

New DOD Rule Supports Independent Research, Development

AMERICAN FORCES PRESS SERVICE (FEB. 6, 2012)

Cheryl Pellerin

WASHINGTON—A new rule published Jan. 30 that modifies the way major defense contractors report to the Defense Department on their independent research and development projects enhances communication between government and industry, a senior Pentagon official said last week.

Independent research and development, known as IR&D, is a contractor's own investment in basic and applied research and development and some kinds of studies that DoD will reimburse the company for making.

Every year the Defense Department invests about \$4 billion in defense firms' IR&D. From this investment come new and improved devices, materials, and other products, and advances in technology that ultimately benefit the department and its warfighters, said Ronald J. Kurjanowicz, senior advisor to the Assistant Secretary of Defense for Research and Engineering.

The rule, published in the *Federal Register*, applies to defense contractors that claim more than \$11 million in a year on IR&D and bid and proposal costs, Kurjanowicz said.

"It's asking firms to submit project data on their IR&D projects to the government [through a secure website] called the Defense Innovation Marketplace," he explained. The site is an industry portal that offers answers to frequently asked questions, contracting news, information about the new rule, and other industry resources.

DoD contracting officials can search the site, he said, "and see where the innovation is, and then communicate back with industry the areas that we think are very strong and the areas where there are probably gaps that we can work with. So it will be a communication mechanism."

Contracts awarded on or after Jan. 30 are subject to the new requirements, a senior procurement analyst in Kurjanowicz's office said.

Major contractors must comply with the new rule, Kurjanowicz said, but the rule also allows other contractors to submit IR&D project data to the website for greater visibility by government contracting officials.

"We in the government have to know what [defense contracting firms] are working on, because as we build acquisi-

tion programs we want to get a sense of what's available out there," he added.

Defense officials decided on a rule rather than a voluntary move to the website "because we wanted to level the playing field and give everybody a chance to submit the information," he said.

"Industry wants to know where we're going, particularly now in this era, at this inflection point, ... so we have to communicate with industry the sort of capabilities we'll need for that environment," Kurjanowicz said.

With that communication, he added, "industry will begin to vector their IR&D in that direction."

IR&D communication mechanisms between DoD and contractors have evolved over the years. "In the 1980s," Kurjanowicz said, "we actually sent people on site" to contracting firms.

"We called them tri-Service reviews, and they would review a contractor's entire portfolio," he added. They then would take the information back to their organizations, and based on their findings, the reviewers determined a company's reimbursement rate, he explained.

In that scenario, Kurjanowicz added, major contractors who could afford to do more IR&D than smaller contractors had an advantage. Today, he said, administrative contract officers do the reviews.

"Firms submit their IR&D projects every year, and everyone does it differently," Kurjanowicz said. "Some firms submit detailed reports, and others send in a list with dollar values, and the administrative contracting officer is supposed to look through that and come up with a rate."

The problem, he added, is that the administrative contracting officers don't always have the technical expertise to evaluate the submissions, "so we're losing insight into what the industry is working on."

Defense contracting officials thought that the easiest and fairest way to fix it for all was to update the Defense Federal Acquisition Regulation with a rule, Kurjanowicz said.

"The fundamental word in IR&D is independent," he added. "We want to communicate our needs, but the firm has the option as to what technology they pursue. The leadership is very keen on that, because we can't say that we have all the good ideas, and ... we rely on industry to give us alterna-

tives. So it's about capabilities, and [defense contractors] determine the technology."

412Th Contracting Support Brigade Conducts Joint Dawn 2012—Army Contracting Command's Mission Readiness Exercise

904TH CONTINGENCY CONTRACTING BATTALION (FEBRUARY 2012)

Army Maj. Anthony Gibbs

The 904th Contingency Contracting Battalion, Fort Knox, Ky., and 412th Contracting Support Brigade, Fort Sam Houston, Texas, conducted the largest contracting exercise in the Department of Defense, Joint Dawn 2012—the Army Contracting Command's mission readiness exercise, from Jan. 19 through Feb. 19.

