited to the U. of Illinois (UIUC) and his student George Sinclair will become the PI of the project, and became the first director of the Antenna Lab (former name of the ElectroScience Lab).

Rumsey (inventor of frequency independent antennas) will become director in 1948. The current model of faculty advising multiple grad students to carry out their research was promoted by Rumsey. Rumsey will eventually be recruited to UIUC and then move to UCSD. Tice (1954) and later Levis became Directors.

1941-1967 Timeline

- Invention of new model measurement techniques for antennas (Bill Everitt)
- ElectroScience (then Antenna Lab) grows to 50 people by 1946 (under George Sinclair)
- Lasers and non-linear optics became an important research; “Lasers and Applications” symposium in 1962
- Time division multiple access for satellite communication demonstrated
- Concepts of wideband and frequency independent antennas introduced
- Radar Cross Section (RCS/Stealth) definition and related studies introduced, including radome research

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<td>Antenna Laboratory is founded by W. L. Everitt. Later, his graduate student, George Sinclair, becomes the lab supervisor, and the lab grows to 50 employees.</td>
<td>Professor Victor Rumsey becomes laboratory supervisor. Graduate students from this period become future leaders of ESL. First commercial spin-off company formed under supervisor Robert Jacques. Experimental program is moved to Tuttle Park Road.</td>
<td>Experimental facilities moved to present location on Kinnear Road.</td>
<td>Antenna Laboratory renamed ElectroScience Laboratory to reflect broad research programs. Addition to laboratory completed, doubling square footage.</td>
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ESL Count: 143 people: 27 faculty & researchers, 10 admin staff-
FY13 ESL contributes 10% to CoE & 46% to ECE.
FY12 ESL contributed 11% to CoE & 51.4% to ECE
FY11 ESL contributed 12.3% to CoE & 57% to ECE
Compared to FY03: ESL was 8.3% of CoE and 38% of ECE.

OSU-ESL Graduates - Recent Years

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<thead>
<tr>
<th>Year</th>
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<tr>
<td>2000</td>
<td>9</td>
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Overview of ESL Facilities and Research Activities

State of the Art Facilities

The Ohio State University
College of Engineering
ElectroScience Laboratories
Department of ECE
Micro & Nano Fabrication Facilities

The Ohio State University
College of Engineering

Cognitive Sensing

Sensing for Guidance and Control

ElectroScience Laboratories
Department of ECE
Antennas and Arrays

The Ohio State University
ElectroScience Laboratories
Department of ECE

Realizing the Potential of Multifunction RF Systems (ONR)

**STATUS QUO**

- Multiple disjoint RF systems used in DOD platforms
  - Not only cost, SWaP, complexity problems, but failure to realize game changing power of true coupled sensing, EW, and comm system

**UWB Arrays**

- Enable adaptive operation over bandwidths >30:1
- Multichannel Digital Tx/Rx: Enable "software defined" adaptive operation for all applications
- Cognition and Adaptation

**GOALS**

- Combine ultra-wideband antenna, RF transceiver, and wideband digital (Giga-sample per second or more) backend into a single integrated multifunction RF system
- Implement 1.2-37 GHz prototype and demonstrate operation in relevant environment
- Demonstrate adaptivity and multi-functionality to facilitate mission and community buy-in

**QUANTITATIVE IMPACT**

- Deployment demonstrations
- Final multi-function system deployment to demonstrate adaptive operation
- Validated demonstration of multifunction RF system capabilities including comm, EW, and radar
- System implementation for continued use
- Clear demonstration of enhanced performance by integrating functions (e.g., simultaneous comm, EW, etc.)

**IN-Phase Goal**

- Single and miniature RF System (with over 10:1 Bandwidth) replaces multiple and single mission systems, reduces costs, and expands capabilities
Body Area Networks / Textile RF Electronics

The Ohio State University
College of Engineering
ElectroScience Laboratories
Department of ECE

Multiphysics Computations (Design & Development)

Computational Decomposition of 8 Substrate Layers
Integrated Optics

Electro-optical switches, modulators & sensors

cantilever coupler
released waveguides
Pt contacts
cantilever couplers

silicon waveguide

1.5 μm
SiO₂ struts

100 μm

Medical Sensing
Ohio State
ElectroScience Laboratory

The Ohio State ElectroScience Laboratory is a distinctive university center where world-class faculty and research scientists lead projects exploring electromagnetic, optics and radio frequency technologies. Researchers from this multidisciplinary facility collaborate with experts in other labs across our campus and around the world. ElectroScience features one of the largest RF research laboratories in the world.

