

## Pentagon Prepares to Unveil Better Buying Power 3.0

*DoD News, Defense Media Activity (March 19, 2015)*

*Nick Simeone*

WASHINGTON—Pentagon officials are preparing to unveil the latest version of Better Buying Power, a multibillion-dollar equipment and service-buying program aimed at improving the acquisition process while maintaining the nation's significant technological edge on the battlefield, the department's chief acquisition officer said here yesterday.

Frank Kendall, undersecretary of defense for acquisition, technology and logistics, told a defense conference that Better Buying Power 3.0 will be largely about innovation, excellence, and maintaining technological superiority—"the things we can do that will make a substantial difference and give us a significant edge for a decade or more on future battlefields."

### **More Capability, More Value**

The Defense Department introduced Better Buying Power in 2010 to extract more capability for the war-

fighter and more value for the taxpayer. "This is largely about efficiency and productivity," Kendall said.

The new version, which will roll out in the weeks ahead, will bring the intelligence community further into the acquisition process, Kendall said. It also will be more responsive and agile to threats while taking full advantage of quickly advancing technologies, including countering what he said is a growing threat of anti-satellite technology posed by Russia and China.

"We are starting to do something about this, but we really haven't made a great deal of progress yet," he said. "We rely on a small number of very capable and very expensive satellites that are increasingly at risk, and that trend is going to continue to get worse."

### **Maintaining the Technological Edge**

*SECRETARY OF THE AIR FORCE PUBLIC AFFAIRS (FEB. 4, 2015)*

*Ed Gulick*

WASHINGTON—Air Force Vice Chief of Staff Gen. Larry O. Spencer urged members of the Air Force Scientific Advisory Board (SAB) to help the Service maintain its technological edge at their winter board meeting Jan. 27.

"We need your help," Spencer said. "We need the expertise you provide because it is really critical. Our budgets are shrinking, our capacity is shrinking, and there's no way to accomplish [our mission] with the budgets we have without technology and innovation."

Spencer cited current modernization efforts, including the F-35A Lightning II, KC-46A Pegasus, long range strike bomber, and the intercontinental ballistic missile fleet upgrade, as current costly programs the Service must pay for. He then urged the group to look at how their studies can help the Service save money while keeping its technological edge.

"We need your help to focus on what we can do versus what we can't," Spencer said. He then highlighted some technologies, such as measuring time in femtoseconds, hypersonics, and quantum entanglement as areas of advancements that need to be studied to determine how they can be used to advance the Service's mission.

"[The Air Force] cannot survive without you," Spencer said. "The technology has leaped so fast, it's hard for us to keep up with it. We want our adversaries to say, 'Where did they get that and what are we going to do about it.'"

The SAB was tasked by Secretary of the Air Force Deborah Lee James and Chief of Staff of the Air Force Gen. Mark A. Welsh III to conduct studies on the cyber vulnerabilities of embedded systems in air and space systems, enhanced utility of unmanned air vehicles in contested and denied environments, and utility of quantum systems for the Air Force.

The SAB is made up of 50 experts among the nation's top civilian scientists and engineers who advise on matters of science and technology relating to the Air Force mission.

The current SAB studies will be completed by the end of June 2015, and then be briefed to the secretary of the Air Force, chief of staff of the Air Force and other Air Force senior leadership. The findings and recommendations of the SAB will then be used to shape and guide Air Force policy.

More information on the SAB and the 2015 studies, including the terms of reference, can be found at <http://www.sab.af.mil/library/index.asp>.

### **Approved Innovation Submissions Projected to Save \$35 Million**

*AIR FORCE PERSONNEL CENTER PUBLIC AFFAIRS (FEB. 9, 2015)*

*Janis El Shabazz*

JOINT BASE SAN ANTONIO-RANDOLPH, Texas—Approved ideas submitted to the Airmen Powered by Innovation (API) program since it launched in April 2014 are projected to save the Air Force at least \$35 million, Air Force Personnel Center officials said.

The API program was created to help gather cost-saving ideas and is a subset initiative to the secretary of the Air Force and the vice chief of staff's Every Dollar Counts campaign. It also combines and streamlines the processes of four legacy improvement programs: Innovative Development through Employee Awareness, Productivity Enhancing Capital Investment, Best Practices, and Air Force Smart Operations for the 21st Century.

"We are averaging more than 100 submissions per month," said Roger Flynt, the AFPC API program manager. "We have already received nearly 3,000 submissions. Suggestions approved to date vary in scope and complexity, and highlight the ingenuity of our airmen."

Some API suggestions included the following:

1st Lt. Ariel Green, the 647th Force Support Squadron readiness and plans chief at Joint Base Pearl Harbor-Hickam, Hawaii, advocated use of steel-toe caps instead of steel-toed boots for fatality search and recovery teams and installation search and rescue teams, because her research indicated that steel-toe caps would offer the same protection as steel-toed boots at a significantly lower cost.

"Many improvements are born of necessity and that's exactly what happened with this idea," Green said. Her squad-

ron was preparing a search and recovery team for possible air show support when they discovered they could not meet the steel-toed boot uniform requirement due to time and funding constraints. Green's idea allowed the squadron to meet the requirement and reusing the covers is expected to save the Air Force \$118,000 per year. Green said she did not consider submitting her idea to API until her commander encouraged her to do so.

"It feels great to know that I made a difference in the squadron and potentially throughout the Air Force. I never imagined a small idea would make such a huge impact," she said.

Master Sgt. Shane Sneary, of the 57th Maintenance Squadron at Nellis Air Force Base, Nevada, said, "There are some folks out there that won't submit their idea because they think they won't be listened to or that their idea is too small and may not matter. I can tell them from personal experience this is not true."

Sneary submitted an idea suggesting improvements for F-16 Fighting Falcon oxygen system bottle testing. His suggestion is expected to save the Air Force \$58,000 per year.