This was the third iteration of what has become an annual, joint exercise for ACC. First dubbed Operation Bold Impact and conducted at Fort Riley, Kan., in January 2010, 35 contingency contracting officers were trained for deployment. Last year the exercise was held at Fort Campbell, Ky., with 115 CCOs trained. This year Fort Bliss, Texas, provided the venue, and Joint Dawn produced 159 deployment-ready CCOs from multiple Services and Components.

Joint Dawn 2012 was a 16 day exercise, broken into three distinct phases, each critical to preparing CCOs for deployment. The training was designed around the regional contracting center concept, with participants assigned to 10- to 11-person joint teams for the duration of the exercise. All training was conducted as team members, or part of an RCC.

Participants came from the Active Army and Marine Corps, as well as the Army Reserve, Army National Guard, and Navy Reserve. In addition, this year's participants included 32 civilians from the Department of the Army and Air Force.

The first phase of the exercise, warrior task training, involved four days of training designed to keep CCOs alive on the battlefield. This consisted of marksmanship training on the M9 and M16 weapons, rollover training in Humvee and Mine Resistant Ambush Protected vehicles, convoy operations training in the close combat tactical trainer (simulated environment), and two days of medical skills training. Although all CCOs have a number of warrior tasks they are expected to train annually at home station; Joint Dawn focuses on the skills that aren't easily trained at the command's numerous dispersed locations, and that are most critical in combat. The objective is not to make CCOs experts in tactical operations such as planning and leading a convoy, but to give them the knowledge to be a contributing member of the team while a member of a convoy. More importantly, the medical training

is designed to teach critical life saving skills that CCOs can use to keep themselves or other soldiers alive and facilitate medical evacuation.

The second phase of Joint Dawn involved three days of classroom instruction focused on topics unique to contingency contracting, and specifically C-JTSCC. This training included hands-on instruction in multiple areas, to include the synchronized pre-deployment operational tracker, a Web-based system to meet congressionally mandated requirements to track contractors on the battlefield; and the 3-in-1 tool, an electronic device used by field ordering officers that automates the purchasing and clearing process for battlefield purchases.

Classroom training led directly into the third and final phase of Joint Dawn, which consisted of six days of contracting operations training. At the start of this phase, each of 16 teams took over an existing RCC, complete with contracts in progress, as well as new requirements ready for contracting action. Throughout this phase, additional requirements were added daily, and contract administration tasks were triggered through live role play, with the goal of creating a stressful environment that simulates the pace and likely issues that will be experienced in an RCC supporting warfighters in Afghanistan.

"If a system or process is being used in theater and it was feasible for us to incorporate it at Joint Dawn, we did it," Maj. Jim Clift, who led the planning for the Contracting Operations phase.

The key to providing realistic contracting operations training involved the use of a robust exercise simulation cell, referred to at Joint Dawn as the smart cell. The smart cell controlled this part of the exercise from behind the scenes, with live role players simulating warfighters (requiring activities), resource managers, contractors, and Defense Finance and Accounting Service. The smart cell had role players that engaged through electronic means (phone and e-mail), as well as through face-to-face interaction.

"Our job is to create the environment so the CCOs feel like they're actually deployed," said Maj. Seth Blakeman, smart cell OIC. "Our role players in the smart cell answer the phone as the contractor or unit representative they're playing, and the folks we send to the RCCs follow a script that's developed based on lessons learned in theater."

In addition to the smart cell, Joint Dawn provided world class instruction by assembling a team of experts to teach and provide mentorship to the CCOs. Every RCC had a coach-



Army Capt. Kelli Kulhanek, 905th Contingency Contracting Battalion, prepares to fire her weapon during a weapons training session as part of Joint Dawn 2012, the Army Contracting Command's Mission Readiness Exercise, conducted in February 2012.

Photo by Army Staff Sgt. Kristen Duus

mentor team consisting of a deployment-experienced Army or Air Force CCO, and an experienced civilian contract specialist. Including the subject matter experts that supported the classroom phase of the training, some of whom stayed to serve as role players during contracting operations, Joint Dawn provided an unprecedented assemblage of experts in nearly every area of contingency contracting.