ESL researchers pursue a variety of emerging technologies, including:
- Medical sensing and neurosensing
- Cognitive sensing
- Millimeter waves, terahertz and photonics
- Multi-physics engineering
- Micro-devices and reconfigurable systems
- Navigation and guidance

The ElectroScience Laboratory features a newly constructed 40,000-square-foot wireless communication and radio frequency research lab. This facility includes an indoor anechoic chamber radio frequency measurement facility, a complete complement of electromagnetics test facilities, and 4,000 square feet of rental space available to companies that focus in areas relevant to the ESL. The original 20,000-square-foot ESL lab continues to provide space for cutting-edge research and education.

Researchers, faculty and students are conducting research in all aspects of electromagnetic, optics and RF technologies at the ESL, including advancements in:
- Wireless communication
- Optics and photonics
- Remote sensing and radar systems
- Electromagnetic scattering
- Sensor fusion and RFIDs
- RF integrated circuits
- Terahertz imaging and millimeter waves communication
- Satellite and ultra-wide-bandwidth communication

ElectroScience Laboratory
1320 Kinnear Road
Columbus, OH 43212

Director: John Volakis
Email: volakis.1@osu.edu
Phone: 614-292-6191
To learn more, visit electroscience.osu.edu
NSWC, Crane News

On Sept. 23, 2014 CAPT JT Elder, Commanding Officer of Naval Surface Warfare Center, Crane Division delivered a speech at the American Society for Naval Engineers, Southern Indiana Chapter (ASNE-SI) Distinguished Lecture Series at Club Lakeview. CAPT Elder shared the story of his upbringing in St. Louis, his career, his journey to Crane and his vision for NSWC Crane.

Naval Surface Warfare Center, Crane Division (NSWC Crane) hosted the inaugural Invention and Technology Showcase on Wednesday, September, 24 2014 at West-Gate Academy and Training Center. NSWC Crane displayed over 100 patents developed by their employees and support contractors over the past three years. Over 50 inventors were recognized for their contribution to NSWC Crane's Intellectual Property (IP) portfolio which currently consists of 414 pieces of IP. State of Indiana Lt. Gov. Sue Ellspermann was the featured keynote speaker addressing Crane's inventors, employees and several Indiana business partners.

On Tuesday October 7 Naval Surface Warfare Center, Crane Division (NSWC Crane) hosted Dr. James (Jim) Conwell, President of Rose-Hulman Institute of Technology. Dr. Conwell was the featured speaker at the American Society of Naval Engineers, Southern Indiana Section (ASNE-SI) Distinguished Lecture Series. He also toured NSWC Crane facilities.

On Thursday, October 9 the Naval Surface Warfare Center, Crane Division (NSWC Crane) Science Technology Engineering and Mathematics (STEM) program held an open house at the Westgate Academy Conferencing & Training Center for the new CraneTech program to showcase their new room and student project ideas. CraneTech is an afterschool program for students in grades 7-10 that meet with volunteer NSWC Crane Scientists and Engineers two days a week. CraneTech is modeled similarly to Maker Space education and emphasizes skills such as drafting and electronics, with topics ranging from programming to crocheting.

On October 21-23 Naval Surface Warfare Center, Crane Division (NSWC Crane) held the First Surface Navy Electro-Optics Industry Days at the Westgate Academy Conferencing & Training Center. The event was focused on Electro-Optic (EO) and Infrared (IR) sensors aboard U.S. Navy surface ships. NSWC Crane Commanding Officer CAPT JT Elder welcomed the visitors to NSWC Crane and Technical Director Dr. Adam Razavian provided the Keynote Introduction. The event was designed to foster information exchange between government, industry, and academia on desired future naval capabilities, as well as to gather market research on relevant products, technologies, and techniques to improve the effectiveness of current shipboard EO/IR sensors.

Source: NSWC Crane, Public Affairs Office Bulletin
The Members on a new robotics team are gearing up for next year’s competition. The team is called Aluminosity and they are setting out to not only build robots, but change a culture by promoting STEM education in our community. Aluminosity operates out of the Lawrence County 4-H under the Limestone Robotics Club. The five or so robotics teams in the club compete in FIRST (For Inspiration and Recognition of Science and Technology).