"I submitted my idea to API so that if my new process was approved, it could possibly be implemented across the Air Force. I want to let my fellow airmen know that with API any idea—large or small—will be looked at and reviewed. It feels good to know that my idea will have a positive impact at the Air Force level," Sneary said.

Several recent API improvements will make it easier for airmen to submit their ideas. According to Flynt, the API program managers have developed an enhanced webpage hosted on the Air Force Portal. The site provides a wealth of information from the latest API approval statistics to tools that can help refine and enhance potential submissions, making it even easier to communicate ideas to improve how the Air Force does business.

Other API site enhancements allow airmen to search to see if an idea has already been submitted, see previously approved ideas, submit new ideas, check the status of their submissions and view an expanded database of ideas submitted under the previous Air Force IDEA program. Additionally, the page includes monthly reports on process submissions. Finally, airmen will find a link that enables them to communicate directly with the API team.

Have an idea for a game-changer? No matter how big or small, the API team is looking for good ideas because every airman needs to make every dollar count.

For more information about API and suggestions submitted to date, go to the Air Force Portal at <https://www.my.af.mil/faf/FAF/fafHome.jsp> and enter "API" in the search window. To submit an idea, go to <https://ipds.afpc.randolph.af.mil>.

### **Key Defense Suppliers Recognized for Stellar Delivery to Warfighters**

ARMY NEWS SERVICE, DEFENSE MEDIA ACTIVITY (FEB. 9, 2015)

David Vergun

WASHINGTON—Getting top-notch materiel to the warfighters in the most cost-effective and efficient manner is what the American public expects of defense contractors. Some do that very well and others not as well as they should, say top Defense Department officials who oversee delivery of such gear.

One of the things the military services are now doing to incentivize industry to improve is by recognizing their top performers. This is accomplished using the Superior Supplier Incentive Program (SSIP).

"We're doing this so people get some feedback from us about how their performance is, relative to their peers," said Frank Kendall, the under secretary of Defense for Acquisition, Technology and Logistics. "Then, they can take whatever action they think they need to do to improve their ratings."

SSIP uses performance data gathered through the Contractor Performance Assessment Reporting System (CPARS), to rate the 25 largest companies doing business with each of the three Services, based on contract obligations, and categorizes their business segments into one of three performance tiers, with "Tier I" being the best.

Within a large defense contractor, for instance, one business segment might develop electronic systems products, while another develops missiles and fire control products. Both of those business segments would be given a separate rating by each of the military departments that work with them.

Business segments "benefit because they receive recognition and it's also useful for companies that are not at the top end to understand where they are and to benchmark themselves against others," Kendall said.

While the SSIP will not be used to give anyone a direct competitive advantage or monetary incentives, there are some other potential incentives, he said. Tier I business units may be invited to meet with military department acquisition leaders to discuss ways which both parties can streamline administrative burdens. This may result in increased efficiency.

Military department acquisition chiefs said they expect SSIP to result in improved performance of their suppliers. "It's recognition for business units that have been doing a superb job," said Heidi Shyu, the assistant secretary of the Army for Acquisition, Logistics and Technology.

William A. LaPlante, the assistant secretary of the Air Force for Acquisition, highlighted another reason for publishing the list. "We do this in all parts of our society," LaPlante said. "We rank/order people, businesses and frankly, we owe it to the taxpayer and the companies to show where people are."

Being in Tier I is "a big deal. There's a huge amount of pride when you worked your butt off," Shyu said, speaking from decades of private-sector experience. "Industry presidents and business segment managers are very competitive. They know it reflects on their leadership and it shows the company and the shareholders that you're a great leader. You've executed well what you've promised your customer. Your customer is happy with your work. To the employees, it's a huge morale booster," Shyu said.

"People tend to underestimate that recognition," she said. "It means you contributed to the fight" in a meaningful way.

According to LaPlante, "It's a point of pride for companies to be called out for being at the top of their game."

David Weber, the chief of Air Force Industrial Liaison Office, said the 25 largest companies were selected for comparison using data from [USASpending.gov](http://USASpending.gov), which was used to identify the businesses with the highest contract obligations during the previous three fiscal years.

Within each company, business sectors were determined based on the best available information; e.g., publicly traded companies were broken out in the same way they are reported to the U.S. Securities and Exchange Commission, he said.

Planning for the Army and Air Force SSIP started last year, Weber said, after the Navy SSIP pilot was announced in June 2014. Now, the Army, Navy, and Air Force each do their own ratings based on the CPARS for each Service's awarded contracts, Weber said. For example, F-35 Lightning II contracts are managed by the Navy so CPAR scores associated with F-35 are included in the Navy's SSIP ratings.

Future SSIP scores are expected to be released annually in late spring or early summer, Weber said.

Curtis M. Smith, a senior procurement analyst with the assistant secretary of the Army for Acquisition, Logistics and Technology, said in the future there may be potential to expand the SSIP program to include categories such as small business, services, information technology, and others.

Smith said business units that earn a Tier III rating will also benefit from the candid assessment of their performance by their customers. "I think that will allow them to focus and engage more with the customer regarding their performance," Smith said. "It should serve as an incentive to improve."

Weber said he thinks it's possible large investors will look at SSIP ratings over time and as trends become evident, use them to gauge future competitiveness of companies, creating additional incentives for companies to improve.

Results for the Air Force and Army are given below. Navy results were compiled last year.