One new area of improvement in Joint Dawn 2012 was the implementation of a system to collect and track assessment information and provide feedback to exercise participants. Assessment has been an integral part of past exercises, but this year a database was developed to standardize how this information was collected and analyzed.

Nearly a year of planning went into Joint Dawn, with the bulk of that work done by the 904th. The planning team conducted two trips to Fort Bliss to coordinate for facilities and resources and to plan training. In addition, the team worked closely with C-JTSCC and several deployed CCOs to create scenarios based on current requirements and relevant issues for CCOs supporting Operation Enduring Freedom. The 905th CCBN, location, and 412th CSB are already planning for Joint Dawn 2013, with the intent to again train at Fort Bliss. The exercise will continue its focus on deploying CCOs and the CENTCOM theater of operations. The scale will remain similar, but there are already plans to expand the

scope of involvement from DCMA, DFAS, U.S. Army Criminal Investigation Command, and the Corps of Engineers.

Department of Defense Announces Selected Acquisition Report

DEPARTMENT OF DEFENSE NEWS RELEASE
(MARCH 30, 2012)

The Department of Defense (DoD) has released details on major defense acquisition program cost, schedule, and performance changes since the December 2010 reporting period. This information is based on the Selected Acquisition Reports (SARs) (<http://www.defense.gov/news/PAC.PDF>) submitted to the Congress for the December 2011 reporting period.

SARs summarize the latest estimates of cost, schedule, and performance status. These reports are prepared annually in conjunction with submission of the President's Budget. Subsequent quarterly exception reports are required only for those programs experiencing unit cost increases of at least 15 percent or schedule delays of at least six months. Quarterly SARs are also submitted for initial reports, final reports, and for programs that are rebaselined at major milestone decisions.

The total program cost estimates provided in the SARs include research and development, procurement, military

construction, and acquisition-related operation and maintenance (except for pre-Milestone B programs, which may be limited to development costs pursuant to section 2432 of title 10, United States Code). Total program costs reflect actual costs to date as well as future anticipated costs. All estimates are shown in fully inflated then-year dollars.

Review the entire report and program summary at www.defense.gov/releases/release.aspx?releaseid=15146.

Strategic Guidance Drives DoD Science Enterprise, Officials Say

AMERICAN FORCES PRESS SERVICE (MARCH 1, 2012)

Cheryl Pellerin

WASHINGTON—The Defense Department's new strategic guidance drove science and technology budget requests that include funding for projects ranging from hypersonics to electronic warfare, DoD officials told a congressional panel today.

Zachary Lemnios, assistant secretary of defense for research and engineering, and Kaigham J. Gabriel, deputy director of the Defense Advanced Research Projects Agency, explained to the House Armed Services Committee how science and technology factor into military planning.

The president's \$11.9 billion request for DoD science and technology, Lemnios said, provides the resources needed to maintain a decisive technological edge for today's challenges and the foundation to surpass the most lethal and disruptive future threats.

Defense Secretary Leon E. Panetta and Army Gen. Martin E. Dempsey, chairman of the Joint Chiefs of Staff, released the Defense strategic guidance in January, and Lemnios said he began reviewing DoD science and technology priorities about a year earlier.

As a result of the review, DoD officials realigned several projects in the president's budget request, he said, pushing hypersonics, an advanced Air Force engine, target-acquisition imagers for the Army, elements of electronic warfare, and DARPA funding for manufacturing.

"We shaped this budget based on a close look at the projects we had," he said, "in concert with the department's strategy."

Lemnios said cyber is one of the department's seven science and technology priorities.

After long conversations with operators, uniformed service members, and system users that began about 18 months ago, Lemnios said, "we built a set of architectures, and we're now working the capability sets to develop that tech base."

The focus of DoD efforts over the past year, he said, "has been in building a common operating picture so that we understand those networks and we start building the measurements and the test campaign to understand, in fact, how we can use our [science and technology] efforts and transition them."