FIRST was founded by inventor, Dean Kamen. Dean’s vision is, "To transform our culture by creating a world where science and technology are celebrated and where young people dream of becoming science and technology leaders." FIRST is accomplishing this by bringing together students, mentors and businesses to build competitive robots in a fun and exciting atmosphere that allows the students to learn and grow.

Within the FIRST program there are four levels of competition ranging from ages 6 to 18. Aluminosity will be competing in the highest level of competition, the FIRST Robotics Competition (FRC). FRC is geared for students ages 14 to 18. The finished robot they will construct will weigh approximately 150 pounds and be up to five feet tall.

So what is the robot supposed to do? Well, that’s part of the challenge. The team will learn what their robot has to do on January 3rd. At that time over 2000 FRC teams from all over the world will be watching the kick off presentation. A new game will be announced and teams will start the build season. The challenge comes from the fact that every team has to be finished building their robot in a mere six weeks. In that time teams will have to understand the rules, brainstorm, prototype, design, machine parts, assemble, program and test their robots. Co-founder of FIRST and MIT professor, Woodie Flowers, describes it as a typical engineering problem in which the teams will tackle, “A problem too big, a time too short, a budget too small, and a team too large.”
According to the team’s project engineer, Josh Drake, the first question people typically ask when talking about FRC is, “Oh, like Battle Bots?” FRC is a competition between teams that promotes “Gracious Professionalism.” That means teams want to win, but will also help their teammates and opponents at the same time. In a qualification round, a team that is against you in one round may very well be on your alliance the next round. So no, it’s not Battle Bots, its high school students accepting a challenge and participating in the hardest fun they’ll ever have.

Justin McMahan, a freshman on the team, was involved with Bloomington South’s team last year. “At first I was like, yeah this looks like fun, but after helping build the robot and going to the competitions, I can’t wait for next season to start.”

Not only does the robotics program promote science, technology, engineering and math, or STEM, it sets the students up for success. The high school participants in the FIRST program are eligible to apply for over 20 million in college scholarships. Along with that, students learn from professional engineers, get to build and compete with a robot, understand strategy and team work and learn to use software and hardware. FIRST and the FRC programs are designed to promote STEM education by introducing students to a real world hands on problem. The completed robot will tour the county as the team gets the word out about STEM and FIRST.

Compared to a national average of 30%, only 10.7% of Lawrence County residence have gotten a bachelors degree. With more and more jobs requiring post-secondary education, it is essential to have programs like this in the community that keep students wanting to learn and further their education.

Jacy Smith, a junior on the team is looking to go to Purdue to study to become a pharmacist. “I am so excited to see what is in store for Aluminosity. This is going to be such a fun season with a lot of great people involved! I can’t wait!”

Lesley Lodmell, is the Extension Educator for the Lawrence County 4-H. She is excited about the new Limestone Robotics program and the opportunities it provides for the 4-H youth. Josh Drake is an engineer at GM and has been involved with FRC for eight years. Along with his wife, Tonya, they are passionate about the program and have seen firsthand the good it can do for students. Josh says, “This program reaches out to the high school students and gives them another option for an extra-curricular activity that helps them throughout life. It allows them to exercise the muscle between their ears.”

The team is looking for students to join, adults to mentor, and businesses to help support Aluminosity. More information can be found at www.usfirst.org or on Aluminosity’s Facebook page. Also you can contact Leslie at lodmell@purdue.edu or Josh at joshuadrake73@gmail.com to find out more about the team.
How Low Would You Go to Get Ahead

By

Robert D. Behn

It was a couple of years ago (OK, maybe a couple of decades ago), when my wife and I took our son, then a high school student, on the pre-college tour. We visited a variety of campuses from coast to coast (and in Canada, too). At the beginning of the fall semester, we ended up in Baltimore at Johns Hopkins University.

The freshmen had just arrived, and the first edition of the student newspaper was displayed on its racks. I picked up a copy. For the freshmen, the paper had a very practical section listing all of the unofficial Johns Hopkins slang words they needed to know to sound cool and—more importantly—to avoid appearing clueless.