### Air Force—Tier 1 Business Segments

- BAE Systems Electronic Systems
- Boeing Commercial Aircraft
- General Dynamics Aerospace
- L-3 Communications Systems
- Lockheed Martin Aeronautics2
- Lockheed Martin Information Systems & Global Solutions
- Lockheed Martin Mission Systems & Training
- Lockheed Martin Space Systems
- Northrop Grumman Information Systems
- Rockwell Collins Commercial Systems
- Rolls Royce
- Sierra Nevada Corp
- United Technologies Pratt & Whitney

### Air Force—Tier 2 business segments:

- Boeing Military Aircraft
- Boeing Global Services & Support
- Boeing Network & Space Systems
- GE Aviation
- Honeywell International Aerospace
- L-3 Aerospace Systems
- L-3 National Security Solutions
- Lockheed Martin Missiles & Fire Control
- Northrop Grumman Aerospace Systems
- Northrop Grumman Electronic Systems
- Raytheon Integrated Defense Systems
- Raytheon Space and Airborne Systems
- Textron Aviation
- United Technologies UTC Aerospace Systems

### Air Force—Tier 3 Business Segments

- BAE Systems Intelligence & Security
- Exelis C4ISR Electronics and Systems
- Exelis Information & Technical Services
- General Atomics Technology Corp Aeronautical Systems
- General Dynamics Information Systems and Technology
- Jacobs Engineering Tybrin
- L-3 Electronic Systems
- Leidos Corp (formerly SAIC)
- Northrop Grumman Technical Services
- Raytheon Intelligence, Information and Services
- Raytheon Missile Systems
- Rockwell Collins Government Systems
- Textron Systems
- ULA/ULS
- United Technologies Sikorsky

### Army—Tier 1 Business Segments

- BAE Electronic
- BAE Global Combat Systems
- Boeing Global Services & Support
- Finmeccanica DRS Technologies
- General Electric Aviation
- Harris Corporation
- Lockheed Martin Info. Systems & Global Solutions
- Lockheed Martin Missiles & Fire Control
- Lockheed Martin Mission Systems & Training
- Science Application International Corporation—Research and Development
- SRC Tech Inc.

### Army—Tier 2 Business Segments

- Aerovironment Inc.
- Boeing Military Aircraft
- Booz Allen Hamilton Inc.
- Chemring Group PLC
- Cubic Inc.
- General Dynamics Info. Systems and Technology
- Northrop Grumman Aerospace Systems
- Northrop Grumman Electronic Systems
- Northrop Grumman Information Systems
- Raytheon Integrated Defense Systems
- Raytheon Space and Airborne Systems
- Science Application International Corporation—Government Services
- Thales-Raytheon Systems

### Army—Tier 3 Business Segments

- Alliant Techsystems Defense Group
- BAE Systems Land & Armaments
- Boeing Network & Space Systems
- CSC North American Public Sector

- General Atomics Technology—Aeronautical Systems
- General Dynamics Combat Systems
- Honeywell International Aerospace
- Oshkosh Corporation
- Raytheon Intelligence, Information and Services
- Raytheon Missile Systems
- Textron Bell Helicopter
- Textron Systems
- United Technologies—Sikorsky
- United Technologies Aerospace Systems

Better Buying Power is based on the principle that continuous improvement is the best approach to improving the performance of the defense acquisition enterprise.

### **AF Research Will Improve Camera for Targeting Munitions**

*AIR FORCE SMALL BUSINESS INNOVATION RESEARCH/SMALL BUSINESS TECHNOLOGY TRANSFER PROGRAM OFFICE (MARCH 7, 2015)*

*Timothy Anderl*

WRIGHT-PATTERSON AIR FORCE BASE, Ohio—In order for an imaging munition to find and make its mark, a variety of information is required, including high-resolution video imagery. Future Air Force munitions will likely feature wide field-of-view (WFOV) imaging seekers that provide Air Force warfighters several advantages over using traditional imaging seekers, including improved capability and lower cost.

The Air Force Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) program office recently provided nearly \$100,000 of additional funding for a SBIR effort that will give the warfighter a WFOV technology system.

The objective of this SBIR Phase II follow-on contract is to address critical sub-system technologies in the WFOV system and its biologically inspired Artificial Compound Eye (ACE) optical technology. Spectral Imaging Laboratory, located in Pasadena, California, will use the additional funding to address the data acquisition hardware and software requirements needed for image acquisition and processing, maturing the technology for the WFOV Seeker Program.

According to Dr. Nicholas Rummelt, an Air Force Research Laboratory researcher involved in the project, new ACE optical systems generate images from multiple sub-images that view different parts of the field-of-view, similar to the compound eye of an insect. Image processing is then required to seamlessly stitch together the sub-images and produce a smooth, easily read image. By implementing this processing

within the camera system's data acquisition hardware, the video output quality improves significantly.

"The WFOV seeker concept was originally inspired by insects such as bees, which use the optic flow field to control their flight and navigate. So one of the advantages of having a WFOV seeker is the potential for GPS-denied navigation," Rummelt said.

This program leverages more than \$100,000 in additional AFRL project funds. These funds will help ensure the Phase II project graduates into a Phase III program that successfully transitions the technologies into military or private sectors.

The Air Force SBIR and STTR programs are mission-oriented programs that integrate the needs and requirements of the Air Force through research and development topics that have military and commercial potential. The SBIR program was established by Congress in 1982 to fund research and development (R&D) through small businesses of 500 or fewer employees. The STTR program was established in 1992, to fund cooperative R&D projects with small businesses and nonprofit U.S. research institutions, such as universities.

Since 2006, the Commercialization Readiness Program has directly linked Air Force centers to AFRL technical points of contact to identify and evaluate Air Force needs and innovative solutions. Its primary objective is to accelerate the transition of SBIR/STTR-developed technologies into real-world military and commercial applications.

The Air Force SBIR and STTR programs provide more than \$300 million in funding for research and development activities by small businesses annually. With this budget, the Air Force funds research from the early stages of concept development until it transitions to military or commercial use.

### **New Horizons: Life Cycle Management Center Plan and Future Opportunities Revealed**

*66TH AIR BASE GROUP PUBLIC AFFAIRS (MARCH 6, 2015)*

*Justin Oakes*

NEWTON, Mass.—With more than 3,000 Air Force programs falling under the Life Cycle Management Center umbrella, Lt. Gen. John Thompson, the center's commander, revealed his plan for the way ahead to an audience that will potentially help the military reach its goals and deliver needed capabilities to the warfighter.