Going forward, Lemnios said, "I suspect that you will see in the coming years ways to integrate a larger number of efforts across our networks, and that's going on right now in the Services and certainly at DARPA, in terms of new concepts that are being developed."

DARPA's deputy director told the panel, "I could discuss some of the agency's accomplishments over the last year ... but instead what I'd like to talk to you about today is what keeps us up at night."

Such concerns include advanced computing, imaging, and communication capabilities that now are readily available to hundreds of millions of people worldwide, and the availability to any consumer as commercial off-the-shelf, or COTS, components, of more than 90 percent of the electronics in an electronic warfare system.

"These insights led us to new investments that leverage COTS technology where we can, and develop technologies where COTS can't or won't go," Gabriel said.

An example is DARPA's intra-chip enhanced cooling program. Cooling a COTS chip allows the agency "to run the chip 10 times faster than it was designed to run, creating differentiating capabilities for ourselves," he added.

In cybersecurity, the deputy director said, "there has been much focus on increasing our defensive capabilities. But we require capabilities in both defense and offense across the full spectrum of the conflict."

Modern warfare demands the effective use of cyber and kinetic means, he said, "and that requires DoD cyber capabilities matched to our kinetic options."

DARPA has launched several programs designed to create cyber capabilities with the diversity, dynamic range, and tempo of DoD operations. One of these is Cyber Fast Track, which taps a pool of nontraditional experts and in-

novators, many of them members of the “white hat” hacker community.

“Hacker” is a positive term that describes a person of exceptional capability and creativity, Gabriel explained, “someone who sees a novel use for an existing capability or technology.”

Over the past seven months, DARPA has received more than 100 proposals and made 32 awards for cyber projects, the deputy director said—84 percent of them to small companies and performers who have never before done business with the government.

“Cyber Fast Track is expanding the number and diversity of talent contributing to the nation’s cybersecurity,” he added. In DARPA’s world, cybersecurity is not just about bits and networks, it’s about the security of physical and embedded systems.

From its unique perch, Gabriel said, DARPA can bring together experts from across the spectrum to examine systems not only from the perspective of computer sciences and cybersecurity, but from electronic warfare, embedded systems, and computer architecture.

This allows the agency, he added, “to knock down the walls between those stovepipes so we can get an integrated look at the opportunities and threats,” creating new capabilities and solutions that are impossible to get from any one domain.

Experts Testify on DoD Missile Defense System

AMERICAN FORCES PRESS SERVICE (MARCH 8, 2012)

Cheryl Pellerin

WASHINGTON—Technical challenges remain for the complex ballistic missile defense system designed to protect the United States and its allies, but the capability is crucial to the nation’s defense posture, experts told a congressional panel this week.

Bradley H. Roberts, deputy assistant secretary of defense for nuclear and missile defense policy, Army Lt. Gen. Patrick O’Reilly, director of the Defense Department’s Missile Defense Agency, and other experts testified March 6 before the House Armed Services Committee’s subcommittee on strategic forces.

Since 1999, the United States has invested more than \$90 billion in missile defense. The fiscal 2013 budget request for missile defense is \$7.75 billion.

Roberts said the missile defense strategy balances the need to defend the homeland with the need to address regional threats overseas to U.S. forces, allies, and partners, and he described the plan to bolster both.

“We live in an era of missile proliferation, we project power forward globally, [and] we have security commitments in regions where missiles are proliferating,” he told the panel. “We must protect our forces, we must protect our allies, [and] they must participate in protecting themselves. To not do that calls into question the very foundation of our security role in the international environment today.”

New capabilities have emerged over the past 10 to 15 years that now are available to bolster regional missile defense, Roberts said. “So we’ve put in place a program to ramp up these regional defense capabilities over the years ahead ... in partnership with allies,” he added. “They are not along for a free ride. We’ve given them many opportunities to strengthen their own self-defense, and many are rising to this challenge.”

The United States has missile defense cooperative programs with the United Kingdom, Japan, Australia, Israel, Denmark, Germany, the Netherlands, the Czech Republic, Poland, Italy, and many other nations.