My attention was quickly caught by one of these words: “throating,” as in the verb “to throat.” Throating is primarily an occupation of pre-med students, though any student could engage in this behavior. To “throat” is to directly hinder or hurt other students’ performance. Any student can throat an individual student or an entire class. For example, a “throat” (a student who engages in throating) might sabotage another student’s lab experiment or destroy yet another’s notes.

Or the throat could do this to everyone by stealing key books from the library or even by cutting an essential article out of a journal or an important chapter from a book.

Why would pre-med students at Johns Hopkins (or any college) engage in such cutthroat behavior? Because they are competing directly with each classmate for admission to the most prestigious medical schools. Each medical school will admit only a very few of Johns Hopkins’ pre-med students. Thus the competition is zero-sum: If you win, I must lose. At Johns Hopkins, I am told, the practice of throating has disappeared. Certainly, I hope so.

Nevertheless, there do exist competitive circumstances in which some people may conclude (regardless
of what their mothers taught them or what approach to ethics they studied) that sabotage is (if not ethically acceptable) obviously expedient.

For example: When the number of undergraduates who will be accepted by a medical school is strictly limited to a small number of applicants. Or when the number of senior managers who can be promoted to vice president is strictly limited to a small number. Or when everyone knows that the number of cookies, or gold stars, or ribbons, or goodies (or other forms of recognition) are, again, strictly limited to a small number.

This is not, however, always the case. In other competitive situations, a would-be saboteur will gain absolutely nothing. Suppose every pre-med student at Johns Hopkins who was qualified—who, for example, passed some kind of medical-school admission test—was admitted to a high-quality medical school. If this was the case, no student would gain any advantage by throating any other student.

In fact, in this situation, all students could benefit from helping their colleagues. If helping colleagues fostered a norm of reciprocal cooperation, every student at Johns Hopkins would benefit. Such cooperation would improve everyone’s ability to pass the medical-school admissions test—and thus get into a high-quality medical school.

Inherently, however, the number of places in the entering classes of top-ranking medical schools is limited. Thus, pre-med students will always be competing with other students—particularly with students from their own college—for one of these precious spots.

This, however, is not always the case. Or, at least, it doesn’t have to be. There are times when the number of rewards—be they cookies or gold stars—is not inherently limited. And yet, for some reason, those who create the reward structure think it is—or, at least, that it should be—very limited.

This is competition, and our mental model for competition is athletics. At the end of the season, there is just one winner. Everyone else is a loser. Is this mental model always appropriate? Do we want only one school to be a winner—while all of the others are declared to be losers? Do we want only one child-welfare manager to be a winner—while all the other managers are labeled as losers?

If we want all schools and all managers to be successful, why do we create a structure of rewards that actually encourages those who have a chance to win to engage in throating, or at least to avoid helping their colleagues? And why do we create a structure of rewards that encourages those who know they have no chance of winning to stop trying? Why do only the top 20 percent of schools get to display a winner’s flag? Why do only the top 20 percent of managers get the (miniscule) bonus?

Isn’t it possible to design a reward structure that discourages throating? Isn’t it possible to design a reward structure that positively encourages people to cooperate?

Source: Excellence in Gov.
The Trouble with Defense Acquisition May Be the Workforce
By Katherine McIntire Peters


If you asked 31 knowledgeable people how fix the way the Pentagon buys weapons you’d expect to hear a multitude of answers aimed at addressing the cost overruns, program delays and failures to deliver promised capabilities that have come to define military procurement. What you might not expect is widespread agreement -- 70 percent -- that one significant problem is the Defense Department’s acquisition workforce itself.

Without better training and recruiting of the men and women who manage large weapons contracts, and more effective incentives to reward smart decision-making, the department may be doomed to continue spending too much money for too little return. That was the conclusion of the vast majority of experts -- industry titans, engineers, weapons buyers and military leaders -- consulted by the Senate Homeland Security and Governmental Affairs Committee’s permanent subcommittee on investigations.

On Oct. 2, the panel’s bipartisan staff released a compendium of the experts’ views in essay form in a 214-page report, “Defense Acquisition Reform: Where Do We Go from Here.” Investigations Subcommittee Chairman Carl Levin, D-Mich., and Ranking Member John McCain, R-Ariz., said the findings would inform the Senate’s ongoing efforts to reform the Defense acquisition process.
The subcommittee found four themes emerged from the experts’ views, two of which related to the acquisition workforce: the need to create better incentives for acquisition personnel and the need to improve recruiting and training.