Focused on processes, people and products, the commander and myriad other speakers addressed more than 400 industry, academic and government attendees during

the annual Armed Forces Communications and Electronics Association's New Horizons symposium March 3. Centered on Hanscom Air Force Base-managed programs, the symposium is sponsored by the Lexington-Concord Chapter of the Armed Forces Communications and Electronics Association, and serves as the primary means of making industry aware of Hanscom weapon systems acquisition opportunities.

"This is our most important industry event this year," said Steve Wert, Air Force program executive officer for Battle Management. "Make no mistake, our mission starts with partnering with industry. That's how we get things done."

At the forefront of the event was a topic that applied to many—cyber security. "We've worked very closely with our industry partners, and this year, Dr. William LaPlante, assistant secretary of the Air Force for Acquisition, has approved LCMC to execute a 2015 cyber campaign plan," said Thompson. "We have a rock solid systems engineering process that we've used in the materiel enterprise for decades,

but we need to make sure that we incorporate cyber security/system security engineering into that standard process."

In addition to integrating security into the engineering process, the campaign plan also includes improving operational cyber mission thread analysis. The mission thread analysis itself involves: mapping out the mission, determining vulnerabilities, identifying risks, and recommending mitigation and program actions.

The general used personnel recovery as a prime example. "It's very complicated, and there are tons of cyber-oriented systems involved in that kind of assessment," Thompson said, referencing items such as communications, precision navigation, voice over internet protocol, and crypto equipment.

Another aspect of the cyber campaign centers on workforce development. "I've got 26,000 employees working on 3,000 programs every day, and I need to make sure they are cyber



U.S. Air Force Lt. Gen. John Thompson, Air Force Life Cycle Management Center commander, speaks to attendees at the New Horizons Symposium in Newton, Mass., March 3. Thompson said the center handles more than 3,000 total projects and that they all have certain overlapping needs, including cyber competency. The symposium connects government and industry with a primary focus on upcoming program opportunities.

*U.S. Air Force photo by Jerry Saslav*

savvy," Thompson said. According to the general, development includes everything from building small teams of experts to ensuring people have the right tools and necessary education.

In addition to the LCMC commander discussing future plans of the center, both Hanscom program executive officers presented and identified a variety of potential business opportunities for industry attendees.

For more information, visit <http://www.hanscom.af.mil/news/story.asp?id=123441067>.

### **DARPA Robotics Challenge Features Disaster-response Tasks**

*DOD NEWS, DEFENSE MEDIA ACTIVITY (MARCH 9, 2015)  
Cheryl Pellerin*

WASHINGTON—Twenty-five human-robot teams from seven countries will compete for \$3.5 million in prizes June 5–6 during the Defense Advanced Research Projects Agency's robotics finals in California, DARPA program manager Dr. Gill Pratt said during a recent teleconference.

The DARPA Robotics Challenge, or DRC, is a program for robot systems and software teams seeking to develop robots that can help people respond to natural and other disasters.

"It's incredibly exciting for me personally and for DARPA as a whole to see the level of interest that we've gotten from around the world," Pratt, DARPA's DRC program manager, told reporters. "The teams all have different hardware approaches, different software approaches, and different approaches for the user interface," he said, "so I think we'll see a whole range of different ways that technology will be applied to this problem."

### **Teams from Seven Countries**

Participating teams—from Germany, Hong Kong, Italy, Japan, China, South Korea, and the United States—represent some of the most advanced robotics research and development organizations in the world, the DARPA DRC website says.

The teams are collaborating and innovating on a short timeline to develop hardware, software, sensors, and human-machine control interfaces that will allow them and their robots to complete a series of tasks that DARPA has chosen for their relevance to disaster response.

The international contest is the culmination of a program that began in June 2013 with a competition for robotic software teams held in a virtual environment. This first challenge

tested software teams' ability to guide a simulated robot through three sample tasks. Afterward, DARPA provided each of the six winning software teams a robot called Atlas, produced by Boston Dynamics. In the later trials and in the finals, some teams will provide their own robots and write software, and others will write software only and use it in the Atlas robots.

### **Simulated Disaster Zone**

During the DRC Trials held in December 2013 at the Homestead-Miami Speedway in Florida, 16 teams guided their robots through eight individual tasks that tested mobility, manipulation, dexterity, perception, and operator-control mechanisms.

In the final challenge, to be held in June at Southern California's Fairplex in Pomona, 25 robots will be given an hour to perform a circuit of physical tasks to be completed one after the other in a simulated disaster zone, with degraded communications between the robots and their operators.

"The robots must somehow communicate information about the world they see in the simulated disaster zone to the human being despite interruptions in communication," Pratt said. "And the human beings must give commands to the robots to execute at a sufficiently high level that they don't need to micromanage, or tele-op as it's called, each one of the motions that the robots do," he added. "And ... that has to happen despite a large number of dropouts in communication."

### **An Evocative, Authentic Story**

The tasks will be similar to those in the Homestead-Miami trials, but they will be "woven together into a fairly evocative and I think authentic type of story," Pratt explained.

Inside a safe zone, a team will put its robot in a vehicle, he said. Then, with communications going back and forth to and from the team and the robot, Pratt said, the robot must drive the vehicle into a simulated disaster zone and on its own get out of the vehicle. The robot then will have to go through a door to get into a building where it will face a series of obstacles, he added.

The obstacles will include debris and rough terrain, and the robot will have to do manipulation tasks, like moving a valve and hooking up wires, Pratt said. The robot also will have to use a tool to cut a hole through a wall and, after all the tasks are complete, climb up a set of stairs to get out of the building.