Roberts said the two-stage plan for bolstering homeland defense includes strengthening the ground-based midcourse defense system, or GDM, and in the next decade, shifting to a land-based standard missile called SM-3 Block 2B as a complementary second layer of the system. GDM is an element of the ballistic missile defense system made up of ground-based interceptors and ground systems components.

Defense strategy calls for ground-based interceptors to be enhanced over the next 10 years, Roberts said. When SM-3 2B missiles become available around 2020, he told the panel, those will be added to the system to provide a second layer of protection on the ground in the United States.

“For regional defense, we now have two layers of protection,” he added. “The homeland deserves the same. Depth and redundancy are better than reliance on a single system.” Such ground- and sea-based interceptor missiles destroy an incoming missile using a direct collision, called “hit-to-kill” technology, or an explosive-blast-fragmentation warhead.

O’Reilly told the panel that the Missile Defense Agency’s top priority is to protect the homeland from the growing threat

of intercontinental ballistic missile attacks from Iran, North Korea, Syria, and other nations.

"We have made significant progress in enhancing our current homeland defense over the past year," he added. Progress includes activating a forward-based transportable radar in Turkey and an upgraded early warning radar at Thule, Greenland, to track intercontinental ballistic missiles from the Middle East.

The agency has also upgraded three ground-based interceptors, or GBIs, activated a second command-and-control node—part of the command, control, battle management, and communications network that links the warfighter to sensors and interceptor missiles—and completed the newest missile field at Fort Greely, Alaska.

"Further enhancement of our homeland defense is paced by the resolution of a technical issue identified in the last GBI flight test and the need for a successful intercept with the newest version of the GBI exo-atmospheric kill vehicle by the end of this year," O'Reilly said.

A successful nonintercept GBI flight test this summer, he added, will confirm that the problem is resolved.

This year, O'Reilly told the panel, ballistic missile defense capability will be built into five more Aegis ships, three SM-3 Block 1B flight tests will demonstrate resolution of the previous test-flight failure, and materiel release is planned for a second terminal high-altitude area defense, or THAAD, battery for area defense, space-based sensors, and sea-based capabilities.

The agency's 2013 budget will deliver a third THAAD battery and three more Aegis ballistic missile defense upgrades, for a total of 32 BMD-capable ships, he said.

"This year and in 2013," the general said, "we will conduct the largest, most complex, integrated layered regional missile defense tests in history by simultaneously engaging up to five crews and ballistic missile targets with Aegis, THAAD and Patriot interceptor systems, a forward-based [transportable] radar, and a command-and-control system operated by soldiers, sailors, and airmen from multiple combatant commands."

An important part of the ballistic missile defense system that's under development is the Precision Tracking Space System, or PTSS, a space-based constellation of satellites that will for the first time be able to track a missile over its entire flight.

"There is no sensor that can fill the function of tracking a missile over its entire flight from space and the broad field of views that we need to cover an entire theater, where we could see missiles simultaneously launched," O'Reilly said.

"The combination of [ground-based midcourse defense], SM-3 2B, PTSS and other programs," the general said, "will provide effective and adaptable missile defense for our homeland to counter the uncertainty of ICBM capability from today's regional threats for decades into the future."

Army's Newest Laboratory Complex to Open April 11

ARMY NEWS SERVICE (MARCH 15, 2012)

John W. Wray

U.S. ARMY DETROIT ARSENAL, Mich.—The U.S. Army will open its new complex, the Ground Systems Power and Energy Laboratory, during a grand opening ceremony at the Detroit Arsenal April 11, 2012.

The eight-labs-in-one Ground Systems Power and Energy Laboratory, or GSPEL, facility offers numerous testing capabilities and an unmatched combination of resources in a single lab. The GSPEL is part of the Army's Tank Automotive Research, Development and Engineering Center's, or TARDEC's, laboratory system.