“Several of the experts consulted report that many program managers in major defense acquisition programs do not remain in their positions long enough to manage the program to its successful deployment or even to a major milestone. As a result, DOD may be unable to hold program managers accountable for those failures,” the report found. Christine Fox, the Pentagon’s former director of cost assessment and program evaluation, noted “there are no career incentives for acquisition managers to say that their program is not progressing well, it is not worth the money, and should be slowed or canceled.”

Ronald Fox, former assistant secretary of the Army responsible for procurement and contracting, put it more bluntly: “As long as defense acquisition is largely in the hands of managers for whom it is merely one step in a career path directed elsewhere, we will continue to see the same quality, cost and scheduling problems.”

In an effort to address the problem, the Defense Department in 2007 required top program managers to sign tenure agreements stipulating they would remain in their position through major milestones within four years. But many of the experts consulted by the subcommittee, including Frank Anderson, former president of the Defense Acquisition University, said he didn't believe the requirement was enforced. Other experts felt the agreements should be required of other acquisition personnel beyond program managers to improve accountability.

A number of experts said they thought Defense should “create a clear career path for acquisition professionals similar to the military promotion system and designate acquisition billets to be on the same level as operational billets,” the report noted.

Irv Blickstein, a senior engineer at RAND Corporation, noted that the 1986 Goldwater-Nichols Department of Defense Reorganization Act, which embodied the most sweeping military reforms in the department’s history, had the unintended consequence of driving a wedge between the operational side of the military and the civilian-centric acquisition side.

“That wall continues to confound sound decision-making to this day,” Blickstein said.

Source: Gov. Exec
The 8 Worst Behavioral Archetypes on Executive Teams

By John W. Myrna

A negative influence on your executive team can be disastrous—especially when it’s time to hold strategic planning meetings. Learn how to spot the eight worst behavioral archetypes who appear on executive teams—the Absentee, the Chief Executive Omniscience, the Consultant, the Frog, the Politician, the Provocateur, the Sectarian and the Theorist—how to keep them from sinking your strategy.

At the first two-day strategic planning meeting I facilitated for Bill’s federal agency, all eight of these negative behavioral archetypes showed up. Let’s look more closely at each one.

**The Absentee** is present physically but “somewhere else” mentally, whether reading emails or half-listening to the discussions. Manuel seemed to be mentally focused on things happening outside the meeting, staring into space and asking us to repeat the question whenever we asked his opinion.

He was an excellent tactical thinker, but Manuel was not invited to the next strategic planning meeting. You need strategic thinkers for these meetings.

**The CEO** is the leader acting in his “Chief Executive Omniscience” mode. Many agency heads can anticipate where a discussion is heading and tend to supply a conclusion to save everyone the time of figuring it out themselves. Bill acted just this way, which meant that team members saw decisions as Bill's rather than their own and expected him to handle implementation problems.

We made sure the CEO spoke last in discussions, enabling Bill to judge how well people had truly understood his viewpoints. When Bill did speak, everyone listened intently, since they understood he was offering new information. The CEO’s active participation in a planning meeting is essential. Active listening helps the CEO understand what team members want to accomplish and why, and makes him more supportive of the resulting strategic plan.

**The Consultant** never commits to a team-developed decision. Every time it looked like a decision was nearly made, Ed would say, “Let me play devil’s advocate and outline how we could fail.” This would put him in a “winning” position no matter the ultimate outcome.
Short-circuit this lack of accountability by emphasizing that you can never have 100 percent information or certainty when you make a strategic decision, but it’s necessary to make a decision and commit to following through. Ed was forced to go on record as supporting the decision. A strategic plan is not a plan until the executive team leaves the meeting with consensus and commitment.

The Frog is so new to an organization that he and the team assume that he has nothing to contribute. However, new employees are a valuable asset. I call them “fresh frogs,” based on the theory that a frog dropped into boiling water will jump out, but a frog put into lukewarm water that is slowly heated up will become a cooked frog.

When you interact with fresh frogs, resist the urge to quickly explain things. Instead, ask them, “Why do you ask that question, what do you see that we don’t?”