“We’re going to throw in one more thing,” Pratt said, “a surprise task that we’re not telling the teams [about], and for the first time we’re going to test whether the teams can adapt themselves to a task that they had not seen before.”

### Falling Down

The teams also have other limitations. They have an hour to complete all the tasks and the robot has to carry its own power supply, Pratt said. Communications will be wireless and will be purposely degraded. And the teams won’t be able to use safety cords that keep the robots from falling down.

To score the human-robot teams, officials will count the number of teams with the most successful tasks and these will be tied, then their times for completing all the tasks will be counted, and those who perform the tasks in the least amount of time will receive prizes, Pratt said.

The winning team will receive a \$2 million grand prize, and DARPA plans to award \$1 million to the runner-up and \$500,000 to the third-place team.

“We are trying to make the world a little bit more robust to disasters that are caused by nature or by [people], and in particular DARPA’s job is to make investments in early technology,” Pratt said.

### Transforming the Field of Robotics

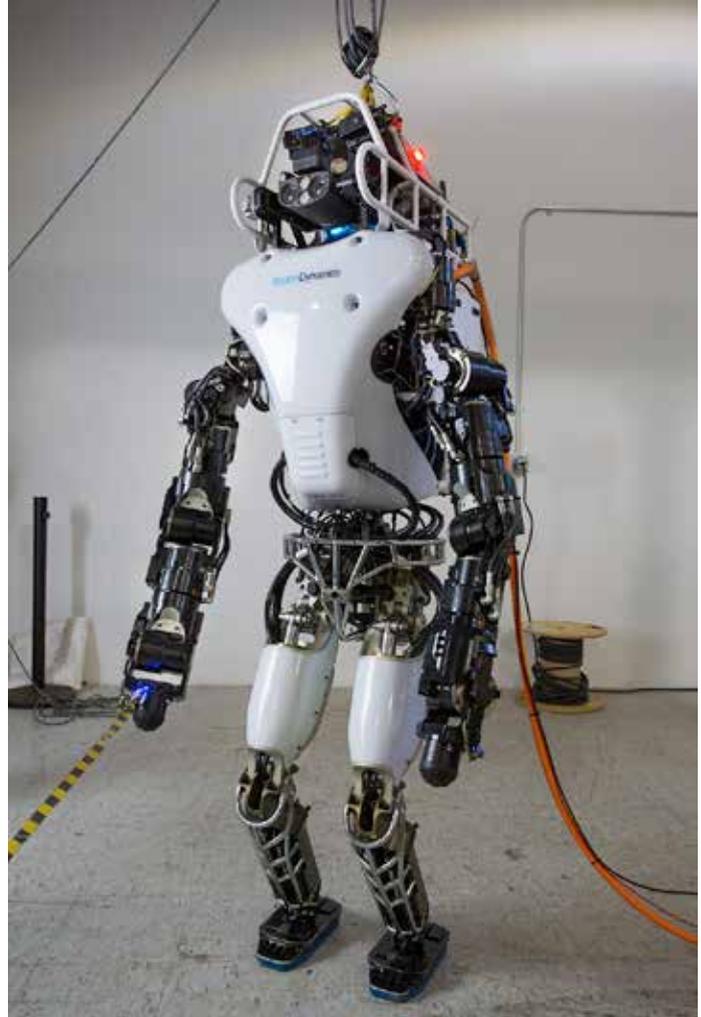
The program’s goal is to “make robots and humans beings able to work together in ways where each one is doing what they do best. Robots are good at working in very dangerous environments. Human beings are good at making very difficult judgment calls and using their cognition,” he added.

DARPA says that technologies resulting from the DRC will “transform the field of robotics and catapult forward development of robots featuring task-level autonomy that can operate in the hazardous, degraded conditions common in disaster zones.”

Pratt held the media call from South Carolina at a test site where most of the teams have come, he said, and each will bring their robots and computers, and wireless communication gear to the test bed and get two days “to work out all the various kinks on their side, and we’re also testing the equipment that we’re going to use at the finals.”

### A Spectrum of Capability

Pratt and his team have seen five of the 25 teams so far, but he said some of the teams are doing extraordinarily well and



The Defense Advanced Research Projects Agency’s Robotics Challenge teams using DARPA’s Atlas robot, developed by Boston Dynamics, met in Waltham, Mass., in January to learn about upgrades to the robot. It was redesigned with the goal of improving power efficiency to better support battery operation. About 75 percent of the robot was rebuilt. Only the lower legs and feet were carried over from the original design. Lighter materials allowed for inclusion of a battery and a new pump system with only a modest increase in overall weight. The upgraded robot is 6-foot-2 inches tall and weighs 345 pounds.

DARPA image courtesy Worcester Polytechnic Institute

seem to have a handle on doing all the tasks. Other teams aren’t doing so well, Pratt said, and he thinks there will be a spectrum of capability during the finals.

Pratt said that as he has visited teams around the world, he’s seen some of the teams using their own test sites to show how they can handle each task. “What remains to be determined is how well the robots recover from falls,” he

said. "If I were to give advice to the teams, I would say fall down now and get up now and let's see how that works. And don't be afraid to break your robot if it falls, because that's almost certain to happen during the challenge."

Pratt added, "It will be neat to see which teams can pull that off and which teams can't."

### **Air Force Civilian Ensures Efficient Missile Maintenance**

*MINOT AIR FORCE BASE PUBLIC AFFAIRS (MARCH 11, 2015)*

*Senior Airman Sean D. Smith*

MINOT AIR FORCE BASE, N.D.—The Leo Marquez Award recognizes Air Force personnel for outstanding performance in areas like financial efficiency and managerial skills. This year, the award went to Robert Mintie, a 91st Maintenance Operations Squadron production controller here.

Mintie manages large-scale maintenance on missile sites, long-range maintenance programs, and sustainment and modification programs. He also won the Leo Marquez, at the Air Force level, in 2009.