While closed to the public, the grand opening is expected to draw top government and industry leaders—many of whom are or will soon be GSPEL's collaborative partners. GSPEL offers shared access to industry and academia to facilitate the exchange of information and ideas to develop emerging energy technologies and validate ground vehicle systems—research that could help the nation achieve energy security goals.

"GSPEL gives the Army overarching, full-spectrum testing and evaluation capability," said TARDEC interim director Jennifer Hitchcock. "The GSPEL's unique facilities will allow the Army to drive innovation for tomorrow's energy solutions."

TARDEC research scientists, engineers, and technicians are already moving into the 30,000-square-foot facility. The eight individual labs are:

Power and Energy Vehicle Environmental Lab, the centerpiece lab featuring one of the world's largest environmental chambers for testing at temperatures from minus 60°F to 160°F, relative humidity levels from 0 to 95 percent, and winds up to 60 mph. The lab's dynamometer and environmental chamber combination allows for full mission profile

testing of every ground vehicle platform in the military inventory in any environmental condition.

Air Filtration Lab is capable of testing the air flow characteristics of various-sized media at four different flow benches using varying flows up to 12,000 standard cubic feet per minute. Each flow stream is equipped with an automated dust feeder enabling simulations from zero visibility to four times zero visibility for evaluation of air filters, cleaners, and other components.

Calorimeter Lab is the world's largest and is capable of testing radiators, charge air coolers, oil coolers individually, or all three simultaneously.

Thermal Management Lab tests thermally managed mechanical and electrical components in varying environments. A variety of chiller and heat systems for use with test bench heat exchanges are used to evaluate components and systems.

Power Lab evaluates major vehicle electrical systems including: charging systems, air conditioning systems, hydraulic systems, and associated components. The lab's two explosion-proof environmental chambers allow for expanded technical research.

Fuel Cell Lab tests future fuel cell capabilities for tactical vehicles. The lab enables the development and evaluation of fuel cell components and systems, including systems to reform JP-8 fuel, various fuel cell media and power conditioning, helping vehicles become quieter and more efficient.

Hybrid Electric Components evaluate hybrid electric powertrains with the emphasis on developing hybrid motor technology and increased electrification of vehicles. Equipment used in this lab will potentially regenerate 80 percent power back into the building, making it possible to re-use the electricity.

Energy Storage Lab makes it possible to safely test and evaluate advanced chemistry battery vehicle modules. Explosion-proof battery test chambers enable safe testing of 10-60 kW advanced chemistry battery packs.

F-35 Reaches Critical Juncture After Strong Year, Official Says

AMERICAN FORCES PRESS SERVICE (MARCH 20, 2012)

Army Sgt. 1st Class Tyrone C. Marshall Jr.

WASHINGTON—The F-35 Lightning II joint strike fighter program—the centerpiece of future tactical aviation and a



The Army's new Ground Systems Power and Energy Lab opens April 11, 2012, just north of Detroit.

Courtesy graphic

key to implementing new military strategic guidance—made strong progress in its development last year, a defense official said today.

Frank Kendall, acting undersecretary of defense for acquisition, technology and logistics, told the House Armed Services Committee that the fighter aircraft is essential to the Defense Department, and that it made “strong progress” in 2011.

“Last fall, the department engaged in a strategy and budget review, where everything—and I do mean everything—was on the table,” Kendall said. “After a careful look at the joint strike fighter program, the department determined that we do need the JSF [and] that we need all three variants of the fighter, and that we need the planned inventory of 2,443 jets.”

That said, Kendall added, “you must recognize there is still a long way to go for JSF.” The F-35 flight test program is only about 20 percent complete and “many of the more challenging elements of flight test are still ahead of us,” he said. Kendall noted the F-35 development has reached a crucial point in the conversion from being conceptualized to actual production.

“The JSF program is undergoing the critical transition from development to production,” he said. “Historically, this is

always a difficult phase for any program, but particularly so for a high-performance aircraft.”

That transition has been even more difficult for the F-35, Kendall said, because the program began production very early, well before flight testing had begun.