The Politician tells everyone a different story behind closed doors, and avoids any meetings where those people would hear the same story from him. Jack attempted to skip the planning meeting, but Bill required him to attend, as strategy took priority.

Prod the Politician to respond with substance. If he couldn’t tell everyone a different story, Jack’s backup strategy was to issue meaningless platitudes. He couldn’t sustain his political behavior when he was constantly forced to go on record in front of everyone.

The Provocateur never considers a discussion concluded or a decision final, living to perpetuate a frenzy of uncertainty and inaction. On the meeting’s second day, the agency executive team began to write down the agreed-upon strategy. Julian tried to reopen each decision: “The strategy has us expanding too fast. The budget is too low.”

The chemistry of strategy formula is what we want the future to look like, why we want it, and how we change the status quo to achieve it. You can’t begin moving in a direction until you decide where you want to end up, and you will make adjustments along the way. Asking and answering how is what action planning is all about. This is the next step after providing answers to what and why. Eventually, Julian channeled his energy into making sure conflicting viewpoints were aired while accepting the team’s ultimate decisions.

The Sectarian sees her role as only representing the thoughts of her function, department and/or people. Caroline, the agency’s human resources director, saw her role solely as representing HR. Whenever the discussion turned to other areas she tuned out, not understanding that her experience and insights were valuable and required to shape the agency’s optimal strategy.

Require the Sectarian to comment on each issue discussed, which draws her into the overall strategy development. Caroline triggered one of the meeting’s “aha” moments when she offered her perspective on an interagency protocol issue.

The Theorist won’t be around to live with the consequences of the team’s strategic decisions. Although Jill had recently tendered her resignation, planning to retire next year, she was invited to the planning
meeting for her expertise. She kept pushing for radical operating policy changes that could dramatically affect the agency’s funding, but would have no impact on her once she retired.

Bill excused Jill from attending the second day, since she wouldn’t be accountable for implementation or suffer any consequences from a poor strategy. Don’t include lame ducks on your strategic planning team.

Source: Excellence in Gov.
While Woody Allen offered, “80 percent of success is just showing up,” I might politely suggest the phrase is missing a key ingredient: attitude.

There’s a profound difference between showing up and showing up with the right attitude.

Our attitude is visible on our faces, discernible in our words and palpable in our body language. If you’re having a bad attitude day, month or lifetime, you can be certain that everybody you come in contact with knows it and feels it. When you walk into a room with a lousy attitude, it’s like a storm front approaching. Everyone sees it and wonders how bad it’s going to get.

The impact of a lousy attitude extends quietly outward, systematically poisoning the working environment.

Think of managers you’ve worked for that projected a “pissed-off, mad at being born, and madder at having to deal with you and your colleagues” demeanor. What did that feel like? How did people react to this person? How effective was this leader? (And while you would like to believe that these characters don’t end up in leadership roles, inexplicably, they do.)

Alternatively, think of managers and leaders you’ve encountered that projected a pragmatically positive perspective, even in the darkest of times and most troubled of situations. Their impact creates a ripple effect that promotes progress, problem solving and innovation. Positive leaders beget a positive environment.

Of course, even genuinely positive people have bad moments. I found myself recently in a setting where I couldn’t find a single positive reason why I was there, and it took every ounce of energy to attempt to remain engaged and interested. I suspect I failed. For others, the speeding ticket on the way to work, troubles on the homefront, the shadow of a family member’s illness or any one of a number of life’s issues can put pressure on the best of attitudes.
Regardless of circumstances, when you hit the office, it’s best to mentally shift gears and focus on your bigger purpose.

Daily Ritual

I love the daily ritual for preparing her attitude, shared by one manager in a workshop: “Every morning, after arriving at work, I sit in my car for a few minutes and think about how I will measure success today. I focus on the impact that I want to have on people around me, and I remind myself that I’m in my role as a leader at the discretion of those I serve. This act of focusing helps me push out all of life’s and the morning’s stress points.”

Priceless advice for success. I’ve suggested this to a great number of coaching clients and they’ve applied it to success. So, if you walk past a colleague sitting in her car in the parking lot, lost in thought, know that she’s simply adjusting her attitude for success in the upcoming workday. Perhaps you should give it a try, you and your colleagues might be pleased with the results. In case you are in need of a little attitude adjustment, consider the following ideas:

1. **Vow to measure success by progress made, not distance left to travel.** Instead of focusing on the magnitude of workplace problems, consider how important it is for you and your team members to take positive steps toward resolving them. Turn your attention to identifying obstacles that you can clear away, and plan on valuing your daily success by how far you’ve helped team members travel.

2. **Shift your view on the workplace as battleground.** Nothing poisons an attitude more than viewing the workplace as a battleground filled with adversaries or enemies. Every meeting isn’t a fight, it’s an opportunity to exchange ideas and develop approaches. The person arguing with you likely has an underlying interest that he/she has not disclosed and yet you seem to be fighting over positions. Strive to understand by asking questions and then strive for agreement on positions. If you’ve burned bridges across the workplace, resolve to invest time every day in repairing at least one relationship. If necessary, be the bigger person and apologize. And then move forward.

3. **Rethink and reset your daily priorities.** What are the most important items you must make progress on today? Chances are they don’t involve clearing your e-mail inbox, rearranging your office or sitting in seven status update meetings. Too many managers navigate their days without making serious headway on the issues that will move the performance indicator for the firm and the team. Mentally reorder your priority list and put the people and problem issues you’ve been avoiding at the top of the list.

4. **Plan to quality-check yourself in real time.** Ask yourself after every encounter: “Did I live up to my commitment to help?” If the answer is, no, retrace your steps and fix the problem immediately.

5. **Remind yourself: “Be kind, for everyone you meet is fighting a great battle.”** Whether it’s the speeding ticket, family challenges, self-esteem issues or career frustration, every person you encounter is waging some internal battle. Respect the person and impact them positively and you will be easing that burden just a bit. Empathy is a virtue in leaders.

You choose your attitude every day and for every encounter. Spend a few minutes today reminding
yourself of the responsibility you have to serve and help others, and prepare your positive attitude before you walk in the door. And when you end your day, remember to measure your successes instead of dwelling on your failures.

Source: Innovation-People-Performance.
Southern Indiana Section Officers and Committee Chairs for 2012-2014

Section Website: https://sharepoint.cran.nmci.navy.mil/org/nongov/asne/

Officers:
- Chair - Maroof Qurashi
- Vice Chair - Nova Carden
- Secretary - Tiffany Adams
- Treasurer - Dr. Courtney Boykin

Committee Co-Chairs:
- Programs: Beth Martin & Vernell Thomas
- Membership: Daniel Horstman & Nova Carden
- Publicity: Rachael Wiseman
- Scholarship: Lynn Connors-Smith & Tom Garner
- 2013 Symposium: Dr. Brian Olson & Raymon Smith
- Webmaster: Cindy Shirley
- Science Fair: Melissa Dyal
- Awards: Amy Fellers
- Regional Council Member: Brad Secrest

Why ASNE?

Finally, and perhaps most important, often we get asked the question, "What's in it for me?" when we ask employees to join ASNE. The historical answer has revolved around networking opportunities and the opportunity for technical interchange. While those are certainly true and good reasons for joining, they are not perhaps the most important. One of our members put it very succinctly recently when he said, "It's not about you, it's about Crane". What that means is that we as ASNE can do things for Crane that we as Crane cannot. Vibrant and active professional societies are important to the future of Crane. We are able to leverage our resources to get Crane visibility and recognition. Think of the symposium, the luncheons, the distinguished lecturers; we target individuals for those events who we want to visit Crane. We are continually working with Corporate Communications, Command, and the Departments to target individuals for symposium and luncheon speakers; our goal is to get those individuals who can influence our national advocacy in the Focus Areas here for a visit. We continually work to enhance the reputation of Crane in our outreach efforts to local communities. The next time you're recruiting a new member and they ask why then should join, explain to them the importance of supporting the work we do.

The Purpose of ASNE is to:
- advance the knowledge and practice of naval engineering in public and private applications and operations,
- enhance the professionalism and well-being of members, and
- promote naval engineering as a career field.

NAVAL ENGINEERING includes all arts and sciences as applied in the research, development, design, construction, operation, maintenance and logistic support of surface and subsurface ships and marine craft, naval maritime auxiliaries, ship related aviation and space systems, combat systems, command control, electronics and ordnance systems, ocean structures and fixed and mobile shore facilities which are used by the naval and other military forces and civilian maritime organizations for the defense and well-being of the Nation.

You need not be an engineer to join!