"We have depot maintenance teams that are on a constant schedule," Mintie said. "They go out and do site refurbishment for the longevity of the sites. It's coordinating all that, when you have one site undergoing maintenance you have to make sure the right people are there."

Mintie's role deals heavily with time and resource management. "With missile sites, since they're all so spread out, you want to do everything you can while you're out there," Mintie said. "So you coordinate what you can. If the site is under maintenance for a certain program, is there anything else we can get done while we're all out there?"

Mintie said he is only one of several individuals who work to keep maintenance scheduling as efficient and economical as possible. "A small part of what I do is reactionary, like if something breaks suddenly," Mintie said.

When that happens, Mintie tries to work that repair into the existing schedule with the least possible disruption. "I make sure there's no work stoppage," Mintie said. "When you take a site down for maintenance, a lot of people need to know; you can't just shut it down."

Mintie's task is to save the Air Force time and money, and if these awards give any indication, he's doing a good job. "Bob is a critical part of the 91st Maintenance Group's day-to-day operations," said Capt. Justin Ahrens, the 91st Maintenance Operations Squadron maintenance operations flight com-

mander. "He has a vast amount of experience, knowledge, and longevity, which provides the group with much needed continuity to the Plans and Scheduling section."

"With all the activity that goes on in the missile fields, you need a central point of coordination," Mintie said. "It's to keep things moving, keep people from bumping into each other, and make sure they're making the most of their time and resources."

### **Nunn-Perry Awards Recognize Mentor-Protégé Program Excellence**

*DOD NEWS, DEFENSE MEDIA ACTIVITY (MARCH 12, 2015)*

*Claudette Roulo*

WASHINGTON—Without the efforts of small businesses across the country, the Defense Department wouldn't be able to meet the needs of warfighters around the world, Army Lt. Gen. Robert S. Ferrell, the Army's chief information officer, said today.

Ferrell spoke before the presentation of the 2014 Nunn-Perry Awards, which recognize DoD mentor-protégé teams that have excelled in technical developments, cost efficiencies, and increased business opportunities for small disadvantaged firms. Awards went to a total of 14 teams representing 27 companies providing services to three military services and four defense agencies.

### **Awardees Represent 'Best, Brightest'**

These companies are "the best and the brightest in this program," said Kenya L. Wesley, acting director of the Office of Small Business Programs. Small businesses eligible for the program can spend three years partnered with a qualifying mentor company, developing their workforce's skills and knowledge.

The program is like a marriage, Wesley told the awardees. "With marriages, you have good times and you have bad times. But in the most successful marriages—just like the most successful business arrangements—you work through those troubled times together."

He added, "Each and every one of you has hit snags along the way. You've had differences of opinions along the way. But you've weathered that storm." And in doing so, Wesley added, the companies have been providing for warfighters—the most important job of all.

The industries represented at the ceremony make up America's "first team," Ferrell said. "We in the Department of Defense cannot do it alone. We cannot do it without you," the general said of the award winners.

### **DoD's Partnership with Industry**

"Our partnership with industry has always been the foundation of our security," he said. "... America's small businesses offer a wealth of talent and ingenuity to our armed forces."

The nearly 28 million small businesses in the United States represent an opportunity that the department can't afford to pass up, Ferrell said. The ability of small businesses to develop innovative technologies will keep the U.S. military the best military in the world, he added.

The mentor-protégé dynamic of shared knowledge is vital to business, the general said. This information transfer accelerates the learning process and prepares small businesses to work with the department, Ferrell noted.

"Thank you for helping make the American industrial base more robust, and for keeping our warfighters ready," he said.

### **Award Recipients**

This year's 14 award recipients, by team and military service or DoD agency component, are:

- The Boeing Company, Huntsville, Alabama, and Victory Solutions, Inc., Huntsville, Alabama, for the Missile Defense Agency;
- CSC, Falls Church, Virginia, and Strategic Operational Solutions, Inc., Vienna, Virginia, for the National Geospatial-Intelligence Agency;
- HP Enterprise Services, Herndon, Virginia, and Emagine IT, Fairfax, Virginia, for the National Geospatial-Intelligence Agency;
- L-3 National Security Solutions, Reston, Virginia, and Cyberspace Solutions, Reston, Virginia, for the National Security Agency;
- Leidos, Oak Ridge, Tennessee, and Minerva Engineering, Temple, Arizona, for the U.S. Army;
- Lockheed Martin Space Systems Company, Huntsville, Alabama, and IERUS Technologies, Inc., Huntsville, Alabama, for the Missile Defense Agency;
- NCH Chem-Aqua, Inc., Irving, Texas, and Green and Sustainable Services, LLC, Ponder, Texas, for the Defense Contract Management Agency;
- Planned Systems International, Inc., Columbia, Maryland, and Favor TechConsulting, LLC, Arlington, Virginia, for the Defense Intelligence Agency;
- Raytheon Missile Systems, Tucson, Arizona, and Sonju Industrial, Kalispell, Montana, for the U.S. Navy;
- Raytheon Missile Systems, Tucson, Arizona, and Advanced Powder Solutions, Inc., Cypress, Texas, for the Missile Defense Agency;

- Rockwell Collins, Inc., Cedar Rapids, Iowa, and TEVET LLC, Mosheim, Tennessee, for the Defense Contract Management Agency;
- TASC, Chantilly, Virginia, and Allegheny Science & Technology, Bridgeport, West Virginia, for the Defense Intelligence Agency;
- Tec-Masters, Inc., Huntsville, Alabama, and PROJETXYZ, Inc., Huntsville, Alabama, for the Missile Defense Agency; and
- Whitney, Bradley & Brown, Inc., Reston, Virginia, and Edaptive Computing, Inc., Dayton, Ohio, for the U.S. Air Force.

### **Pharmaceutical Contracting Team Earns Federal Excellence Award**

*DEFENSE LOGISTICS AGENCY TROOP SUPPORT PUBLIC AFFAIRS (MARCH 13, 2015)*

*Dena Selkow*

A Defense Logistics Agency Troop Support contracting team received a federal acquisition excellence award March 3 in Washington, D.C., for a pharmaceutical contract expected to save about \$3 billion over 10 years.

The Medical supply chain's global prime vendor team earned the Chief Acquisition Officers Council Acquisition Excellence Award for its work on a \$26 billion pharmaceutical contract. The contract provides support to about 9.6 million service members and other Defense Department healthcare beneficiaries worldwide.

"Making an award that our entire military family and several other government agencies can benefit from for the next 10 years makes it worth it," said Paul Vasquez, chief of the prime vendor division.

Other agencies that will benefit from the contract include the National Institutes of Health and the U.S. Department of Health and Human Services.

The award recognizes the efforts of acquisition professionals who contribute to outstanding improvements in contracting throughout the federal government.

The innovation and dedication of DLA Troop Support's workforce is celebrated with this award, William Kenny, executive director of contracting and acquisition management, said. "A Better Buying Power culture and continuous process improvement efforts are evident in the latest generation of pharmaceutical prime vendor," Kenny said.

The team achieved the lowest known distribution fee in the history of the pharmaceutical prime vendor industry

by using an innovative sequencing of traditional negotiating techniques combined with reverse auctions, according to the award nomination.

Vasquez said the contract also provides new support capabilities to DoD customers, like enhanced war readiness features and streamlined ordering. The contract was awarded with the best discounts in the industry, he said. "This contract will allow the [Services] to stretch their limited pharmacy budget a little further," Vasquez said.

This contract also sets the standard for future price reductions in the home delivery pharmaceutical prime vendor arena, Vasquez said.

In addition to Vasquez, the global pharmaceutical prime vendor team members include: Jayne Bailie, Medical contract specialist, Patricia Kniffin, retired Medical acquisition specialist, and Stephanie M. Fuss, procurement analyst with the Procurement Process Support directorate.

### **Army's Largest Technical Library Collaborates to Define its 21st Century Future**

*U.S. ARMY AVIATION AND MISSILE RESEARCH, DEVELOPMENT AND ENGINEERING CENTER PUBLIC AFFAIRS (MARCH 17, 2015)*

*Nikki Montgomery*

REDSTONE ARSENAL, Ala.—The board of directors for the largest science and technology library in the Army met March 11 at the U.S. Army Aviation and Missile Research, Development and Engineering Center, or AMRDEC.

Redstone Scientific Information Center, or RSIC, is a unique, national asset containing a collection of specialized materials including technical reports, contractor reports, technical memorandums, informational briefs, special reports, and conference papers open to all government employees and contractors at Redstone Arsenal.

In addition to being the largest technical library, it is also the only joint Army/NASA library.



Paul Vasquez, right, chief of DLA Troop Support's Medical prime vendor division, and Jayne Bailie, left, Medical contract specialist, receive the Chief Acquisition Officers Council Acquisition Excellence Award. Anne E. Rung, center, administrator for federal procurement policy, Office of Management and Budget, poses with the award recipients at a ceremony March 3 in Washington, D.C.

Courtesy photo



### **SECAF Visits Preeminent Center of Nuclear Excellence**

*AIR FORCE NEWS (MARCH 11, 2015)*

Maj. Gen. Sandra Finan, commander, Air Force Nuclear Weapons Center, discusses the preeminent center of nuclear excellence with Secretary of the Air Force Deborah Lee James, and Steve Amburgey, deputy program executive officer for Strategic Systems, March 9, at Kirtland Air Force Base, N.M. Strategic Systems is scheduled to fully integrate with the AFNWC later this year. The proposed change will better align nuclear acquisition responsibility, authority, and accountability, creating more efficient life cycle support of nuclear systems by combining acquisition and product support.

*U.S. Air Force Photo by Meredith Minglehoff*

The RSIC board of directors is composed of various Redstone organizations to include AMRDEC, NASA Marshall Space Flight Center, or MSFC, Missile and Space Intelligence Center, Space and Missile Defense Command and, most recently, Missile Defense Agency as an emergent funding partner.

“RSIC is extremely important to NASA’s Marshall Space Flight Center as a resource for technical data on a wide variety of topics ranging from rocket propulsion to space physics, from systems design to vehicle operations,” said MSFC Center Chief Technologist and Board Member Dr. Andrew Keys. “Marshall is committed to working with the ‘Team Redstone’ members to ensure RSIC has a future within our community.”

RSIC Board Chair and AMRDEC Director James Lackey shared insight on future development for the center. “One of the key challenges for RSIC is making a secure transition into a more digital future. The entire definition of what a library means is fundamentally changing,” Lackey said. “Just look

at how eBooks are proliferating over traditional hardback products in your very own home. Brave new world concepts of ‘knowledge management’, ‘data mining’, and ‘cloud analytics’ prevail over traditional dusty phrases of ‘card catalog’, ‘bound periodicals’, and ‘microfiche.’”

Library customers can provide information on their topics of interest and the staff will set up a profile in several databases. Customers will then receive journal articles, conference papers, and report citations by email when something new is published on their subject. This service saves researchers time and keeps them informed about the latest publications in their field.

All registered users at RSIC also have desktop accessibility to the library’s online resources, which include access to the library’s online catalog, 20 electronic databases, the electronic books and journals, and RSIC’s digital collection containing electronic documents produced by AMRDEC, MSFC, Redstone Test Center, and the Comanche Project Office.



James Lackey, Redstone Scientific Information Center chairman and U.S. Army Aviation and Missile Research, Development and Engineering Center director, and board members reviewed near-term actions as well as far-term strategic plans during a Board of Directors meeting held March 11 at the U.S. Army Aviation and Missile Research, Development and Engineering Center.

*Courtesy photo*

Lackey said, "RSIC must keep pace with information technologies to remain viable and relevant for today's and tomorrow's technical workforce. This entails a variety of activities including converting existing collections into digital format, exploring use of information technology tool sets, and social media as well as potentially expanding partnerships of RSIC beyond the arsenal gates to include local academic institutions. All of this future greatness comes with a literal cost."

The objective of RSIC's board of directors, or BoD, was to review the current operational status of the RSIC and make decisions on near-term actions as well as far-term strategic plans, including how to secure a more stable funding future.

"While the answer to this question is complex and obviously depends on a variety of factors, BoD members remain committed to support the RSIC charter going forward in the best supportive manner under our current and projected budget constrained environment," Lackey said.

The Aviation and Missile Research, Development and Engineering Center is part of the U.S. Army Research, Development and Engineering Command, which has the mission to

develop technology and engineering solutions for America's soldiers.

**Inventions Benefit Warfighter, Educate Community**

*U.S. ARMY AVIATION AND MISSILE RESEARCH, DEVELOPMENT AND ENGINEERING CENTER PUBLIC AFFAIRS (MARCH 18, 2015)*

*Kyle Chronister*

REDSTONE ARSENAL, Ala.—Among the "101 Rocket City Inventions" on display at the Space and Rocket Center in Huntsville, Alabama, are three innovations created by the Aviation Missile Research, Development and Engineering Center, or AMRDEC.

In conjunction with the center's featured exhibit, the "101 Inventions that Changed the World," the center included local patents ranging from a poultry watering system to the four AMRDEC contributions.

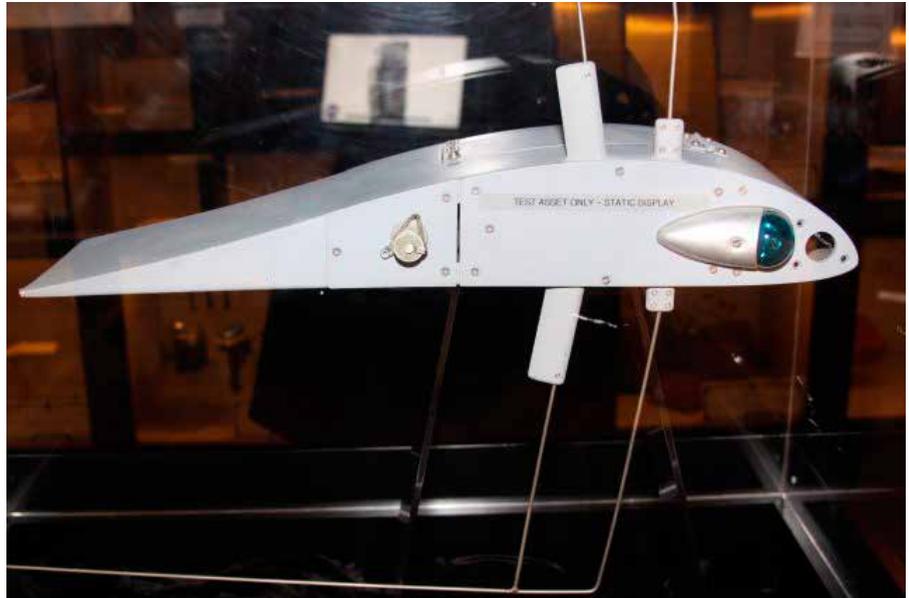
AMRDEC's exhibited inventions include the high-mobility, multi-wheeled vehicle crew extraction d-ring, the shadow unmanned aerial vehicle communication relay system, and the enhanced fiber optic guided missile.

Each featured AMRDEC invention was created to provide solutions to benefit the soldier in communication, protection, and combat readiness beginning with the Iraqi War, and continuing through the current engagement.

"Pieces that came out of the AMRDEC really show the ingenuity that goes into the development of these systems whether it is communications, weapons, or in the case of the crew extraction d-ring, you are talking about a very simple concept applied in a very unique and creative way," said Edward Stewart Huntsville's Space and Rocket Center exhibits director. "AMRDEC's engineers, scientists, and technicians apply the creativity and ingenuity to all of their inventions that are beneficial to the warfighter."

AMRDEC's featured inventions include:

- Crew extraction d-ring: During the Iraqi War, the high-mobility, multi-wheeled vehicles, or HMMWV, were attacked and soldiers would be pinned inside their rollover vehicle with no way to escape. AMRDEC's prototype integration facility designed a d-ring to provide an anchor point for emergency removal of damaged doors. There is a d-ring on every up-armored HMMWV in the military inventory.
- The unmanned aerial vehicle communication relay system, also known as the UAV CRS, provides soldiers with early warning and intelligence information through enhanced communications between the ground control station operators and company commanders. This technology gives the shadow UAV operators a way to communicate with soldiers who are on the ground. Due to the high success of this system, the communication relay system has been used for situational awareness, call for fire support throughout the theater, and a way to communicate danger to troops at the ground control station.
- The enhanced fiber optic guided missile, or EFOG-M, is a deployable missile system able to defeat armored ve-



The unmanned aerial vehicle communication relay system, also known as the UAV CRS, provides soldiers with early warning and intelligence information.

U.S. Army photo

hicles, rotary wing aircraft, and other high-level targets. AMRDEC designed the EFOG-M with a high resolution infrared video camera on the front nose of the missile, providing the gunner a visual from the missile's perspective. This missile utilizes a fiber optic data link to transmit and receive command and sensor inputs to seek out and defeat threats hidden behind hills, foliage, or even urban settings.

The 101 Rocket City inventions, and its partner exhibit, 101 Inventions that Changed the World, remains at the U.S. Space and Rocket Center through Dec. 31. Admission is free for active-duty military (with discount for spouses and children). Admission is also free for NASA employees.

AMRDEC is part of the U.S. Army Research, Development and Engineering Command, which has the mission to develop technology and engineering solutions for America's soldiers.