That decision for early production resulted in an unprecedented level of concurrency, which drove the need for significant changes in the program, he said. “With this year’s budget, I believe we are now set on a course for program stability,” he added.

Navy Vice Adm. David Venlet, program manager for the F-35, also said the program now is on track. “The F-35 has schedule and budget realism now going forward,” he said. “It is transparent in the discovery and correction of issues arising in test that are typical in all fighter aircraft development.”

Venlet told the Congress members he believes the F-35 “is a critical presence in the combined force battle space. It makes many other systems and capabilities and effects better because of the presence of the F-35’s sensors.”

Venlet called the F-35 a “critical presence” to many nations, as well as being a bond of joint strength across all U.S. military services.

“It is a bond of capability and a bond economically across many nations that raises the level of technology benefit in our militaries and our industries,” he said.

Venlet called the F-35 “the best possible growth platform to incorporate future advances in weapons, sensors, and networks.”

The F-35 also is an assurance to service members that “they will succeed in every mission and return home safely to their loved ones.”

Army Sees 10,000 CROWS Manufactured

ARMY NEWS SERVICE (MARCH 26, 2012)

Kevin Doell

WASHINGTON—The Army is marking the manufacture of the 10,000th M153 Common Remotely Operated Weapons Station, known as CROWS.

The CROWS system allows a weapon such as the M2 .50-caliber machine gun to be mounted atop a vehicle, such as the Humvee, and be targeted and fired remotely from inside the vehicle. This allows a soldier operator to stay safely inside the vehicle.

Army officials from PEO Soldier, along with Pennsylvania Congressman Mark Critz and Norwegian Defense Attaché Rear Admiral Trond Grytting are attending a March 26 event at Kongsberg Protech Systems in Johnstown, Pa.

“The growth of this program can be primarily attributed to one thing—soldier demand,” said Mary Miller, deputy PEO Soldier. “CROWS continues to prove itself as a significant force multiplier on the battlefield with tremendous opportunities for further development.”

The Army has fielded thousands of CROWS II systems in support of soldiers since 2007 across the theater of operations on more than a dozen vehicle platforms. The program reached a major milestone in February when the Army classified the CROWS program with ACAT I status, recognizing the CROWS among the elite levels of the DoD’s major defense acquisition programs.

CROWS is a turret system that provides soldiers the ability to employ cameras, sensors, and weapons from inside the protection of an armored vehicle. CROWS provides fire superiority for the soldier as a result of its ability to turn “area weapons,” such as the M2 .50 caliber machine gun into on-the-move precision engagement weapons.

The Army launched its third CROWS competition January 9. The new contract will enable the Army to procure additional CROWS systems; maintain current and new systems with repairs and spare parts; and secure engineering services needed for product improvements and field service support. The contract competition closed March 23, and the Army anticipates awarding a contract in the fall of 2012.

Program engineers and soldiers alike continue to expand upon the range of applications possible for the CROWS platform. One example is the fielding of one of the Army’s “Greatest Inventions” for 2010, the “Green Eyes” Escalation of Force Kit. The non-lethal green laser offers soldiers an interim step in the escalation of force by temporarily disrupting vision and sending a warning signal across language and cultural barriers to keep innocent people from entering into harm’s way.

The Army’s product manager for crew served weapons incorporated soldier feedback from an earlier operational assessment to improve the fit and function of a second generation of escalation of force kits.

Soldiers recently began to look for ways to leverage CROWS’ target identification and day/night surveillance capabilities in support of force protection. Units requested fixed site

mounting kits to install CROWS in guard towers to better monitor areas and target threats remotely from inside a protected structure. PM CSW began installing fixed sites in January 2012. Fielding teams plan to install systems at various combat outposts and forward operating bases throughout Afghanistan in 2012.

Other accessory upgrades of interest include a secondary screen to assist in verifying enemy combatants prior to engaging with lethal force, enhanced sensor capability, additional weapon integrations such as Javelin, and integrated 360-degree situational awareness.

The Maneuver Support Center of Excellence, which acts as the proponent for the CROWS program, is currently developing a new requirement that will determine what the future CROWS will provide in terms of capability and characteristics. The next chapter for CROWS will be written in the coming years as the proponent's new requirement is staffed, approved, and executed by PM CSW.

Vertical-Lift Aircraft Design Expected Soon

ARMY NEWS SERVICE (March 28, 2012)

Gary Sheftick

WASHINGTON—The military services expect to unveil performance specifications this summer for a new joint vertical-lift aircraft, Maj. Gen. William T. Crosby told congressmen.

Crosby, director of the Army's Program Executive Office Aviation, testified Tuesday afternoon to the House Armed Services Committee, subcommittee on Tactical Air and Land Forces at a hearing on rotorcraft modernization programs. His counterparts from the Navy, Marine Corps, and Air Force also testified.

Crosby said a consortium, which includes industry partners, has been working with the military on ideas for a joint vertical-lift aircraft. Two demonstrator aircraft have been developed, wind-tunnel tests have been conducted, and other studies completed.



Soldiers in a Mine Resistant Ambush Protected (MRAP) vehicle with CROWS atop finish a route clearance patrol with the 57th Sappers (Airborne), 27th Engineering Battalion, and pull into the Combat Outpost Nerkh in Wardak province, Afghanistan, June 2011.

U.S. Army photo

A joint attack-utility variant is the first aircraft the military will invest in under the program, Crosby said.

"Some people are saying it's going to be rotary-wing. We don't know that," Crosby said. "It may be a tilt-rotor of some sort that we're going to go to. But based on the wind-tunnel studies and the demonstrators that we've done and the input of this team, including the consortium, we hope to have a deliverable this summer of a specification that will guide us toward what the next step will be that we're going after."

The effort to design a next-generation aircraft has been called the Joint Multi-Role program. This Army-led program has included input from the Office of the Secretary of Defense, all military services, including the Coast Guard, Special Operations Command, NASA, and others.

Those involved envision the aircraft having vastly improved avionics, electronics, range, speed, propulsion, survivability, altitudes, and payload capacity. Some have said it should be able to sustain speeds in excess of 170 knots, have an overall combat range greater than 800 kilometers and be able to



Three different concepts for the next-generation vertical-lift aircraft are among those being developed under the Joint Multi-Role program.

Courtesy graphic

hover with a full combat load at altitudes of 6,000 feet in 95-degree heat.

Under questions about industry reps being included in the consortium planning the aircraft, Crosby defended this partnership, stating the consortium has been primarily a technology advisory panel.

“There was no commitment to award contracts of scope or anything like that,” Crosby said. “What we were trying to preclude is duplication, where we had a bunch of people going after the same technologies.”

“The other thing is, we in the government, we don’t do a lot of development—cutting-edge development. Our partners in industry, that’s what they do. So we wanted to bring them on to look at these enabling technologies we needed to go to the future, to prevent us from going down a ‘rat hole’ and getting after something that really wasn’t achievable.”

Modernization is more of a challenge today because technology is turning over so fast, Crosby said. As science and

technology dollars become tighter, the Army may rely more on consortiums to help develop new technologies for its future aircraft, he said.

A future vertical-lift study will soon be released to provide a way ahead for aviation modernization, Crosby said.

“It lays out a road map for all of us Services together looking forward. It identifies kind of a scalable architecture of rotary-wing or future vertical lift platforms.”

Another program Crosby cited as showing a lot of

potential is the Improved Turbine Engine Program, or ITEP. This program’s objective is to develop technologies for a 3,000-horsepower engine that reduces fuel consumption for the AH-64 Apache and UH-60 Black Hawk helicopters.

“What a great capability,” Crosby said of the ITEP tech demonstrators. He said they were demonstrating “all of the improvements that we’re asking for,” including a 30 percent increase in power and a 25 percent decrease in fuel.

The ITEP is expected to come out of its science and technology phase this summer, Crosby said, adding that the Army intends to continue carrying two vendors for the program if budget realities permit.

Information on the vision for the next-generation helicopter was obtained from Kris Osborn, an adviser to the Office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology.