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SPECIAL REPORT

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October 12, 2015

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INTERVIEW

Gen. Mark Milley

The US Army chief of staff discusses the conflict in Iraq, Russia's actions in Syria and budget challenges. *Page 46*



Fighting ISIS: Is Pentagon Using Air Power to its Full Potential?

By LARA SELIGMAN

WASHINGTON — It's been one year since the United States and partner nations began airstrikes to degrade and destroy the Islamic State in Iraq and Syria, and the fight is far from over.

Now as Russia ramps up its own offensive, the Pentagon faces accusations that commanders do not have a clear strategy or goal for the campaign.

Some blame the perceived lack of progress on President Obama's reluctance to use airpower to its full potential. Critics compare Operation Inherent Resolve (OIR) to previous air offensives, pointing

INSIDE

Ankara Reacts:

Russian actions tighten Turkish bond with NATO, Qatar. *Page 38*

and Iraqi Freedom.

But the Air Force is pushing back, arguing that the nature of warfare has shifted drastically over the past few decades. The Pentagon can't fight this war the same way it fought the last few, top officials say.

How Does OIR Stack Up?

As of Oct. 6, the US and partner nations had conducted 7,323

out that coalition aircraft flew significantly more strike missions each day during Desert Storm

strikes against ISIS: 4,701 in Iraq and 2,622 in Syria, according to a Pentagon report on OIR. Over one year, that averages out to about 13 strikes in Iraq and seven strikes in Syria each day.

By comparison, during the 42-day Desert Storm air campaign against Saddam Hussein in 1991, coalition fighters and bombers flew 48,224 strike sorties, or 1,100 a day. Twelve years later, the 31-day Iraqi Freedom air campaign averaged more than 800 offensive sorties a day.

This limited application of air power to destroy ISIS raises questions about the administration's

See AIRSTRIKES, Page 8

Arabian Gulf Divides Threaten Anti-Assad Coalition

By AARON MEHTA and AWAD MUSTAFA

WASHINGTON and ABU DHABI — While Gulf Arab countries are united in the fight against the Islamic State group, the addition of Russia's military to the region is threatening to divide the coalition — and potentially kill any kind of a political solution to the crisis in Syria.

It's a situation that could only deepen the chaos in Syria at a time when the United States is re-evaluating its strategy to train and equip Syrian moderates, but remains unwilling to commit fully to counter the military actions of either Syrian President Bashar al-Assad or Russian President Vladimir Putin.

The debate inside the Gulf nations boils down to whether the regional powers believe Russian intervention in Syria will help curb the spread of the Islamic State group, best known as ISIL or ISIS but regionally referred to as Daesh.

On one side of the disagreement are the Saudi, Qatari and the Turkish governments, which are adamantly opposed to Russian intervention in the region. Saudi Foreign Minister Adel al-Jubeir described the Russian military moves as an "escalation" at a recent meeting of the Gulf Cooperation Council (GCC).

The other side is made up of the United Arab Emirates, Egypt and Jordan, which view Russia's actions with optimism. That voice can be heard through Egypt's Foreign Minister Sameh Shukri, who

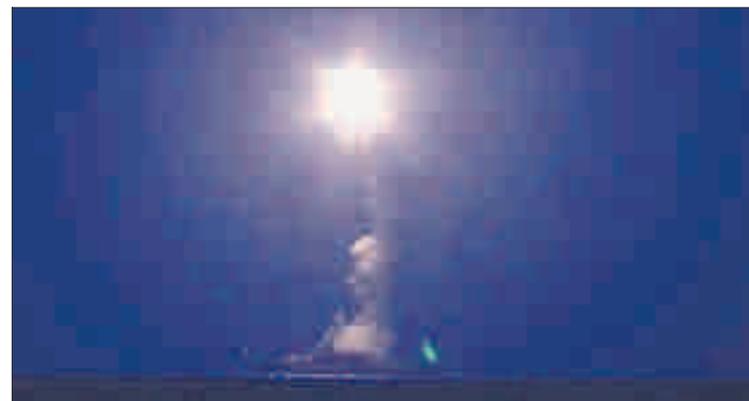
See GULF DIVIDES, Page 10

Is Caspian Sea Fleet a Game-Changer?

By CHRISTOPHER P. CAVAS

WASHINGTON — Few naval strategists would count Russia's Caspian Sea flotilla among significant units in an order of battle. The inland sea features naval forces from the four bordering countries — Azerbaijan, Iran and Turkmenistan in addition to Russia — but most vessels are small missile-armed or patrol craft, nearly all well under 1,000 tons. The forces have been viewed purely as local craft.

But that changed on Oct. 7, when four Russian warships in the Caspian Sea launched a reported 26 Kalibr SS-N-30A cruise missiles at targets in Syria, nearly 1,000 nautical miles away. While most analysts dismissed the military effects of the missile strikes, the fact that



RUSSIAN MINISTRY OF DEFENSE VIA ITV

Extending Its Reach: A Russian Buyan-M-class corvette launches Kalibr cruise missiles at Syria from the Caspian Sea on Oct. 7.

such small, inexpensive and relatively simple craft can affect ground operations that far away is

significant.

"It is not lost on us that this

See CASPIAN FLEET, Page 8

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InBrief

US Army To Prioritize New Light Vehicle, Stryker Upgrade

By JEN JUDSON

WASHINGTON — The US Army's plan to modernize its combat vehicle fleet in the near term looks to acquire a new lightweight vehicle for infantry brigade combat teams and increase the lethality of its Strykers, according to the service's new combat vehicle modernization strategy.

In the outlying years of the strategy, vehicles will have robust mobile protected firepower capability and formations could see mostly unmanned, autonomous systems carry out security and reconnaissance missions.

The strategy acknowledges there are no "silver bullet technologies," Lt. Gen. H.R. McMaster, the head of the Army's Capabilities Integration Center, told Defense News in an exclusive interview.

The Army's brigade combat teams need to come to the battlefield overmatching the enemy's ca-

pabilities, McMaster explained.

When the Army is "in close combat with the enemy, you want to be the Terminator, if you can be," he added.

The Army has struggled to get new vehicle programs off the ground, canceling its Future Combat Systems and the Ground Combat Vehicle (GCV) without providing new capabilities. The Army awarding a contract to Oshkosh for its new Joint Light Tactical Vehicle is the service's only recent victory in the vehicle realm.

The strategy, obtained by Defense News, acknowledges that future missions will require the Army's brigade combat teams to fight with a joint force and "to win against well-armed state, non-state and hybrid threats across a range of operations. Therefore, there is urgency in refocusing the Army's combat vehicle modernization strategy and a need to increase investment to prepare for existing



SGT AUSTAN OWEN/US ARMY

More Punch: Under the US Army's modernization plan, Strykers will need to be made more lethal.

and emerging threats."

Those investments will include quickly procuring a lightweight combat vehicle for infantry brigade combat teams to rapidly deploy in restrictive areas across all types of terrain and urban and austere environments.

The Army also wants a light reconnaissance vehicle in the near term particularly for cavalry squadrons that would need to execute early or forced entry operations.

Stryker armored personnel carriers need to be more lethal. That means adding a 30mm cannon on half of them and Javelin anti-tank missiles on the rest, along with machine guns.

With the cancellation of the GCV program, the Army has fallen fur-

ther behind in replacing its aging Bradley infantry fighting vehicles. A newer program, the Future Fighting Vehicle, is on the horizon, but McMaster said the Army needs to move on its development "like now. I mean like right now."

The strategy also called for the near-term replacement of the M113 armored personnel carrier. The Army needs to do "everything it can do to accelerate the AMPV because we are already behind," McMaster said, adding the M113 is "kind of a death trap now." □

Email: jjudson@defensenews.com.

For more details on the Army's Combat Modernization Strategy, pick up a copy of the Association of the United States Army's show daily.

FOR THE RECORD

Total Response to Cyber Attack

As the US faces an increasingly volatile cyber landscape, responsibilities and responses will increasingly be governmentwide, a top US cyber official said.

"Cybersecurity is a whole-of-government domain," in which the Defense Department works with the Department of Homeland Security and the FBI, said Aaron Hughes, the DoD's deputy assistant secretary of defense for cyber policy. This means the US has a variety of options in how to respond, and that response is not automatically a counterattack in cyberspace.

Paul Stockon, a non-resident fellow at the Center for Strategic and International Security, and manag-

ing director at Sonecon, suggested the government expand its cyber efforts to include state National Guard forces to provide support for water, power and other critical infrastructure.

Russia Building 'Arc of Steel'

A resurgent Russia is creating an "arc of steel" meant to challenge and confront NATO, a top US naval officer warned.

"We are observing the manifestation of a more aggressive, more capable Russian Navy," Adm. Mark Ferguson, commander of US Naval Forces Europe and commander of the Allied Joint Force Command in Naples, said in Washington.

Speaking at the Atlantic Council, Ferguson described a revived Russian military that is expanding its capabilities from Cold War days.

"Responsiveness is a new element, as we have seen that Russian

actions have fully integrated the elements of speed and strategic surprise," he said.

German Fund for Partners

The German government has set up a €100 million (US \$112.5 million) fund to help partner countries in Africa and the Middle East stabilize their security situation.

The new fund, which is planned for fiscal 2016, will be tapped for measures such as assistance for Tunisian border protection, Katrin Suder, state secretary of the German Ministry of Defense, said in her speech during a conference this week in Berlin.

According to Suder, the aim of the new initiative is to help partner countries prevent crises and stabilize their overall security environment. The money will be used to procure equipment and services for tasks like border protection,

small arms controls or the clearing of minefields.

Norway Sets 9.8% Budget Hike

Norway's military is set to gain a 9.8 percent real-term increase in its budget for 2016. The rise, contained in the government's newly released budget proposal, will result in defense spending climbing by US \$526 million to \$6 billion in 2016.

The plan will increase Norway's defense spending to 1.54 percent of GDP. About \$1.51 billion is allocated to weapons and equipment procurement, while infrastructure projects will receive \$393 million in 2016.

The plan, coupled with parallel objectives set out by the Ministry of Defense, addresses funding and force development issues set out in the Strategic Defense Review presented to the MoD on Oct.1. □

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■ **Adm. Mark Ferguson**, commander, Allied Joint Force Command and US Naval Forces Europe-Africa, discusses Russia's military modernization, improving US troop training and Russia's recent actions in Syria.

■ **Michael O'Hanlon** of the Brookings Institution discusses his new book, "The Future of Land Warfare."

■ Retired **US Army Lt. Gen. Rodger Thompson**, executive vice president, Membership and Meetings, Association of the US Army, previews the AUSA conference.

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Concern is mounting on Capitol Hill after tests revealed a lightweight F-35 pilot's neck could snap when ejecting at certain speeds.
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WorldNews

Chinese Newspaper: Satellites Will Pinpoint US Carriers

By WENDELL MINNICK

TAIWAN — China's military is getting its ducks in a row for what many experts see as a realistic competence at destroying US aircraft carriers during a confrontation scenario over Taiwan.

In a recent issue of the Chinese-language state-run China Youth Daily newspaper, a report claims that the Gaofen-4 geostationary earth observation satellite will be launched by the end of this year with the express purpose of hunting US aircraft carriers. The satellite is equipped with a visible light imager at 50 meters and infrared staring optical imager at 400 meters.

During the 1996 Taiwan Strait missile crisis, the Chinese military was flustered by the presence of two US aircraft carriers sent to protect Taiwan during missile

exercises designed to intimidate the island.

Since then, the military has created the means of holding at risk US aircraft carriers with two new anti-ship ballistic missiles, the DF-21D and the new DF-26. However, locating US aircraft carriers is not easy, and China has developed a variety of airborne and space-based sensors to ease the search.

"The Gaofen series of satellites, as the first series of satellites developed under the Medium and Long-term Development Plan for Science and Technology, plays an important role in building this system," Kevin Pollpeter, senior research analyst on China at Defense Group Inc., said. "As China develops and deploys long-range, precision strike assets, it recognizes the need for an effective C4ISR [Command, Control, Communications, Computers, Intelligence, Surveil-

lance and Reconnaissance] platforms, to take imagery of large swaths of the ocean to attempt to locate targets such as aircraft carriers."

Pollpeter said that during the time that it would take to process the imagery, the aircraft carrier would have moved, but its general location would have been fixed.

Hans Kristensen, director of the Federation of American Scientists' Nuclear Information Project, agrees that the Gaofen-4 will have limitations, but "China does not need to track every single US aircraft carrier around the globe — only those within striking range of China." For knowledge of a carrier's location to be useful for operators of the DF-21D, the satellite would have to be able to relay that information, more or less, continuously to the guidance system for a DF-21D to be able to strike the



TORU YAMANAKA/AFP

Hunting Carriers? US aircraft carrier Ronald Reagan arrives at the US Navy base in Yokosuka, a suburb of Tokyo, on Oct. 1. A Chinese state-run newspaper claims that the Gaofen-4 geostationary Earth observation satellite will be launched by the end of this year with the express purpose of hunting US aircraft carriers.

carrier.

The Gaofen appears to be another important piece in China's evolving space-based monitoring capabilities — a network that will work together to locate, target and destroy aircraft carriers and destroyers.

The tragedy, according to Ian Easton, a China military specialist at Project 2049 Institute, is that China has made clear its intention to target US carrier groups with ballistic missiles.

"Yet the Obama administration chose not to issue a diplomatic demarche or raise the issue with [Chinese President Xi Jinping] at

the White House," Easton said. "By default, the White House is legitimizing China's military buildup, which is aimed at [the US] and [its] friends. Any other sovereign country in the world would protest full throatedly. America's silence on this issue is self-defeating."

In early September, Beijing commemorated the 70th anniversary of its victory over imperialist Japan with a parade that unveiled both the DF-21D and the new DF-26. The DF-21D is operational and deployed; the status of the DF-26 is unclear. □

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Carter: Threats Arising on NATO's Southern Flank

By STAFF REPORTS

BRUSSELS, ROME and MADRID — US Defense Secretary Ash Carter's visit to Europe last week inevitably focused on Russian bombing in Syria, but he also stressed the growing danger of instability in North Africa after making stops in Spain and Italy.

Speaking at the NATO defense ministers' meeting in Brussels, Carter described "the challenges facing NATO's southern flank, including the ripple effects of [the Islamic State in Iraq and the Levant] and state instability in North Africa and the Middle East."

In Spain, Carter visited the Moron de la Frontera Air Base, home to a Marine contingent set up following the 2012 murder of US diplomat Christopher Stevens by militants in Benghazi, Libya, as the country collapsed into chaos. The Special Purpose Marine Air-Ground Task Force (SP-MAGTF) envisages a maximum presence of 2,200 military staff, 500 DoD staff, six MV-22 Ospreys and two KC-130J Super Hercules for supplies and medical evacuation.

After a final agreement on defense cooperation reached last month with the Spanish government, the initial SP-MAGTF crisis response has become permanent and allows for a maximum long-term US military presence at Moron Air Base of 2,200 military

personnel, 500 US Defense Department civilian employees and 36 aircraft.

With options for the addition of an 800-strong crisis response force and 14 more aircraft, the contingent is three to four hours from Libya and has already operated in Sudan and trained in Senegal, as well as serving as a US logistics hub during the West African ebola outbreak in 2014.

In June, US F-15 fighters mounted an attack in Libya on Mokhtar Belmokhtar, a jihadist who led a deadly attack on an Algerian gas facility two years ago.

Besides the Moron Air Force, the US has home-ported four Arleigh Burke-class destroyers, equipped with the Aegis guided missile combat system, in Rota as Spain's contribution to NATO ballistic missile defense.

The US is not involved in an EU naval operation, which started on Oct. 7, to capture traffickers who have helped over 130,000 migrants and refugees sail from lawless Libya to Italy this year.

Carter also visited the US air base at Sigonella on the Italian island of Sicily, from where planes flew to bomb Libya in 2011 to assist rebels fighting then leader Col. Moammar Gadhafi.

US Global Hawk UAVs now fly over Africa from Sigonella, and Carter said in Rome that Global Hawks acquired by NATO as part of

its Allied Ground Surveillance program would arrive in Sigonella next summer. This summer, a US Beechcraft King Air 350ER flew from the Italian island of Pantelleria in the Mediterranean to remote areas in western Tunisia, to track suspected terrorists, reportedly on behalf of Africom.

Syria Focus

Still, the majority of the NATO conference — and indeed, of Carter's trip abroad — was naturally focused on the situation in Syria, with a number of NATO members condemning Russia's ongoing actions in support of Syrian President Bashar al-Assad.

"Instead of engaging in political transition in Syria, which is needed in this long-suffering country, Russia has chosen to double down on their long-standing relationship with Assad, committing additional capabilities and personnel," Carter said in a speech at NATO.

Those comments were echoed by other European leaders. Federica Mogherini, the High Representative of the Union for Foreign Affairs and Security Policy, cautioned that a military escalation on Russia's part "will lead nowhere."

She added that, for Russia, "fighting alongside the regime" in Syria's bloody civil war will only "prolong the agony" of the conflict.

On the fight against terrorism in Syria, she said the EU had decided "long ago" not to be militarily involved, but added, "Still, we actively contribute with non-military means to the objectives of the global coalition against Da'esh. Our engagement goes from reducing the threats of radicalization and the recruitment of new foreign terrorist fighters in European countries, to working to stop the flow of revenues to Da'esh."

Anna Fotyga, who chairs the European Parliament's influential subcommittee on security and defense, also accused Russia of "trying to destroy" the opposition in Syria rather than fighting the Islamic State group.

Those concerns seemed to manifest themselves in real terms toward the end of last week, as ISIS fighters for the first time advanced to within a few miles of Aleppo — a key commercial town — after taking a series of villages while rebel forces fighting them were under attack from Russian raids.

"ISIS is exploiting the confusion caused by the Russian bombing of rebels to help its advance on Aleppo," said Thomas Pierret, a lecturer in contemporary Islamic studies at the University of Edinburgh. □

Tom Kington in Rome, **Esteban Villarejo** in Madrid and Brussels, and **Matthew Bodner** and **Martin Banks** in Brussels contributed to this report.





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WORLD NEWS

AIRSTRIKES

From Page 1

objectives, said retired Lt. Gen. Dave Deptula, former deputy chief of staff for intelligence, surveillance and reconnaissance.

"To what end it's still unclear, particularly since the application of air power to date, while enormously precise and effective to the extent that it has been applied, the degree to which it has been applied is very, very, very limited relative to what the potential application of air power could be," Deptula told Defense News.

Deptula also pointed out that OIR is lead by an Army general: Lt. Gen. James Terry. If the administration's goal is to take out ISIS through the use of air power alone, why put an Army commander in charge of the air campaign, he asked?

"They [the Russians] are taking advantage of a less-than-robust US military effort regarding the Islamic State to dramatically increase their presence in the Middle East," he said, adding that Russia's moves in recent days have shown "not only can the Russians walk and chew gum, they can also play chess."

Analyst Mark Gunzinger blamed the perceived failure to defeat ISIS on the lack of an overarching strategy.

"This really isn't an air campaign as we have thought of them in the past, in terms of numbers of sorties, in terms of targets struck, in terms of intensity," according to Gunzinger, a senior fellow at the Center for Strategic and Budgetary Assessments and former deputy assistant secretary of defense. "It's almost as if the starting point was: 'How can the United States use the least force possible and avoid a deeper entanglement in the conflict?'"

Reality of Warfare Today

But the Pentagon defends its tactics in Syria, with one top Air Force general arguing that OIR is a completely different ballgame.

For one thing, the battlefield today is much more complex, according to Gen. Hawk Carlisle, commander of Air Combat Command. The situation in Syria involves many different players, Carlisle stressed: the Iranian Quds Force, the Shia militias, the moderate Sunnis, ISIS, the Kurds and the Syrians forces, just to name a few.

"When you look at the complexity of that battlefield, if you look at the number of players and the identification of who is who and who is doing what to whom, and you look at the factions that are out there ... this is an incredibly complex battlefield," Carlisle said last month during the Air Force Association's annual air and space exposition.

Since Desert Storm and Iraqi Freedom, the US has made great strides in precision-guided munitions, Lt. Gen. Robert Otto, deputy chief of staff for ISR, said in an interview with Defense News. The US is deploying primarily precision-guided bombs in the region to avoid collateral damage, he stressed.

This could provide one explanation for OIR's lower strike sortie rate, but Deptula doesn't buy it. The administration is placing too much emphasis on avoiding collateral damage, he argued, to an extent that well exceeds the requirements of the laws of armed conflicts. In the meantime, ISIS is busy murdering innocent civilians.

"What is the logic of a policy that limits the application of force to get rid of the evil that is the Islamic State while allowing them to kill innocent men, women and children?" Deptula said.

One frustration for the Air Force is a lack of assets and intelligence on the ground, Otto noted.



US AIR FORCE/GETTY IMAGES

Air Power: An F-22 Raptor is refueled by a KC-10 tanker prior to strike operations in Syria.

"I think we need to do a better job at holistically using our intelligence to create the targets. So it's using signals intelligence, what we hear with geospatial intelligence, what we can discern from pictures with moving target indicators," Otto said.

Budget uncertainty is also a challenge for commanders in charge of the strikes in Syria and Iraq, Otto said. The Air Force is stretched dangerously thin, which limits commanders' ability to deploy key assets like remotely piloted vehicles and the Distributed Common Ground System.

"The key skill sets that we need to do this have been stretched, and the ability to deploy and redeploy some of the key skills has

been an issue for us in the Air Force," Otto said.

Fifth-generation Platforms

But the news out of Syria is not all bad. The Air Force's new F-22 Raptor, deployed for the first time last year as part of the ISIS strikes, is exceeding all expectations, Carlisle said.

"The reliability of that airplane is extraordinary, the maturity of that airplane — it's really reaching its stride," Carlisle said.

"We won't send airplanes into certain areas if they don't have F-22s with them because they make everybody better."

Col. Larry Broadwell, commander of the 1st Operations Group, emphasized the Raptor's enhanced ability to identify and destroy targets on the ground, adding that the plane's integrated sensors have improved battlefield awareness for both US and coalition aircraft.

But the F-22 has some limits. While it is able to communicate with other F-22s, the plane does not yet have the ability to send information to fourth-generation aircraft, Broadwell acknowledged. The plane can import information across traditional data links, but can't export data, he said.

The Air Force's ISR platforms, including the U-2 spy plane and RQ-4 Global Hawk, are also performing well.

But the Air Force is afraid Russia is catching up.

"They are closing the gap," Carlisle said.

"I still believe that we hold an advantage over everybody, and certainly the Russians, in the way we train and the caliber of our airmen, and I think fifth-gen to fifth-gen and fourth-gen to fourth-gen we still own the advantage," Carlisle said. "But their fifth-gen to our fourth-gen — that's a tough fight. □"

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CASPIAN FLEET

From Page 1

launch from the Caspian Sea was more than just hitting targets in Syria," said a US official. "They have assets in Syria that could have handled this. It was really about messaging to the world and us that this is a capability that they have and they can use it."

The Kalibr missile used in the strikes is an improved version of the Granat land-attack cruise missile, similar to the US Navy's Tomahawk, that travels at subsonic speeds. Designated 3M-14T by the Russians — SS-N-30A is the NATO designation — the Kalibr long-range version has only recently reached operational status. A submarine-launched version is in service, along with a ship-launched version equipping larger ships, including the Project 1161K Gepard-class light frigate Dagestan, which took part in the operation. But until now it was not clear that smaller ships, including the Project 21631 Buyan-M corvettes that also took part in the Oct. 7 attacks, could operate the weapon.

"This was not a missile seen as

being normally carried by the corvettes, which had [shorter-range] Klub missiles as opposed to the land-attack version," said Bryan Clark, a naval analyst with the Center for Strategic and Budgetary Assessments in Washington. The Kalibr, he said, "changes it from being a sea-control ship to one with distributed lethality. The US has been aspiring to that, but the Russians have shown they already have it."

Milan Vego, a long-time authority on small combat craft and professor of joint military operations at the US Naval War College, noted that many navalists overlook the capabilities of smaller craft.

"We have been somehow dismissive about the increasing combat power of small combatants," he said.

"The US Navy and other navies, blue water navies, really have to pay more attention to what is going on. These smaller ships are less than 1,000 tons. It is very dangerous to be dismissive, especially in smaller straits where they can do a lot of damage."

The Dagestan is one of two Gepard-class frigates of 1,961 tons full load displacement in Russian ser-

vice, according to IHS Jane's, completed in 2012 after a prolonged building period at Zelenodolsk Shipyard in Kazan, Russia. Two export versions of the design were delivered to Vietnam in 2011 and two more are under construction. So far, the Vietnamese versions do not seem to be armed with the Kalibr missile.

The other three ships taking part in the Oct. 7 missile strikes are 949-ton corvettes also built at Zelenodolsk, all for Caspian Sea service. The six Buyan-M corvettes were known to be fitted with an eight-cell vertical launch system mounted amidships, capable of launching the SS-N-27 Klub missile.

It is not clear how effective the missile strikes were. The Russian Defense Ministry claimed that all 26 missiles hit one of 11 different targets in Syria — according to Pentagon sources, most around the Aleppo area, where ISIS is not known to be operating.

The flight path from the Caspian Sea crossed Iranian and Iraqi airspace en route to Syria, said the Russian Defense Ministry, adding that pre-strike approval was granted by both countries. On Oct. 8 reports emerged that four of the 26

missiles landed prematurely in Iran. The reports were discounted by official Russian sources, while Pentagon sources were confident the stories were accurate.

"The strikes are mostly indicative of this dramatic improvement in Russian command and control," Clark said. "They involved deconfliction of multiple aircraft and missiles in the same airspace. That's no mean feat, and generally has been a place where someone like Russia has problems. Seeing that they were able to do it here implies they're getting better at that."

Aiming the missiles at fixed, land-based targets also simplified the operation, he noted, as the ships didn't need sophisticated sensors or fire control systems to carry out the strikes.

"As long as you're going after a fixed target you can get someone else to figure out the target location and transmit that to the ship," Clark said.

"If you're going after a moving target you need some kind of data link, some way to get that into the missile. It gets a lot more complicated."

The operation was a good dem-

onstration of the concept of distributed lethality, Clark said, where weapons and sensors can be spread out to multiple units.

"The Russians are adopting distributed lethality faster than the US," he noted. "The arguments made for distributed lethality are to put firepower on a bunch of smaller ships, have them disperse, in turn increase targeting problems for the enemy, and you may be able to generate the same kind of firepower if you concentrate the platforms."

"With the Russians, these 900-ton corvettes are harder to find than a [4,000-ton US] littoral combat ship. You can buy them in larger numbers, and they also carry land-attack weapons," unlike LCS.

The US Navy is working on a more heavily armed version of the LCS, dubbed the LCS frigate, but those ships are not likely to have a Kalibr-like weapon.

"We have a new class of ships that we're not equipping with anything that's like this missile," be moaned Clark. "The Navy should feel embarrassed that they let this happen." □

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GULF DIVIDES

From Page 1

recently said his nation believes “that the [Russian intervention] will impact the fight against terrorism in Syria and help eliminate it.”

“Russia is concerned by the resistance to terrorism and the purpose of its intervention is a fatal blow to terrorism in Syria, and its strikes are in line with those of the anti-Daesh coalition in Syria and Iraq,” he added.

Driving that divide is the question of the so-called moderate rebels fighting both ISIS and Assad’s regime inside Syria.

The UAE, Jordan and Egypt view the groups being hit by Russian airstrikes as extremists, explained Gulf-based geopolitical adviser and analyst Theodore Karasik.

He points out that King Abdullah of Jordan, Crown Prince Mohammed Bin Zayed of the UAE and President Abdel Fattah El-Sisi of Egypt all met with Vladimir Putin at the MAKS air show in July and likely laid out their thoughts on the Syrian situation then.

“There has been a lot of complaining from the West that these airstrikes have not only targeted the Islamic State but other groups,” Karasik said. “This concept of other groups is very important, because Russia, Egypt, Jordan and the UAE consider other actors in Syria to be extremist, including the Free Syrian Army, because the FSA has been an abject failure.”

In contrast, while the US has at least vocally supported some groups fighting in Syria, it has avoided giving them major weapons systems that could help fight Assad or Russian forces. That is more in line with the Saudi-Qatari-Turkish alignment, although there are cracks there as well.

In addition to operations against ISIS, Turkey is at war with the PKK, a Kurdish militant group with a power base inside Syria; at the same time, the US is relying heavily on Kurdish forces to fight against ISIS in both Syria and Iraq. And Qatar has ties with al-Nusra, a group designated as a terrorist organization by the US.

As of the afternoon of Oct. 9, unconfirmed reports were circulating on social media of a potential shootdown of a Russian jet by Turkish forces.

Internally, Saudi Arabia has an ongoing policy fight between deputy crown prince and defense minister Prince Mohammed Bin Salman, crown prince and interior minister Mohammed bin Nayef and Foreign Minister Adel Al Jubeir, said Karasik.

“Mohammed Bin Nayef is upset because the attacks on Saudi-backed groups is a direct threat on



FAYEZ NURELDINE/AFP

Russian Aggression: Saudi Foreign Minister Adel al-Jubeir, shown here at a September meeting of the Gulf Cooperation Council, has described the Russian military moves in the region as an “escalation.”

the kingdom and causes a direct effect on domestic security in Saudi, these attacks would cause a splatter effect and may cause some of these extremists to go back to Saudi Arabia,” the analyst said.

Those internal issues, as well as Russia’s full-throated entrance into Syria, means any near-term chance of a political solution that sees Assad leave power has likely ended, said Emma Ashford of the Washington-based CATO Institute.

“In the last six months we’ve seen increasing contacts between Saudi and Russia, where we started to see leaders having meetings, holding conversations, and there was hope they were moving toward a political settlement,” Ashford noted. “This new Russian campaign seems to have killed that. I suspect that [the GCC countries] are scrambling to figure out what to do now that Assad’s regime has a lot more power.”

John Herbst, former US ambassador to Ukraine and now director of the Atlantic Council’s Dinu Patriciu Eurasia Center, warns that there is “little hope” for the kind of stable, moderate Syria that the US is seeking, at least in the short term.

“In the longer term, the prospects for the following deal might emerge: Assad steps down and is replaced by someone else from the Alawi community. That successor is chosen in consultation with prominent Sunni families/politicians/business leaders, and these prominent Sunnis likewise become part of a new, transition government,” Herbst argues.

“This possibility would emerge once Russia is bloodied by extrem-

ist groups regaining the initiative against Assad. Facing the dilemma I describe above, Moscow chooses to give up Assad,” he continued. “For this to work, we would have to make sure that the Gulf States and Turkey are turning off all support for the jihadis.”

Just how likely a political solution between the Saudis and Russians was, however, is unclear.

“For the Saudis, the main strategic objective remains the fall of Assad’s regime — a goal irreconcilable with Russian interests,” said Karim Bitar, Arab affairs specialist at the Paris-based Institute of International and Strategic Relations.

In contrast, “Egypt’s Sisi is more in line with Putin’s policy that seeks to revive the camp of authoritarian nationalism in the face of Islamist movements.”

Even if Saudi Arabia wants the fall of the regime in Damascus, it has a “confusing” foreign policy as seen from its intervention in Yemen, said Yezid Sayegh, Syria expert at the Carnegie Middle East Center.

“It does not know what to do or how to do it. The Saudis have reached a limit” when it comes to Syria, he added.

Increased Support

Both the US and Gulf states have supplied equipment to rebel groups inside Syria, although in different ways.

While the Gulf nations have funded several groups, the US has been stingy in its support, with a Pentagon program to train and equip moderate fighters restricted to those who wish to fight ISIS only, leaving out the large swath of

potential fighters who are more concerned with the Assad regime.

That program, which cost the US tens of millions of dollars to produce only a small handful of fighters, was formally paused Oct. 9 in favor of a looser equipping program.

Rather than vet every fighter, the Obama administration announced, the Pentagon will vet leaders of various units and then task those leaders to hand out US provided equipment — which, in turn, opens up the risk of that equipment falling into the hands of groups like al-Nusra.

To address those concerns, the program will restrict the flow of sophisticated weapons and supplies.

“We’ll be providing more basic kinds of equipment. That’s one way we’ll try to mitigate the risk because we aren’t vetting with each fighter,” Christine Wormuth, the undersecretary of defense for policy, told reporters.

“We’re certainly not talking about some of the higher-end types of equipment” such as shoulder-fire missiles or portable anti-tank systems known as MANPADS, she added.

That means the gear will not be much help against the heavily armed Russian forces now providing support for Assad’s ground troops, including with daily airstrikes and helicopter sorties.

Although it is still unclear whether other Gulf states would want the Syrian rebels they fund to engage Russian forces in battle, Sami al-Faraj, a Kuwaiti security adviser to the Gulf Cooperation Council, said he expected Gulf states will continue to funnel weapons to the opposition groups, he added, but would “not give them with the objective of fighting Russian forces in Syria.”

Former Saudi Royal Navy Commander Prince Sultan bin Khaled al Faisal said last week at the Washington-based Center for Strategic and International Studies that Russia and Iran have “delusions of grandeur” when they look at their military capabilities.

Describing Moscow’s military involvement backing the regime of Bashar al-Assad “is just exasperating the problem” of resolving the civil war.

As for the United States’ role in the Middle East, Prince Sultan said, “It can be more forceful.”

The United States could “put more pressure on Iran to pull out of Syria and have their subordinates go back to Lebanon,” he added, but the Obama administration “has to want to do it” economically, diplomatically and militarily, if necessary.

Russian-led Alliance

While the US-Gulf coalition is facing infighting, another coalition

has solidified between Russia, Iran, Iraq and Assad’s government.

To US-based analysts, a more formal relationship between Iran, Russia and Syria is not a huge game-changer. After all, they have had some form of relationship in place for quite some time, with Russia and Iran supporting Assad’s regime since the rise of ISIS.

The real change is Iraq’s shift toward Iran and Russia, a move that seems to create a rift between the US and the government of Iraqi Prime Minister Haider al-Abadi.

“We continue to view Iraq as our ally, and we’re working with them to fight ISIS together, but it looks increasingly like the government in Baghdad is very comfortable working with the Russians, working with the Iranians, and they may even start to ask Russia to participate inside Iraq for airstrikes,” Ashford said. “So it’s a very different situation in Iraq.”

The most attention-grabbing part of the alliance is the new agreement between the countries, announced Sept. 28, that Iraq will be sharing intelligence with Iran, Russia and Assad’s government.

The US obviously shares significant amounts of information with the Iraqi government, raising the specter of US intelligence being passed along to Iraq’s new partners — providing a bevy of US strategic and tactical information to Assad’s government.

At the Sept. 29 Senate Armed Services Committee hearing, Deputy Secretary of Defense Bob Work admitted the Pentagon was “caught by surprise” when Iraq entered into the intelligence-sharing agreement with Iran, Syria and Russia.

“Obviously, we are not going to share intelligence with either Syria or Russia or Iran,” Work said. “We are in the process of working to try to find out exactly what Iraq has said. Certainly, we’re not going to provide any classified information to help those actors on the battlefield.”

One Pentagon official, however, said the DoD was not overly concerned, once again due to the existing ties between Iraq and Assad, chalking it up to, essentially, nothing really new.

Frederic Hof, former US special adviser for transition in Syria, also downplayed the intel-sharing agreement as “less about sharing intelligence than it is about putting an exclamation point on Mr. Putin’s claim that ISIS can and should be fought only by existing regional governments.”

Putin, Hof says, “wants more than anything else to rehabilitate his client: Bashar al-Assad. This ‘agreement’ is meant to reinforce Russia’s pro-Assad position.” □

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'Trail Boss' Prioritizes Cyber Situational Awareness

BY JEN JUDSON

ABERDEEN PROVING
GROUND, Md. — Col. Joseph Dupont is the US Army's first cyber "trail boss" and he equates his job to "wrapping my arms around water and holding on tight."

The job leading the Army's Cyber Acquisition Task Force is "all about enabling the Army to operate in cyberspace," Dupont told Defense News. "That ends up being a very vague subject for many people."

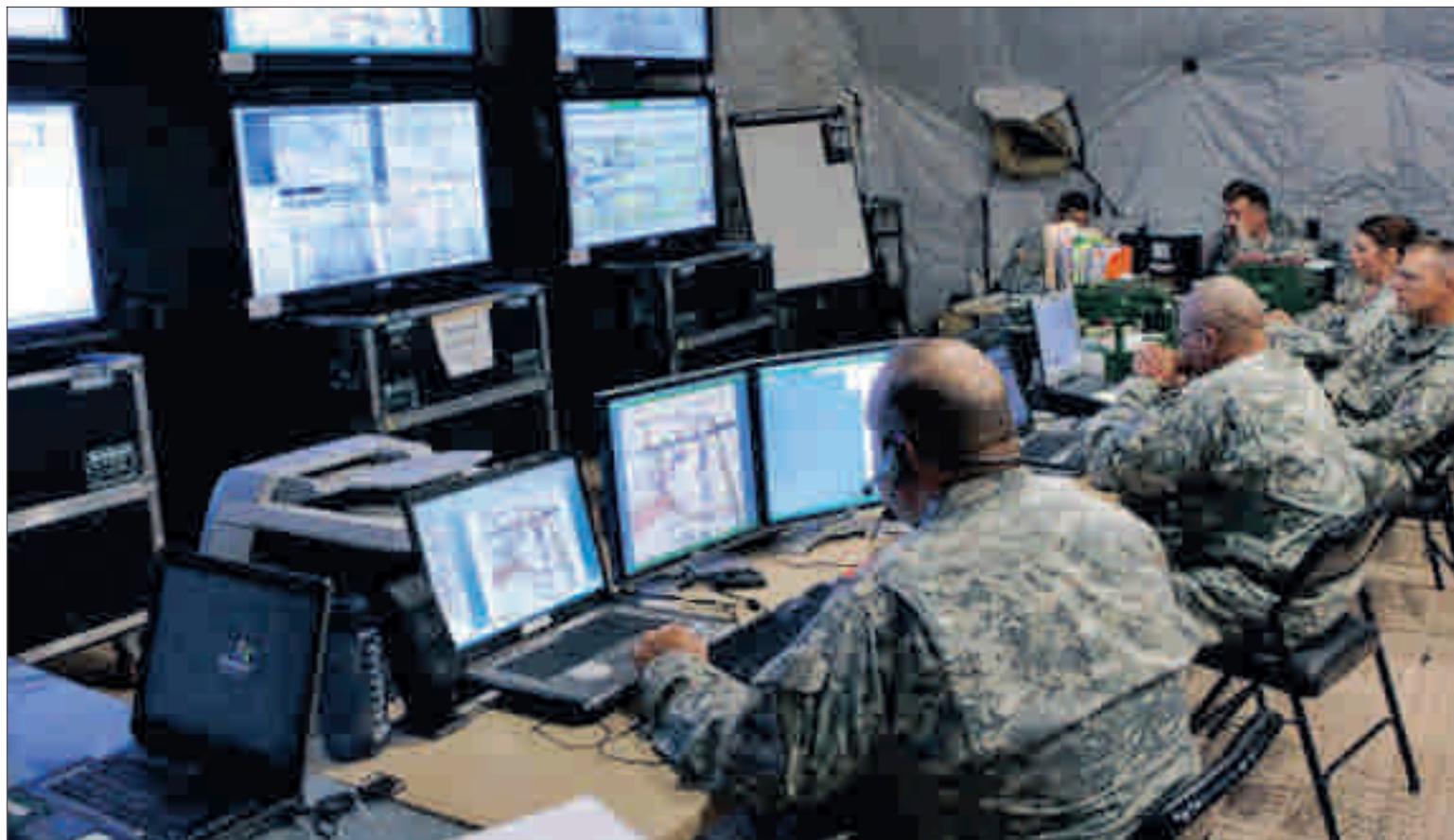


Dupont

Dupont stepped into the newly created role in August after leaving his post as the Army's electronic warfare project manager in July when Col. Marty Hagenston took over.

The trail boss is tasked with wrangling three major program offices identified as key to solving the cyber materiel problem: PEO Command, Control, Communications-Tactical, PEO Intelligence Electronic Warfare and Sensors, and PEO Enterprise Information Systems. PEO C3T has the lead on the tactical internet, PEO IEW&S has the cyber offensive lead and PEO EIS is in charge of the Army's network.

By coordinating the three PEOs, Dupont said, "there was also recognition that, well, if you know if IES



US ARMY

is building tools to define the enterprise, can those same tools be used to defend the tactical network? And if C3T is developing and buying tools to defend the tactical network, can those be used to defend the enterprise? Well, the answer is absolutely."

Additionally, the Army recognized that things it must do to develop the defensive side of cyber operations may affect things it is trying to do on the offensive side and vice versa, Dupont explained.

"The whole idea behind my role right now," which Dupont joked he

could be accused of building himself into, "is to take these three PEOs and say, 'All right, we can't do things in a vacuum because what you're developing and/or buying may impact what your brother is doing on the other side.' ... It's try-

See CYBER, Page 29

Interconnected: The US Army has procured WAVE software technology that links two-way radios, smartphones, telephones and PCs. WAVE will be employed by the Army's Program Executive Office Command, Control and Communications - Tactical.

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UK Army To Extend Life of Challenger 2; New Tank Too Costly

By ANDREW CHUTER

LONDON — Deciding that purchasing a new main battle tank would be too expensive, the British Army will likely stick to what has long been its plan A and proceed with a Challenger 2 life extension project (LEP) starting early next year, the Ministry of Defence said.

“During the concept phase of CR2 Life Extension Project (LEP) all options, from do nothing to buying a new tank, have been considered. As it stands, the manufacture and costs of a new main battle tank make it unlikely that the Army would seek this option. CR2 will be taken forward and the LEP is scheduled to enter the assessment phase in early 2016,” an MoD spokesman said.

Challenger 2 was essentially sidelined in the 2010 strategic defense and security review (SDSR), with the number of operational tanks slashed and capabilities allowed to atrophy. The question of how to keep Challenger 2 viable was given new impetus by the re-emergence of Russia as a strategic threat and the appearance of the new T-14 Armata main battle tank at a Moscow parade in April.

The admission that a new tank was probably beyond the reach of the Army follows a recent media report that said the Army was considering such a move.

Industry responded to an LEP request for information from the MoD last year and later followed that up with a rough order of magnitude on pricing.

Lockheed Martin UK, one of the contractors that responded to the request, said it expects a prequalification questionnaire to emerge next month.

Other contractors that responded to the information request last year included BAE Systems, General Dynamics UK and Kraus-Maffei Wegmann.

British Army boss Gen. Sir Nick Carter, speaking at September's DSEI show, admitted the Challenger 2 is showing its age.

“We certainly have issues with the tank we have at the moment and we should be in no doubt that if we don't do something about it some of the obsolescence built into it will be challenging. How we deal with it is still in discussion,” he said.

The MoD has previously insisted the LEP would resolve aging issues and not be a capability upgrade, but analysts wonder whether more now needs to be done.

Ben Barry, the senior fellow for land warfare at the International Institute for Strategic Studies think tank in London, said conditions have changed since the SDSR of 2010.

“In the light of world circumstances now, rather than 2010, the need for an upgrade of Challenger 2 becomes more important,” he said.

Challenger 2 is just one of a number of programs the British are looking at to modernize armored vehicle capabilities.

Except for new vehicles rushed to British forces in Afghanistan to combat Taliban bombs, the past decade has largely failed to deliver what the British Army would have hoped for to build armored vehicle capabilities with several key programs falling by the wayside.

Many of those urgent operational requirement purchases have now been taken into the core equipment program.

But new programs are coming through, including the Multi Role Vehicle – Protected (MRV-P), the Mechanised Infantry Vehicle (MIV) and a Royal Marines replacement for their BV206 all-terrain vehicles.

The eight-wheel-drive MIV is the Army's priority and Carter said the program would be launched



GRAEME MAIN/MOD/WIKIMEDIA

New Life: The British Army will proceed with a life extension of its Challenger 2 tanks rather than acquire a new main battle tank.

shortly.

Barry said it was an important program to give the British the sort of balanced force of tracked and wheeled armored vehicles the US, France and other respectable armies have.

The MoD briefed industry on the program in May.

“The MIV project is still in pre-concept and initial work is taking place scoping the approach to the project. Initial Gate [the concept phase] is anticipated in 2016,” said the MoD spokesman.

The British have already tested Nexter's VBCI and the Army has visited the US for a look at the Stryker.

Other likely contenders include ST Kinetics, Patria and General Dynamics. Companies like Lockheed Martin and BAE Systems, which are vying for the US Marine amphibious combat vehicle program, may also throw their hat into the ring.

“Lockheed Martin is considering a number of possible options for the MIV program which could include offering our own 8x8 platform,” a spokeswoman said Sept. 30.

Affordability of the armored vehicle programs remains a big concern, though.

“I am not convinced the MoD can fund its future armored vehicle aspirations. The SDSR will need to make some very hard decisions [on programs],” said one leading industrialist.

The MoD is set to spend £15.4 billion (US \$23.4 billion) on land equipment up to 2024, but not all of that is on armored vehicles.

Data released recently under the Freedom of Information Act regarding land forces equipment spending to 2024 showed seven of the 18 programs covered in the largest A and B spending categories were armored vehicles.

Category A is for deals above \$400 million and category B is for programs costing \$100 million to \$250 million.

Barry, though, said the issue with armored vehicle requirements isn't just money but the changing strategic situation the SDSR will have to address.

“The latest edition of the UK defense equipment plan was written to allow the armed services to implement the 2010 SDSR. The

strategic situation has changed since then. Particularly relevant to the British Army is the French operation in Mali as a model of intervention that involved some armor, including wheeled vehicles, and more importantly the events around Russia and the Ukraine,” he said.

“NATO's readiness action plan and the UK's commitment to send forces to train in Eastern Europe is all about deterrence. If you are going to deter Russian conventional forces you need credible land forces,” Barry said.

The Army has been working to achieve some of its priority capability improvements.

Last September, General Dynamics UK signed a \$3.5 billion deal with the MoD to deliver 589 Scout Specialist Vehicles between 2017 and 2024. The first of the most important version, a reconnaissance vehicle recently named Ajax by the Army, is scheduled for delivery starting in 2020.

Lockheed Martin UK is in a \$642 million development phase of a program to update the Warrior infantry fighting vehicle with a new turret, 40mm cannon and other improvements.

The Lockheed spokeswoman said the production element of the contract is “currently scheduled to be awarded in December 2017.”

The MoD was less clear about the timing for a production contract, suggesting there are still issues to be resolved.

“A decision to proceed to contract for manufacture will be made once the MoD is clear that the proposed solution provides confidence and value for money for this phase. It is anticipated that trials will commence in 2016 and an initial operating capability will be delivered in 2019,” said the MoD spokesman. □

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Eyeing Russia, E. Europeans Expand Armored Vehicle Fleets

By JAROSLAW ADAMOWSKI

WARSAW — Eastern European allies plan to acquire new armored vehicles and improve their land forces' capabilities as a response to a perceived increased land-based threat from Russia.

Numerous countries accelerating their armored vehicle programs share a border with Ukraine. These include Poland, Latvia, Estonia and Romania.

Most programs in the region foresee the deliveries of multiwheel-drive vehicles, as opposed to tanks, in a bid to significantly

boost the mobility capabilities of their land forces.

In Poland, the Defense Ministry aims to acquire 307 more eight-wheel-drive Rosomak armored modular vehicles (AMVs) with final deliveries scheduled by 2019. This will increase the land forces' existing 670 vehicles made by state-run manufacturer Rosomak SA under a license secured from Finland's Patria.

The move is one of the major land force procurements under Poland's ongoing program to modernize and overhaul its armed forces from 2013 to 2022. The planned acqui-

sitions of weapons and military equipment are expected to total some 139 billion zloty (US \$36.9 billion).

“Over the past years, there has been definitely more talk about upgrading these countries' Air Forces or enhancing their air defense capacities [than about] modernizing their land forces,” said an analyst from a government-run think tank in Warsaw. “But the Ukrainian crisis and Russian [military intervention] have shifted the need to modernize these capabilities upwards.”

Poland is also cooperating with Slovakia on its armored vehicle program.

Last July, Polish Prime Minister Ewa Kowalczyk signed a letter of intent with her Slovak counterpart, Robert Fico, for Poland to supply 30 eight-wheel-drive Rosomaks to Slovakia. As part of the two countries' increased military cooperation, their turrets will be



ROSOMAK SA

New Acquisitions: Slovakia plans to buy Polish-made Rosomak armored modular vehicles.

installed by the Slovak defense industry, according to the July 3 agreement.

“In the next three years, Slovakia will buy 30 units of the new version of the Rosomak,”

See ARMORED, Page 16





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ARMORED

From Page 14

Kopacz said at the signing ceremony. "Owing to this, the plant in Siemianowice Slaskie will obtain more than 120 million zloty."

Kopacz said the new variant of the vehicle, jointly made by Poland's and Slovakia's defense manufacturers, is intended to compete

for other foreign military contracts. This is enabled by the producer's renewed deal with Patria, inked in 2013, which allows Rosomak SA to offer the armored vehicle in foreign military tenders.

The deal with Bratislava will mark the first foreign sale of Rosomak SA's flagship vehicle.

"We want to promote this new Polish-Slovak version, not only in Europe but also in other parts of

the world," Kopacz said.

Kopacz said she hoped that Rosomak's performance in Afghanistan, where it supported the operations carried out by Poland's military contingent, will be an additional asset to potential buyers.

Poland is also developing a number of other vehicles for its land forces.

In late July, the Defense Ministry launched a tender to buy 882 new

high-mobility vehicles in armored and non-armored variants. These are expected to replace the military's outdated locally built Honker vehicles, as well as improve the mobility of the Polish Armed Forces.

The technical requirements call for the vehicle to be fitted with a four-wheel drive and weigh less than 3.5 tons for the non-armored version. The ministry is currently

evaluating the bids, which were due on Sept. 8.

Earlier this year, two state-run defense companies, Polish Armaments Group (PGZ) and its offshoot OBRUM Gliwice research unit, signed a deal with Germany's Rheinmetall to cooperate on building a new amphibious armored personnel carrier (APC). The six-wheel-drive vehicle is designed to replace the outdated Soviet-designed BRDM-2 amphibious vehicles operated by the Polish Armed Forces.

According to PGZ, the German-Polish APC will be a "highly functional platform" and its potential use includes reconnaissance missions.

Baltics Eye Armored Vehicles

Other countries that are expanding or planning to increase their armored vehicle fleets include Latvia, Estonia and Romania.

In a number of deals, Eastern European countries purchase second-hand vehicles from other NATO member states due to tight budgets.

In early September, the Latvian military took over the first four combat vehicles reconnaissance (tracked) it has acquired from the UK, the country's Defense Ministry said in a statement.

In the deal worth €48.1 million (US \$53.9 million), 123 vehicles will be delivered by 2020.

"This an important step toward bolstering Latvian self-defense capability, as these upgraded armored vehicles are to be equipped with the best anti-tank weapons, and they will significantly improve the combat and mobility capabilities of the Land Forces Infantry Brigade," said Latvian Defense Minister Raimonds Bergmanis.

Neighboring Estonia's government aims to obtain 44 CV90 infantry fighting vehicles from the Netherlands under a contract worth about €25.2 million (US \$28.4 million). Deliveries of the first units are scheduled for the second half of 2016. For Tallinn as for its neighbors, the conflict in Ukraine has raised the importance of increasing the ground-based mobility of the country's land forces.

Meanwhile, Romania's government is reportedly drafting a program to use a national emergency procedure to allocate additional funds from the budget to local defense industry players and enable the production of new weapons for its armed forces.

The new funds are to allow local defense companies to supply armored vehicles, air defense missiles, artillery systems, explosives, personal weapons and other gear for the Romanian military, according to local business news site Profit.ro. □

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Nordic Interest Soars in Simulation, Combat Training Tech

By GERARD O'DWYER

HELSINKI — A push for improved simulated training and battlefield protection for troops is driving higher levels of research, development and investment among Nordic militaries.

The militaries are looking for technologies that are cost-effective and readily deployable, while interoperability of equipment is becoming a more critical factor in materiel acquisitions.

These needs are producing closer strategic partnerships among

local defense industry players such as Systematic, Terma, Saab and IFAD A/S, the Danish mission-critical networked simulation training technology specialist.

These and other defense companies are seeing a greater share of national military budgets allocated

to soldier-protection technologies, interoperable command-and-control solutions, as well as simulated combat training and battlefield management systems.

The Danish Army is testing a new training simulation system based on C2 Simulation Gateway tech-

nologies jointly developed by Systematic and IFAD.

The C2 Simulation Gateway command-and-control system, which comprises Systematic's scalable battle management SitaWare suite and integrated C2 information system, bridges the simulator with the C2 system to enable users to react to events using identical C2 systems employed in combat.

"The agreement gives the Danish Army a national industry partnership that provides them with a better and more modern educational environment, and training systems that they already have today," said Benny Graff Mortensen, IFAD's CEO.

The Danish Army hopes the C2 Simulation Gateway will reduce its live field-based combat training costs by providing a more cost-effective alternative that also mirrors life-like combat operations and specialized mission tasks across different military units.

The core C2 system has the capacity to provide military units with a uniform standard of information using cameras, radars, sensors and information systems.

The C2 Simulation Gateway is expected to answer the Danish Army's future requirement for a modern and innovative training system that promotes interoperability and improves situational awareness in collaboration with other forces in multinational operating environments.

More Nordic defense sector companies are pursuing home-market partnerships with national militaries. Terma, for instance, established Market Development Denmark in August. This new unit's mission is to identify and commercialize combat support technologies in collaboration with the Danish Defense Forces.

"As our global expansion continues into the United States, Asia Pacific and the Middle East, we are aware that we are ultimately a Danish company with close relations to the Danish government and administration and that our long history with the Danish Defense Forces and the Danish Acquisition and Logistics Organization in particular is fundamental to our success," said Jørn Henrik Rasmussen, Terma's senior vice president, market development.

Market Development Denmark, which is headed by Kristoffer Groth Jakobsen, will be responsible for coordinating Danish customer relationships, offset opportunities, and interaction with defense and foreign ministries.

Terma's land warfare R&D investments have grown most in areas such as command-and-

See *SIMULATION*, Page 20

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Simplified Italian Future Soldier Program Ready for Production

By TOM KINGTON

ROME — The Italian Army's long-running Future Soldier program, which aims to digitize and better connect the infantry, is ready to enter production after trials this year showed that too much tech was slowing soldiers down.

A program that started with plans for Wi-Fi links on the battlefield, Bluetooth connections between soldiers and their rifles, and tablets strapped to the wrist of each combatant, has been streamlined to provide the required capabilities while preventing information overloads, data traffic jams and too much weight.

"Thanks to trials carried out in Lecce, southern Italy, over the course of this year, the Future Soldier program has been simplified and become more pragmatic," said Gen. Gaetano Zauner, the head of the Italian Army's general and financial planning department.

Launched in 2002, the Future Soldier program spawned more than a decade of collaboration between the Army and Italian companies led by Selex in a bid to kit out the Italian soldier for the 21st century.

The initiative forms part of a wider program known as Forza NEC, which is charged with digitizing vehicles like the Italian VBM Freccia armored vehicle and giving command-and-control structures a net-centric dimension.

With a budget of €940 million (US \$1.1 billion) the Forza NEC program extends to 2021 and is spending €235 million this year, according to Italian budget documents. In 2010, the program entered a risk-reduction stage.

This year, the Army started testing components of the Future Soldier program at Lecce, and will also give them a run during the part of the NATO Trident Juncture exercise to be held in Spain in November.

The Italian Army's Pinerolo brigade was picked to test the new technologies, while Selex is leading an Italian consortium of firms developing new kit, including Iveco, Oto Melara and Beretta.

Today, the software-defined radio, which forms a key element of the Future Soldier program, is a mature technology, said Zauner, as is the night-vision goggle — which was used in Afghanistan — an 800-gram helmet, body armor, a protective nuclear, biological chemical mask and protective clothing.

A thermal camera to be carried by each platoon should be ready by 2016, as will new command posts, Zauner said.

The Army's new standard rifle, the Beretta ARX-160, also was used in Afghanistan, and one soldier per squadron will carry a grenade-launching version of the rifle. A sniper in each platoon will carry the ARX-200, a 7.62mm rifle equipped with an intelligent combat sight made by Steiner, which is controlled by Beretta.

Soldiers program the performance of their cartridge into the sight, which then calculates trajectory and uses a laser range finder to indicate where to shoot.

Platoon commanders will carry a tablet with a menu of messages that, if pressed, will send the message by radio.

"The soldier's load should be about 30 to 40 kilograms," said Zauner. "That is acceptable if you need to move fast."

After the exercise in Spain, which will be



SELEX

Streamlined Tech: Italy's Future Soldier program is ready for production.

data-linked to Lecce, the Army will have an end-of-year review to make a final decision on what gets put into production.

But what is clear is that the Future Soldier program was streamlined since conception. In the last decade, planners initially envisaged all soldiers, not just platoon commanders, wearing tablets strapped to their wrists. That was scrapped, as were plans for images from gun optics to be sent by Bluetooth to soldiers' goggles, allowing them to "see" around corners by holding out their gun.

Additionally, a Wi-Fi capability in the radio was to allow communication with a range of up to 100 meters, to reach other soldiers and

vehicles.

Those plans have been dropped.

"Thanks to testing, we have been able to see exactly what was needed to attain the capabilities we needed," said Zauner.

"Bandwidth in theater is not what you have in the lab," he said. "We were finding that packets of data were getting stuck in queues whether we were using the radio or satellite communications."

Zauner said that too much information risked slowing the soldier down. "We needed to filter information," he said.

Another crucial aspect was cost. "Today the radio we are putting on the Lince Army vehicle is almost the same price as the vehicle itself," he said.

As cash-strapped Italy looks to cut spending, military planners are concerned that net-centric programs may be squeezed. Army officials are already concerned that the service is being cut out of big ticket programs while the Air Force looks forward to receiving the joint strike fighter and the Navy plans a huge new shipbuilding program.

Parliament did approve a new round of Freccia vehicle purchases months ago, but the funds have not been cleared by Italy's Industry Ministry.

In the meantime, the Pinerolo brigade received the combat version Freccias, as well as anti-tank versions armed with the Spike missile, with mortar versions, command post versions, ISTAR and recovery versions to come.

"The Pinerolo will be a fully digitized brigade in two to three years," Zauner said. □

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SIMULATION

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control systems, combat management, and soldier/equipment survivability systems.

The company's Terma MASE pods, which comprise the self-protection Terma ALQ-213 Electronic Warfare Management System, missile warning sensors and chaff/flare dispenser modules, are being integrated into Dutch Air Force multirole NH90 helicopters.

Systematic's SitaWare Frontline battle-management system, meanwhile, is being used in the digitization of the Danish Army's Leopard 2 tanks. The upgrade will improve the tank's computer, digital radio, sensors, routers and GPS target-designation equipment.

SitaWare Frontline's battle-management suite can provide real-time situational awareness of friendly and hostile units during combat.

The Leopard 2 digital upgrade forms part of Denmark's plan to add a battlefield digital-electronic mapping capability to the tank. The system will replace outdated analog-mapping that relied on establishing visual contact with hos-



SYSTEMATIC

Focus on Simulation: Systematic SitaWare Frontline's battle-management simulation.

tile units and using radio communication to relay tactical situation data and firing directions.

The battle management system (BMS) component in the Leopard 2's digital upgrade also contains a friendly fire prevention function. All data, including from tank sensors, is processed by the BMS and fed into a digital map updated in

real time. The system not only enables all units to share situational data on the positions of both friendly and hostile forces, but accelerates decision-making.

In total, the tactical communications network program will involve digital upgrades to more than 400 heavy and light armored fighting and transport vehicles in the

Danish Army's fleet.

The Norwegian Army, which is looking to reduce its organization operating costs in 2016-2020, is also planning to invest more of its procurement budget on battlefield training technologies.

The Norwegian armed force's Combat Training Center (CTC) is to upgrade its training and simula-

tion systems under a new agreement with Saab set to run to 2020.

The \$16.8 million contract, reached between Saab and the Norwegian Defense Logistics Organization, includes the delivery of new generation sight simulator units for vehicles.

The investment at the CTC, which operates as a battalion-level training facility for soldiers, vehicles and anti-tank weapons, is intended to strengthen combat readiness and training capabilities, particularly for international missions.

On the troop-and-equipment-protection side, a number of Nordic militaries are thought to be interested in Saab's troop-protection counter-rocket, artillery and mortar system (C-RAM).

C-RAM's primary use is to shield friendly forces from hostile fire, with the system's sensors capable of providing detection and early warning against small, mobile and so-called "hard-to-find" threats such as rocket and mortar fire.

Saab recently agreed to terms on a \$20.5 million contract to deliver the C-RAM to Australia's Defence Forces. □

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Japan's Amphib Capabilities Struggle With Rivalries, Budgets

By PAUL KALLENDER-UMEZU

TOKYO — Concerns are mounting among US Marine Corps observers and defense analysts that Japan's commitment to developing an amphibious capability is being sidelined by senior Japan Maritime Self-Defense Force (MSDF) leadership who favor investments in submarines, ASW capabilities, aerial reconnaissance and ballistic missile defense.

The "de-emphasis" potentially calls into question the effectiveness of the force, scheduled to become operational in the spring of 2017 and deemed essential to deter aggression against Japan's far-flung southeastern Nansei Shoto island chain, said Grant Newsham,

a senior research fellow at the Japan Forum for Strategic Studies.

"This is a historic point we're at. For the first time since the end of World War II, Japan has a choice of whether it wants a military able to defend Japan and protect its citizens or to just drift along with a stunted, misshapen SDF [Self Defense Force] that's of little use from a national security perspective and for Japan to remain pathologically dependent on the United States," Newsham said.

The Joint Staff Office headed by Adm. Katsutoshi Kawano and the Ground Self-Defense Force (GSDF) appear to still be committed to amphibious development, and the MSDF Mine Warfare Force that has been assigned responsibil-

ity for the effort appears to have operated effectively at last month's Operation Dawn Blitz exercise.

However, in the MSDF, Japan's amphibious plans seem relegated toward the bottom of the pecking order, he said.

In terms of funding, efforts related to the Amphibious Rapid Deployment Brigade (ARDB) amount to 17.9 billion yen (US \$27.3 million) for the financial year to April 2016 to acquire land to build bases for 52 AAV-7 amphibious landing vehicles, seven Osprey tilt-rotor aircraft and CH-47JA transport helicopters.

The ARDB initially will deploy around 2,000 troops supported by about 90 specialists for training.



MARK RALSTON/AFP/GETTY IMAGES

Amphib Practice: A signalman directs a Japanese landing craft air cushion during an amphibious landing operation with US Forces and the Japan Maritime Self Defense Force during the Dawn Blitz 2015 exercise in Camp Pendleton, California, on Sept. 5.

Currently about 700 troops of the GSDF's Sasebo-based Western Army Infantry Regiment are charged with defending about 6,000 islands and islets of the Nansei Shoto that extend south and west into the Pacific until they nearly reach Taiwan.

"Too often, people equate 'amphibious' with the Senkakus and

since the Senkakus are tiny there's no need for an amphibious force. Instead, one should understand that the entire Ryukyus and Nansei Shoto are in play," Newsham said.

Newsham said that if properly funded, the scheme for ARDB would be about the correct size and organization, and that many

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China Challenges Army With Realistic Training Scenarios

By WENDELL MINNICK

TAIPEI — China has greatly increased the realism of its Army training, attempting to improve readiness and interoperability, and unearth operational weaknesses.

These trends demonstrate the People's Liberation Army's (PLA) rising self-confidence in dealing with a variety of scenarios beyond its traditional focus of a conflict with Taiwan, analysts said.

Since 2006, the PLA has increased the number of trans-regional exercises, particularly units moving from one military region (MR) to another for training, said Roy Kamphausen, senior vice president for research at the National Bureau of Asian Research.

China has seven military regions, but is expected to reduce that number to five in the near future.

While rail still serves as the predominant means of moving troops, more trans-regional exercises suggests higher priority is being placed on road mobility, Kamphausen said.

The PLA has made three key improvements in land warfare exercises, said Li Xiaobing, author of the book "A History of the Modern Chinese Army."

First, the PLA has moved the exercises out of their training fields like the one in the Beijing region and into actual battlegrounds, including some remote, frontier areas like those in Tibet and Xinjiang.

Second, the exercises have become more practical in terms of real war conditions, such as command, communication and long-distance logistics.

"They even traveled long distance to Russia for a joint land exercise," he said.

Third, the blue army or enemy force is now better prepared and stronger than the red army or PLA.

"The red army has to fight harder and smarter rather than expecting a guaranteed

victory," Li said. Li once served in the PLA and is now a professor at the University of Central Oklahoma.

To keep things interesting, units deploy in scenarios where China is already under attack and their movements to the training areas are monitored by enemy intelligence and reconnaissance and are subject to attack by long-range air precision strike, including chemical and biological, and interdiction by special operations forces, said Dennis Blasko, author of the book "The Chinese Army Today."

Often, last minute changes are given to units just before they deploy or while they are en route, he said. After arriving at their destination, they engage a blue army that simulates advanced enemies more effectively than in the past. Exercises include use of laser designators and umpires.

The PLA's exercise regime is now reaping the benefits of nearly two decades of investment in "informationalization" and "mechanization," said Richard Fisher, a senior fellow on Asian military affairs with the International Assessment and Strategy Center.

"Investments in new command/control/communication and information [C3I] combined with investments in a third generation of tracked and wheeled armor, plus Army aviation, have allowed for a fuller exploitation of the building of military region-level combined exercises, new tank and armor training centers, and the current trend of moving from MR to trans-MR exercises," Fisher said.

These C3I advances have already flattened command chains and allowed consolidation of MRs to enable more varied combination of units for real and virtual exercises, he said.

Blasko said there is more emphasis on the use of complex electromagnetic environments, including electronic warfare and



STR/AFP/GETTY IMAGES

Combat Preparation: Chinese People's Liberation Army soldiers train at their barracks in Heihe on Sept. 16.

cyberwarfare, than in the past, which has allowed them to discover shortcomings in the training of commanders in joint and combined arms operations.

Li said weaknesses of the recent land exercises remind people of the institutional problems of the PLA.

"Politics still has a role in the exercises, including site selection, commander appointments and battle designs," he said. Problems include economic issues: "Some units were asked to use old weapons before their retirement and ammunition before the expiration dates."

Exercises also focused on forming modular, combined arms battalions, where standard infantry armored battalions temporarily are reinforced by artillery, engineers, air defense and special operations forces. These exercises discovered that battalion headquarters had not assigned enough personnel to control these operations, so they are experimenting with how many officers and noncommissioned officers to assign to a battalion staff, Blasko said.

"This problem is because under the old Soviet organizational system, regiment headquarters did all the planning and gave

very specific orders to battalions; now, under brigades, there is no intermediate regimental headquarters between brigade headquarters and the infantry and armored battalions," Blasko said.

"They are also attempting to improve techniques to conduct what we call 'close air support,' provided by Air Force planes or Army Aviation helicopters."

Another problem is the integration of new weapons and equipment, such as UAVs. Not all units receive advanced equipment at the same time and there is substantial variation in the type of equipment among units, which naturally means capabilities vary from unit to unit, Blasko said.

When new equipment is introduced, units have to adjust their operational methods and techniques to take advantage of the new capabilities, Blasko said.

"So they are constantly discovering problems in training, which is one of their main objectives in any exercise. They then conduct remedial training that year or focus on those problems in the next training season," he said. □

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ENDURING FORCE





APS-Equipped MRAP To Debut at AUSA

Lightweight System Based on Rafael's War-Tested Trophy

By BARBARA OPALL-ROME

TEL AVIV — An Israel-US team will debut at this week's AUSA exhibition a demonstrator all-terrain vehicle featuring a version of the Trophy active protection system.

Installed on an Oshkosh four-wheel-drive, mine-resistant ambush-protected (MRAP) vehicle, the joint demonstrator features Trophy LV, a light vehicle version of the system that has successfully defended Israeli tank crews against anti-tank, rocket-propelled grenades (RPGs) and other threats since it was first deployed in August 2009.

The ground-maneuvering demonstrator also features Rafael's Mini Samson, a remotely controlled weapon station that allows crews inside the vehicle to launch Spike long-range anti-tank missiles without exposing themselves to enemy fire.

"Every year, we get numerous reminders that it's almost impossible to maneuver on the battlefield without an active protection system," said Giora Katz, Rafael exec-

utive vice president and general manager of the firm's land and naval division. "When militaries and peacekeeping forces are facing millions of relatively cheap weapons in the hands of terrorists and other organizations, you better have some kind of protection like Trophy if you want to survive."

In an Oct. 6 interview, Katz said Trophy LV is optimized for vehicles as light as 3 tons, has been tested in hundreds of scenarios, and draws on operational lessons gleaned over the course of two wars in Gaza and continuous deployments along Israel's borders.

"Hundreds of Trophy-equipped tanks participated in Protective Edge and the results were crystal clear," he said of Israel's summer 2014 maneuvering war against rocket launching cells and underground attack routes in the Gaza Strip.

Like the heavier version, Trophy LV is designed to automatically detect threats, determine if they are headed for the defended zone enveloping the platform, and destroying all incomings with what the



OSHKOSH

Now Appearing: An Oshkosh M-ATV outfitted with Israeli company Rafael's Trophy active protection system, remote-controlled weapon station and launcher for long-range Spike anti-tank missiles will be at this year's Association of the US Army exhibition.

firm calls "energetic blades." The modular system combines radar and electro-optic sensors against unitary and tandem warhead RPGs and can include a soft kill jammer against anti-tank guided missiles.

According to the firm's brochure, Trophy-LV "ensures 360-degree protection, including high-elevation, vehicle windows and doors," and has been demonstrated to provide "high kill probability against current advanced threats."

Katz emphasized that Rafael does not yet have an agreement with Oshkosh to mass produce Trophy LV for the many thousands of new Joint Light Tactical Vehicles (JLTVs) that the US firm plans to build for the US Army and Marine Corps under a multibillion dollar contract awarded in August.

Nevertheless, as the provider of "the world's only combat-proven APS for armored vehicles," Katz said Rafael is well positioned to

serve as subcontractor to Oshkosh or any major systems provider in need of a mature active protection system.

"We don't have an agreement with Oshkosh about the Trophy system. What we do have is a joint demonstrator for the AUSA exhibition, and this is a good start ... as this kind of system is one of the capabilities that is essential for JLTV," Katz said.

Meanwhile, Rafael is talking "with all kinds of OEMs [original equipment manufacturers], not only about a Trophy, but other systems as well since our capabilities are add-ons that are relatively effortless to install without penetrating the surface of the vehicles," Katz said.

"Oshkosh Defense is honored to provide the world's most capable, battle-proven MRAP vehicles to support our customers' missions around the world," said John Urias, retired US Army major general and executive vice president, Oshkosh Corp. and president, Oshkosh Defense. "In addition to designing these powerful military vehicles, we have an extensive engineering capability that allows us to collaborate with companies across the industry to seamlessly integrate advanced technologies such as APS and C4 SR to keep troops safer and more connected as they perform their missions." □

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Mideast Conflicts Fuel Land Force Developments

By AWAD MUSTAFA

DUBAI — Transnational threats and the conflict in Yemen have spurred land force developments across the Middle East, especially in the last nine months.

Countries in the region are expected to spend US \$344 million by 2016 on guided munitions alone and are also driving the armored vehicle market along with Asia, according to Texas-based research and consultancy Markets and Markets.

The two lead countries in the fight for Yemen — Saudi Arabia and the United Arab Emirates — are leading the surge in purchases. Iraq is also acquiring new and used equipment from its partners and allies in its fight against the Islamic State terror group, or ISIL.

Sources have stated that the Iraqi Defense Ministry has tendered to buy 500 four-wheel-drive military vehicles this year to make up for the losses against the Islamic State group.

Since the beginning of operations against ISIL, Iraq has petitioned the United States to buy 1,000 M1151A1 up-armored Humvees, 1,000 M2 .50 caliber machine guns, 1,000 MK-19 40mm grenade launchers, commercial radios, communication equipment and spare parts and training estimated at \$579 million, according to the US Defense and Security Cooperation Agency.

Iraq also requested the sale of 175 M1A1 Abrams tanks with the upgraded 120mm

gun, 15 M88A2 improved tank recovery vehicles and 175 .50 caliber M2 machine guns.

Within the last year, the United Arab Emirates and Qatar have introduced mandatory military service to increase readiness and manpower.

Operations in Yemen led by Saudi Arabia, which include the UAE, Kuwait, Bahrain, Qatar, Sudan, Egypt, Morocco and Jordan, have resulted in many casualties for the land forces that have been deployed since July. Approximately 10,000 men have been deployed recently in addition to the initial 4,000 that were involved in the operations to retake the southern port city of Aden.

Although each Arab gulf state in the GCC pursues its own approach to developing land forces, the nominal effort to create a gulf rapid reaction force is very limited and of uncertain effectiveness, according to Anthony Cordesman, Arleigh Burke Chair at the Center for Strategic and International Studies.

"Saudi Arabia has the largest ground force in the Arab gulf forces, and they are equipped with modern and highly capable weapons. Its land forces is expanding and estimates of its size differ," Cordesman stated in his report, "The Arab-U.S. Strategic Partnership and the Changing Security Balance in the Gulf."

Though they have not had major combat experience in recent years other than in the first gulf war in 1991, the Saudi forces have fought in various small counterterrorism

actions since 2003 and have been sporadically engaged on the Yemeni border since 2009, he added.

The March 2015 coalition of 10 Arab states against the Houthis in Yemen has provided extensive experience for gulf Arab troops involved, analysts agreed.

"This coalition has allowed the Saudi Arabian military to improve and manage its command-and-control system," said Nawaf Obaid, a Saudi expert at the Belfer Center for Science and International Affairs.

According to the armored vehicle market analysis, wheeled vehicle acquisition is clearly on the rise as more governments look at six- and eight-wheel-drive vehicles to cope with the terrain, and because of their lower maintenance costs.

At the beginning of operations in July, a coalition official told Defense News that Saudi Arabia has deployed 45 mine-resistant, ambush-protected Oshkosh M-ATVs, while the United Arab Emirates has deployed 50 Emirati-made Nimr four-wheel-drive multipurpose armored vehicles as well as 25 Emirati-made Enigma eight-wheel-drive infantry fighting vehicles.

This is the first deployment of the 8x8 Enigma as the vehicle was first unveiled at the Abu Dhabi International Defence Exhibition in February.

The vehicle, produced by Abu Dhabi-based Emirates Defense Technology, was set to undergo trials this summer with the UAE armed forces, company CEO Mo-



SALEH AL-OBEIDI/AFP/GETTY IMAGES

Fighting ISIL: Tanks and armored vehicles of the Saudi-led coalition are deployed on the outskirts of the southern Yemeni port city of Aden.

hamed al-Suwaidi told Defense News during IDEX 2015.

More recently, Nimr proprietor Emirates Defence Industries Corporation unveiled new vehicles in September. The N35 Multi-Role Protected Vehicle with 4x4 and 6x6 wheeled armored variations were based on designs from South African Denel Vehicle Systems' RG35, which is under full ownership of NIMR.

"The 4x4 and 6x6 variants complement our existing range, allowing NIMR to expand beyond our traditional light-medium weight vehicle category into the more highly protected, higher payload categories," said Nimr CEO Fahad Saif Harhara at the time of launch.

No information has been provided on the vehicles' field deployment in Yemen. □

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JAPAN AMPHIB

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more forward-thinking MSDF officers supported the development.

“Even if it lacks enough amphibious ships for a standing three-ship amphibious ready group like the Americans have, they can still do quite well with two ships, or even one, operating in support of GSDF,” Newsham said.

However, compared to resources being diverted into other programs, the ARDB is under-resourced, both in absolute budget and in planning, tactics training and equipment, sources said.

Col. Jonathan Goff, USMC liaison to the SDF, agreed that the ARDB faced a tough challenge if it was going to be an effective partner to the US.

First, the brigade's equipment will be almost immediately inadequate because of short-sightedness and (perhaps deliberate) under-funding, he said. For example, the ARDB needs its MV-22s to have refueling capabilities, attack helicopters need to be networked and, helicopters need folding blades, which can be retrofitted, for example. And all acquisitions need to be suitable for marine operations. None of this has been considered, Goff said.

“They have most of the right gear but lack enablers. There is a budgeting process deficiency coupled with a planning process deficiency. There are many things the SDF did not think about when planning for this,” Goff said.

More worryingly, a series of briefings beginning this spring by the Japanese Maritime Staff Office to the USMC made it increasingly clear that the MSDF now regards the ARDB as a distraction rather than a priority. The ARDB already faces the probability of being poorly trained but also may be the victim of inter-service rivalries.

Newsham said the USMC has received signals from the MSDF that it is not only reluctant to hold a Dawn Blitz 17 drill, citing lack of resources and ships, but also to commit to a joint effort with the GSDF to establish a joint task force to coordinate the amphibious mission.

“Amphibious operations are joint operations, requiring all three services to cooperate and operate in a unified fashion. Setting up a joint command for the Southwest Island Region is essential for focusing the amphibious development effort. This lack of jointness is SDF's most serious deficiency and prevents it from being effective,” Newsham said.

“Amphibious development potentially serves as the forcing func-

tion for SDF to overcome this fundamental problem, and to actually become a useful force, able to defend Japanese territory and protect Japanese citizens. It currently cannot do either of these very well,” Newsham said.

Such parochialism among the three services that is moving beyond a lack of coordination to the point of noncooperation may prove to be strategically damaging to the ARDB's chances of being an effective force.

“The best thing they could do is establish a Southwest Regional Joint Command centering on Kyushu and Nansei Shoto and consisting of all three components under one commander. Next, establish a joint operational command counterpart to the three service operational commands and give the Joint Staff real authority over the services,” Goff said.

Further evidence that the ARDB effort is being choked comes with the fact that its two biggest advocates in the GSDF, Lt. Gen. Koichiro Bansho, former vice chief of staff of GSDF and commander of the Western Army; and Lt. Gen. Koichi Isobe, former vice chief of staff of the Joint Staff Council, were both eased into early retirement this August.

The ARDB requires a new doctrine of maneuver warfare along with realistic training to form a

ground force suitable for a maritime nation, not a Soviet land invasion, and which must be inherently expeditionary, Goff said.

“The SDF continues to insist on ‘a Japanese Way’ of Amphib ops ... I hear this too often. That way is just an extension of the big land force doctrine, with centralized control, that they already possess,” Goff said.

Therefore, the ARDB “desperately” needs more training with US forces rather than less, Goff continued. The ARDB also needs organizations to test and evaluate units for combat readiness based on an objective set of training standards, taking advantage, for example, of the USMC's Tactical Training Exercise and Evaluation Groups.

Related to this, ARDB needs to tap into new leadership that is open to the experience of the US, and not controlled by GSDF doctrines that were devised in the 1950s and that have no experience fighting amphibious warfare.

“There needs to be training where failure is allowed and units pushed to their failure point. The GSDF is an army of companies with almost no training at the regiment or above. Their capacity is adequate if the Russians invade Hokkaido, but not for a mobile, agile force in 2015,” Goff said.

Christopher Hughes, a Japan military expert and professor of international politics and Japanese studies at the University of Warwick, said it was perhaps too early to judge the unit, which has only been in planning since 2013.

“I hear the criticism of the Japanese moves thus far, but it takes time to build a marine force-type capability and we also know even the USMC is not free of rivalries in working with other US military services,” Hughes said.

As the revised US-Japan Defense Guidelines make clear, it is Japan's responsibility to first respond to any attack on its southern islands. So Hughes believes that over time the ARDB would overcome Japan's typical interservice rivalries because of the looming threat from China in this area.

“It's unusual that a defense capability — amphibiousity — potentially has such strategic, transformational importance, if taken advantage of,” Newsham said.

“Japan's decades-long under-funding of the JSDF is a disgrace. However, even without major increases it is possible to develop a useful amphibious force as envisioned by GSDF and others. It just takes reorganizing existing assets and, as important, changed mindsets and missions,” he said. □

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SECURING THE FUTURE





CYBER

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ing to bring three PEOs together and have a much better integrated and synchronized manner from which we actually provide materiel solutions.”

But coordinating program offices is only the tip of the iceberg in terms of the philosophical wrangling Dupont will need to do.

At the highest level, the Army is struggling to figure out what it really needs on the materiel side in order to operate in cyberspace. Sometimes acquisition of tools are similar to normal processes, he said, and “in some cases, because it’s still somewhat vague, how do we operate in cyberspace, it’s very difficult right now for the Army to write up a requirements document that says: ‘Here’s exactly what we need, here you go [project manager], go build this.’”

Some things the Army needs for defensive cyber capabilities are obvious, like anti-virus and anti-malware capabilities, but others still need more clarity such as tools needed on the defensive side like ways to be alerted to a potential cyber attack, where it’s coming from and who might be attacking. Tools for denying an adversary an opportunity to get into the protected network are also needed, Dupont said.

Defining what is needed on the offensive side is even more challenging because the Army must operate within national authority “because it’s not like as an Army you can go out there and start messing around with someone’s computer,” Dupont said. So within those constraints, “what is it we really need on the offensive side?”

Specifically, the Army is focused on defensive cyber operations infrastructure and tools, Dupont said, and is working on Web vulnerability tools, which helps identify vulnerabilities and how to patch them.

The Army also is working on developing cyber situational awareness, he said, which “was identified as the No. 1 capability gap across cyber operations — offensive, defensive and the [Defense Department Information Network] DODIN.”

Cyber situational awareness is another area that ends up being vague for some, Dupont said. “What does it look like? ... If I’m a commander on the ground, a brigade commander, I provide them a common operational picture. ... How do you map that out in cyberspace?”

Funding is another challenge for Dupont — not necessarily having enough — but figuring out what is already funded to accomplish some of the things the Army wants to accomplish in the cyber domain. “There are two difficult pieces,” he said. “One is identifying the fund-

ing [the Army] already has, what is cyber-related and how much more do they really need. There’s no easy answer to try to figure that out right now.”

One of Dupont’s responsibilities is to oversee the execution of funding that has been provided for cyberspace requirements, so “if X number of dollars has gone to a particular PEO and they can’t execute, what do I do with that funding? I

can give to one of the other PEOs.”

Dupont’s also tracking how the Army acquires cyber capabilities and looking for more agile ways to procure solutions. In June, the Army put out a pre-solicitation to industry for deployable defensive cyber operations infrastructure capabilities for cyber protection teams, selected four possible vendors, then down-selected to vendors who demonstrated their

solutions in August at Fort Gordon, Georgia. Then the Army made a procurement decision.

“We had an industry day in May and by the end of September, we had procured a product,” Dupont said. “The interesting thing is what did we do different. The only thing we did differently is we actually used a method available to us that doesn’t typically get used,” which is using a consortium where indus-

try can become a member and bid on future work.

“Because it was so successful, I want to try to use that again because we have additional needs requirements that have to be filled,” Dupont said. “The big question is we have this big basket of requirements; now what do we want to get after that?” □

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Russian Modernization Puts Focus on Land Force Protection

By MATT BODNER

MOSCOW — Under Russia's sweeping 2020 rearmament program, the Defence Ministry hopes to modernize about 70 percent of its military. While most of the attention is paid to flashy procurements such as nuclear submarines and stealth fighters, rejuvenation of the land forces is a significant priority.

A total of 20 trillion rubles was allocated in 2011 (at that time, the value of the program was around \$700 billion), with about 16 percent of that money, or 3 trillion rubles, dedicated to land force acquisitions.

"The central problem is that all of the land forces need attention," said Henry Boyd, a military expert at the International Institute of Strategic Studies (IISS) in London. However, Russia has not been able to make much procurement headway.

According to Ruslan Pukhov, director of the Center for the Analysis of Strategies and Technologies, a Moscow-based defense think tank, the Defence Ministry was not satisfied with the Soviet-designed tanks and assorted vehicles industry had on offer.

Instead, the industry for the past several years has been working on designing a new offering of land platforms, known as the Armata Universal Combat Platform, which includes a new battle tank, the T-14, and a variety of armored personnel carriers and infantry fighting vehicles.

"Current wars on Russia's borders and other places show that the current platforms are very vulnerable to all types of munitions — anti-tank and air-to-surface — and we need to protect people," Pukhov said.

The new platforms ditch Soviet-style design philosophies, which prioritized cheap and easy-to-produce tanks that could be made in massive quantities to overwhelm enemy platforms.

Instead, the Armata platform places a clear premium on crew survivability by separating the crew compartment from the munitions compartment and main gun, which is controlled remotely from the forward compartment. The Armata platform also reportedly sports advanced composite armor not seen on current designs.

"For the first time in our history we don't have a huge reservoir of people," Pukhov said, explaining the shift in approach to platform design.

Although new platforms have been a key focus of Russian land forces modernization, they are extremely expensive and Russia's economic crisis is forcing the Defence Ministry to adjust procurement forecasts.

In March, Deputy Defence Ministry Yury Borisov said Armata turned out to be much more expensive than anticipated — a claim manufacturer UralVagonZavod has since attempted to refute — and would force the military to buy fewer of them.



MATT BODNER/STAFF

New Protection: An Armata tank rolls by during Russia's Victory Day parade in May.

President Vladimir Putin has said on numerous occasions, including at the May 9 Victory Day Parade, when Armata was officially unveiled, that Russia would buy 2,300 of the new tanks.

However, according to Vadim Kozyulin, a military expert at the Moscow-based PIR Center think tank, most of the armored vehicle procurements by 2020 will be modernized Soviet and early post-Soviet designs.

"This means the land forces will get modernized T-72B3 tanks, BMP-3 and BTR-82 armored vehicles ... the Russian industry is familiar with them and capable of doing this work effectively," Kozyulin said.

Beyond the need to modernize its weapon platforms, one of the major problems facing the Russian land forces is the quality of personnel.

The Russian military is focusing on creating a hybrid land force — not completely reliant on conscripts, but not fully volunteer —

which has been partially successful, Pukhov said. But these efforts have been stifled by a lack of quality non-commissioned officers, he continued.

"We still have a huge problem with NCO corps. In all professional armies, it's NCOs that run the army, but we have this gap; we have soldiers and senior officers, but not NCOs. That is why there is hazing, and abuse, and you name it," he said.

But overall, Kozyulin argued, the land forces are not a priority for the Russian military, which is devoting most of its resources into nuclear, air and sea modernization.

"Still, they will benefit from the overall modernization effort, as they'll get new communications, electronic warfare, and air defense systems ... not to mention the new samples of tanks, artillery, missiles, anti-tank and other systems," he concluded. □

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In Budget Talks, Defense Watchers Look to Boehner

By **JOE GOULD**

WASHINGTON — Budget talks have begun between the White House and leaders in Congress, but the big question is who will sit at the negotiating table for Republicans.

House Majority Leader Rep. Kevin McCarthy on Oct. 8 dropped out of the race to succeed Speaker John Boehner, a surprise move that leaves an open race to lead the fractured party. Boehner, who planned to leave Oct. 30, said he would stay until the House elects a new speaker — and as of Oct. 9, no date for that had been set.

At the White House after the news broke, presidential spokesman Josh Earnest said it would be easy for Democrats to poke fun at the Republicans' predicament if not for the serious issues Congress faces. The next speaker will have to tame a small vocal group of ideologues blamed for McCarthy's implosion, he said, and work in a more bipartisan fashion.

"It's going to be something that requires bipartisanship to pass," Earnest said of the budget. "It's also going to have to incorporate

the views of Democrats in the House and the Senate."

Defense watchers worry that if Boehner cannot broker and force through a spending deal that raises the Budget Control Act spending caps, there may be no deal until after the November 2016 elections. That raises the risk of further continuing resolutions, deemed a nightmare scenario by the Pentagon and defense industry.

Because a new speaker will have an even tougher time corralling his caucus, "Boehner will have to absorb all of the heat" and make a deal, Roman Schweizer, an aerospace and defense policy analyst with Guggenheim Securities, said in a note to investors.

On the flip side, Todd Harrison, a senior fellow at the Center for Strategic and International Studies, said negotiations will be stalled until the House leadership issue is resolved, "and then that doesn't leave much time."

That's because Congress must also tackle several pressing matters: An Oct. 29 deadline to renew transportation funds, a Nov. 5 deadline to raise the federal debt

limit and a Dec. 11 deadline to fund the federal government, when the CR passed Sept. 30 expires.

Harrison said the best case would be a "mini-deal" that slightly increases caps for defense and non-defense spending, perhaps allowing somewhat less extra funding for overseas contingency operations (OCO) than Republicans want — but there is nobody empowered to make that deal for House Republicans.

"Until I see something concrete that people are actually negotiating, and it's the right people who have authority to negotiate, I don't think anything's happening," Harrison said.

For the Senate, Majority Leader Mitch McConnell, R-Ky., is said to be interested in making a two-year deal to prove, ahead of next year's elections, that Republicans can govern. The Senate's No. 2 Republican, John Cornyn, told reporters he would favor "doing as much as we can do, as soon as we can do it, not waiting until Dec. 11." Yet how politically feasible this is, is an open question.

"There are a lot of controversial



MARK WILSON/GETTY IMAGES

Awaiting A Successor: House Speaker John Boehner walks to the House Chamber on Oct. 8 after House Majority Leader Kevin McCarthy announced he had withdrawn his name from House elections to replace Boehner.

items, spending, debt ceiling," Cornyn, of Texas, acknowledged. "I think there's a way to get there, and matter of fact, I don't think we have a choice but to get there one way or another."

For the White House, Office of Management and Budget Director Shaun Donovan is said to be in the lead and asking for three things:

■ That \$38 billion in base budget

requirements for defense, funded in the Republican plan through the budget cap-exempt OCO wartime account, be matched dollar-for-dollar in non-defense discretionary programs. Such a move would require an easing of budget caps, likely funded by offsets of some sort. (The OCO funding scheme has triggered a threat from President Obama to veto the defense



Image is a derivative of -M136 AT4 In Action, by the US Army

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**NORTH AMERICA**

policy bill that passed the House and Senate.)

■ A “clean” budget deal that excludes riders such as a failed anti-abortion amendment for the CR last month.

■ Power for the White House to allocate the matching funds for non-defense, considered a tough provision to stomach for Republicans who have control of Congress and appropriating authority.

According to Senate Minority Leader Harry Reid, he and House Minority Leader Nancy Pelosi are a co-equal part of the negotiations, alongside the White House. Congressional Democrats are a necessary part of the process because House Republicans are unlikely to have the votes to pass a budget without them.

Campaigning for the speakership, Utah Rep. Jason Chaffetz told CNN he rejected McConnell’s insistence that the GOP Congress would keep the government open and never default on the country’s debt.

“I think it’s wrong to signal that you’re going to cave in the end,” Chaffetz said when asked about McConnell’s promise.

Before McCarthy’s departure, Sen. Chuck Schumer of New York and other Democrats called for such Republicans to be pushed aside so that negotiations could be quickly concluded.

“We’re seeing candidates pledge economic destruction in order to win a few votes on the hard right caucus,” Schumer said. “Well, the grownups in the Republican caucus need to grab the reins.”

With a weakened Boehner at the table, the disarray among House Republicans actually tilts the negotiations in favor of House Democrats, observers say.

“The White House may get some of what it wants because they are depending on the Dems to pass the damn thing,” said Gordon Adams, an American University professor who oversaw national defense budgeting for the Clinton administration. “I don’t know what the odds are on Boehner delivering a deal before he leaves in October.”

Yet McCarthy’s exit “ups the ante” for McConnell to work with Boehner to get a two-year cap-adjusting budget deal as soon as possible, said Mackenzie Eaglen, an American Enterprise Institute analyst. For defense, such a deal suggests a budget with increases close to Obama’s requested levels.

If Boehner leaves without a government spending deal intact, “all bets are off,” Eaglen said. The likely outcome is a full-year continuing resolution, “which could roll into a two-year CR when these same questions have no better answers next year.”

Under a yearlong continuing resolution in 2016, the Pentagon

would wind up with \$35 billion less than it requested. At 2015 levels, the Defense Department would have a base budget of \$496 billion, \$3 billion shy of the \$499 billion sequestration budget cap, but \$38 billion less than the president’s \$534 billion budget request for 2016.

Though a strict CR does not allow new-start programs or produc-

tion increases, Harrison, of CSIS, speculated lawmakers will grant the Pentagon special authorities to divert money between accounts for priority programs it names.

“Why would Congress want to cede that authority to the Pentagon, well, Congress’ hands would be clean — and that could be a good election year strategy,” Harri-

son said. “They wouldn’t have their fingerprints on any of the things that needed to be cut.”

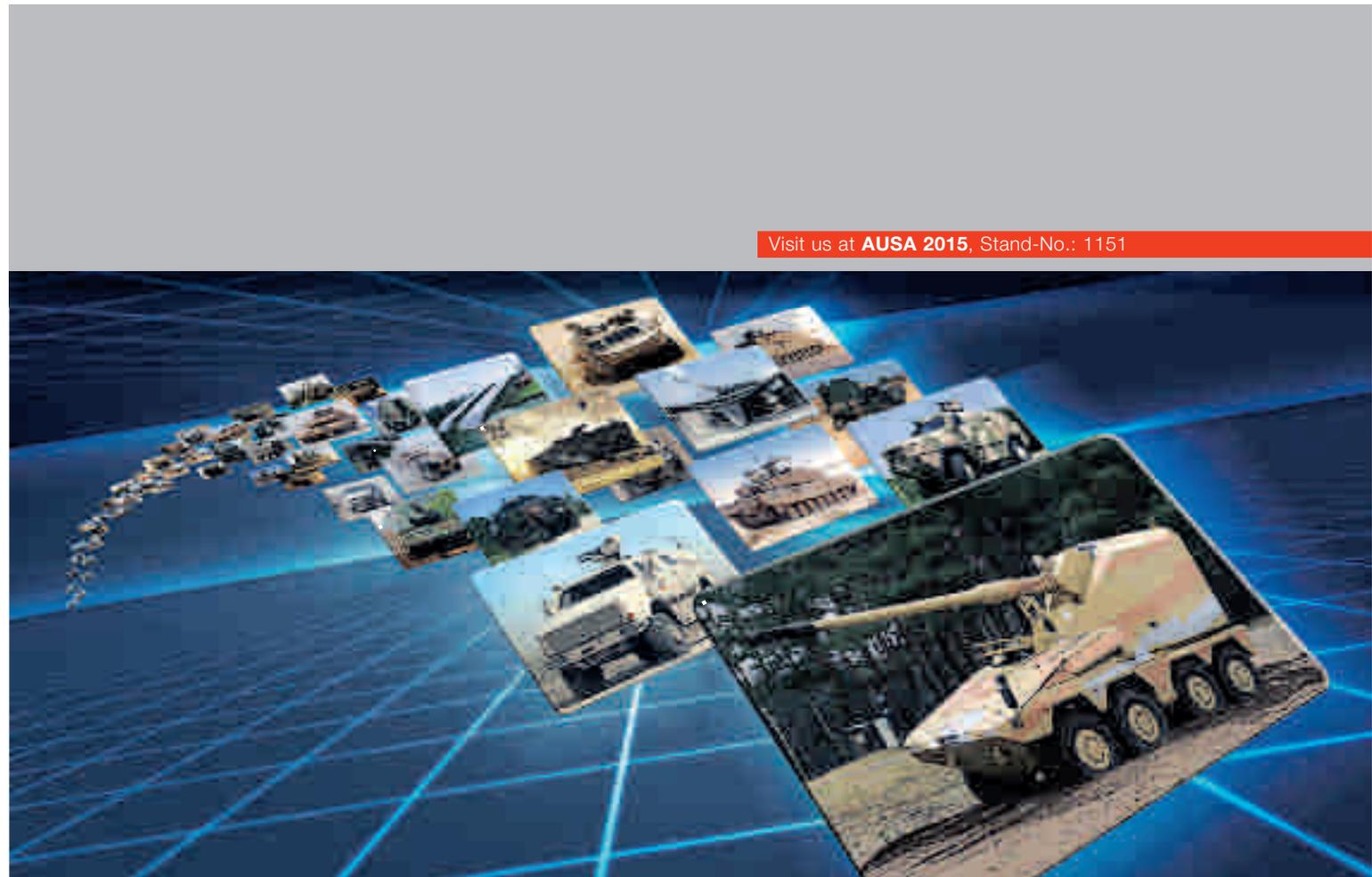
For Arnold Punaro, chairman of the National Defense Industrial Association, “the one ray of hope” against this scenario is Obama’s pledge Oct. 2 not to sign another CR. That increases the chances of a government shutdown, which is

so disruptive it might create the political pressure to force a deal.

“That says we’re headed for something nobody wants, which is a government shutdown,” Punaro said of the president’s promise, “but out of a shutdown, you would get a compromise.” □

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NORTH AMERICA

Pratt, GE Battle for Future of Military Engines

By **LARA SELIGMAN**
and **JEN JUDSON**

WASHINGTON — The US Air Force and the Army are moving full speed ahead toward next-generation engines the services hope will significantly increase fuel efficiency and power.

And both endeavors pit two giants in the engine-building world against each other: GE Aviation and Pratt & Whitney.

The Air Force is kicking off the next phase of its effort to develop adaptive engine technology, a new concept both companies have been developing for several years. Pratt and GE both submitted proposals, due Sept. 16, for the Air Force's Adaptive Engine Transition Program (AETP), which is meant to build and test the new engine model.

Industry expects the Air Force to award contracts for AETP to Pratt and GE in early 2016. The five-year program, which could be worth as much as \$950 million to each team, will transition the existing technology out of the Air Force Research Laboratory and into the acquisition realm.

Industry does not expect a down-select to one company in the near term, but the Pentagon will likely make a decision on a single engine solution in the next few years.

If the stakes weren't high enough, some say AETP will play a role in shaping the requirements

for the next-generation fighter jet. As the Air Force works to understand the needs of air power out into the 2030s, the service hopes soon to settle on a path forward for a sixth-generation plane. Under AETP, which runs parallel to the planned analysis of alternatives for sixth gen, Pratt and GE will work alongside the three major aircraft primes to test different concepts.

Meanwhile, the Army released a request for proposals for preliminary designs for the Improved Turbine Engine Program (ITEP) at the end of September. ITEP will replace the engine in roughly 3,000 UH-60 Black Hawk and AH-64 Apache helicopters with a more powerful and fuel-efficient one.

It's been a long road to get to the preliminary design phase. Army leaders stressed the engine replacement was its No. 1 priority, but after it wrapped up the science-and-technology phase, the service made little public progress toward the program's inception for well over a year.

Companies have until Nov. 9 to submit offers and be part of an open competition where up to two vendors will be selected to develop designs. While it's possible a dark horse like France's Turbomeca could respond to the request, it's expected only two engines will be submitted: one from a Honeywell-Pratt & Whitney team and one from GE.

The two teams both developed

engine concepts in the Army's science and technology effort leading up to the ITEP program of record.

The service plans to make an award late next summer to up to two vendors to design engines. The Army will then choose one engine design to continue into the engineering and manufacturing development phase in 2019.

Implications for 6th-Gen Fighter

The Air Force Research Laboratory has been working with GE and Pratt & Whitney on adaptive, "three-stream" engine technology for several years, under a science and technology program called Adaptive Engine Technology Development (AETD).

Fixed-cycle engines powering today's military aircraft are limited to one capability: either maximum power or fuel efficiency. The adaptive engine concept enables new engines to switch between the two. Where most fighter jet engines have two "spools" of air, the adaptive engine design adds a third stream around the outside of the engine. By changing that air stream, engineers can adapt the engine to get optimal performance throughout the flight envelope, according to Jimmy Kenyon, Pratt's director of advanced programs and technology.

"It's like shifting a gear in your car, shifting a gear on your bicycle," Kenyon explained. "You change the way the machinery



SGT. TARESHA NEAL JOINER/US ARMY

Enhanced Engines: About 3,000 Black Hawk, above, and Apache helicopters will receive engine upgrades under the Improved Turbine Engine Program.

works together so you match the conditions you are running out."

Both companies finished up design review this year, and will continue to build and test individual components under AETD. The follow-on program, AETP, will build and test full-up engines, Kenyon said.

Pratt's AETD engine improves fuel efficiency by 25 percent, thrust by 20 percent and range by 30 percent, Kenyon said. Similarly, GE's AETD design improves fuel consumption by 25 percent, increases thrust by 10 percent, and extends aircraft operating range by 30 percent.

Pratt is still on contract to build F135 engines for Lockheed Martin's F-35 fighter jet, and the company is working on upgrades to improve the fuel efficiency and thrust for that engine. The company sees potential to incorporate some of the technology developed under AETD into the F135, Kenyon said.

GE's proposal builds on the company's commercial LEAP and GE9X engines, which will soon enter service with Airbus' new A320 and Boeing's new 737 MAX, according to Dan McCormick, who leads the company's adaptive cycle program. In addition to the third air stream, the engine leverages ceramic matrix composites, a new type of material that can withstand hotter temperatures than conventional metals, and additive manufacturing.

In the next few years, industry expects AETP to look at the application of adaptive engine technology to the next-generation fighter jet. Under AETP, the companies will contract with primes Lockheed Martin, Boeing and Northrop Grumman to conduct trade studies on fit and integration of the new engines into next-generation aircraft designs, McCormick said. This contractual effort is intended to inform the Navy and Air Force's ongoing analysis of alternatives for the FA-XX and F-X sixth-generation fighter programs, he said.

"This is definitely intended to help populate a matrix of capabilities that help both services determine what capabilities could be provided to the aircraft relative to Mach numbers and ranges and payloads, the typical characteristics," McCormick said.

AFRL declined to comment on future contractual efforts.

See *FUTURE OF ENGINES*, Page 36

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NORTH AMERICA

USAF Secretary Gains New Space Authorities

By **AARON MEHTA**

WASHINGTON — The secretary of the US Air Force has been assigned new oversight responsibilities for space programs in the Defense Department, in an expected but long-delayed move from the Pentagon.

Secretary Deborah Lee James has been designated the principal DoD space adviser (PDSA) as of Oct. 5. The secretary previously had the responsibility of Department of Defense executive agent for space (EA4S) to the principal DoD space adviser.

The move is geared toward creating a more cohesive approach to the Pentagon's space architecture, said Deputy Secretary of Defense Bob Work in a statement.

"The PDSA will continue to chair the Defense Space Council (DSC), which remains the primary body to coordinate and resolve space issues," Work said. "However, while the PDSA will deliver DSC recommendations on space issues, the PDSA will also provide independent assessment and recommendations to the deputy's management action group when the DSC is unable to achieve a consensus."

The move comes as the US is increasingly wary of expanded offensive space capabilities by China and Russia. Earlier this year, the Obama administration announced a plan to funnel \$5 billion into developing new defensive space technologies for the US.

"To prepare for a conflict which may extend into space, the DOD requires a governance structure that monitors and oversees the performance of the entire DOD space portfolio and provides logical and analytically supported programmatic recommendations to departmental leadership," Work said in the statement.

The new authorities for James were previewed by Work over the summer, but the announcement was delayed while the department figured out exactly how the new setup would function.

Speaking at the annual Air Force Association conference in September, James described the goal of the change as "strengthening the role to give it more power to advocate over budgets and programs for space in the future."

James later confirmed that the role would have oversight on the "black" space budget as well as "white" programs that are out in the open.

However, the role change does not appear to come with any direct acquisition authority, leaving James and future Air Force secretaries unable to have final signoff on major space decisions.

One former Pentagon official told Defense News in September that unless those authorities are included, "it may be a title change, but it's semantics only."

"She's still going to be an adviser,

and there will still be a Defense Space Council, and she really doesn't sound like she'll have any other authorities than she had before," the former official said. "So, much ado about nothing."

The announcement of the new role comes one day after the Air Force announced that the first two satellites of the Geosynchronous Space Situational Awareness Program (GSSAP) had achieved initial operational capability.

The GSSAP program was a black program that the Air Force brought into the open in February

2014. The system will provide "neighborhood watch" oversight of other systems in the GEO belt, something that analysts have said comes dangerously close to an offensive space asset. The Air Force has defended the program as necessary to protect vital US assets. □

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Election Will Determine Canadian Role in F-35 Program

By **DAVID PUGLIESE**

VICTORIA, British Columbia — Whether Canada withdraws from the F-35 program will be decided next week as Canadians select a new political party to form the country's next government.

Liberal Party leader Justin Trudeau says if elected on Oct. 19, his government would remove Canada from the F-35 program and select a less costly aircraft to replace the Royal Canadian Air Force's CF-18 fighter jets. The savings from such a move would be redirected into naval shipbuilding, according to Trudeau.

The Conservative Party, led by Stephen Harper, has been in power for nine years and would continue the country's partner status in the F-35 program, although it has not yet committed to buying the aircraft.

The Liberals are in a hotly contested two-way race with the Conservatives, with opinion polls showing the election too close to call.

The Liberals released an 88-page election platform Oct. 5, which included some details about how it would proceed with replacing the CF-18s.

"The primary mission of our fighter aircraft should remain the defence of North America, not stealth first-strike capability," the platform noted. "We will make investing in the Royal Canadian Navy a top priority. By purchasing more affordable alternatives to the

F-35s, we will be able to invest in strengthening our Navy."

But Harper warns that Trudeau's plan would seriously damage Canada's aerospace industry.

"The Liberal Party is living in a dream world if they think we could pull out of the development project of the F-35 and not lose business," Harper told journalists Sept. 21.

Trudeau has countered that Canadian aerospace firms would receive equal or more work on a new fighter jet project that would invite bids from a variety of firms.

The other potential contenders to replace Canada's CF-18s are the Eurofighter Typhoon, the Dassault Rafale, Boeing's Super Hornet and Saab's Gripen.

Thirty-three Canadian firms have active contracts on the F-35 program totaling US \$637 million.

Frank Kendall, the Pentagon's undersecretary of defense for acquisition, raised questions about Harper's claims when he told reporters Sept. 22 that Canadian firms involved in the F-35 program would likely continue to supply components.

"I believe those suppliers are part of the team, I don't see any reason why they would not continue to be part of the team whether Canada [buys jets] or not," Kendall said during a ceremony to celebrate the roll out of Norway's first F-35. "We make our decisions on participation based on best value, and if Canadian firms are still best value, then they will be part of

the program."

Alan Williams, who signed the original memorandum that brought Canada into the F-35 program in 1997, also questioned Harper's claim.

"Those Canadian companies were selected because they provided the best product at the best value," said Williams, who is the former assistant deputy minister for materiel at Canada's Department of National Defence. "They weren't selected because they were Canadian."

Williams said holding an open competition for a CF-18 replacement would ensure Canadian aerospace firms have the best chance at obtaining work on such a project.

Lockheed Martin has not commented on Trudeau's plan. But in the past, company representatives warned that if Canada doesn't buy the F-35, it might not continue using Canadian firms on the project.

On Sept. 25, Canadian firms involved in the F-35 program released a joint statement emphasizing the program had already created long-term high technology jobs.

The firms noted that the F-35 program could create CAN \$11 billion (US \$8 billion) in work for Canadian companies as well as future opportunities to be involved in supporting the aircraft.

"If Canada does not buy the F-35, these opportunities and future technological advancements will be in jeopardy of being lost to



LOCKHEED MARTIN

F-35 and Election: Two Canadian political parties vying for power have different ideas about acquiring the F-35.

other countries," said the statement from the Canadian JSF Industry Group. "Current and future jobs will be lost to countries that buy the F-35."

Although Harper supports Canada's continued involvement in the F-35 program, he stopped short of saying the country would purchase the fighter jet.

Harper had previously committed his government to buying 65 F-35s.

But in December 2012, the Conservative government, under fire over questions about the increasing cost of the F-35 program and how the procurement process had been handled, announced it would put the acquisition on hold. The procurement process has yet to restart.

"No decision has been made on the CF-18 replacement at this point," said Conservative Party spokesman Stephen Lecce.

Harper dismissed Trudeau's plan to provide further funding for Canadian naval programs, adding that his government has launched the largest shipbuilding program

in the country's peacetime history. But most of the projects, announced in 2006 and 2007, have been delayed and no new ships have been built.

In the meantime, the Royal Canadian Navy has taken out of service its only two supply and refueling ships as well as two of its three remaining destroyers. The ships were decommissioned because of their age as well as mechanical issues.

Trudeau said his government's increase in funding to shipbuilding would speed up the construction process.

"We are going to build the ships and prevent the kind of delays on hiring and training and investment in infrastructure in order to deliver those ships in a timely way and on budget," Trudeau told journalists.

The New Democratic Party, which at one point was in a three-way tie with the Liberals and Conservatives, said if elected it would hold a competition for the CF-18 fighter replacement. □

Email: dpugliese@defensenews.com.

FUTURE OF ENGINES

From Page 34

Army ITEP Opportunities

The Army's new engine will be designed to save 25 percent on fuel consumption at 3,000-shaft horsepower, as well as boost the horsepower-to-weight ratio by 65 percent and engine-design life by 20 percent.

The Army will spend \$51 million in 2016 and anticipates a total development cost of \$720 million.

Honeywell is taking its experience developing engines for a variety of Army platforms and applying it to its ITEP design that it believes could save the Army \$1 billion a year in fuel and maintenance costs.

And Honeywell's partner Pratt & Whitney "has the most sophisticated and newest DoD engine going for the joint strike fighter," Craig Madden, president of the two companies' joint venture, the Advanced Turbine Engine Co., said last week at a media brief-

ing. "If you combine those two companies, we can make a hell of an engine."

ATEC is offering the HPW3000 turboshaft engine for the ITEP competition, which uses a two-spool gas generator architecture that improves specific fuel consumption, according to Madden. The engine successfully completed performance and durability tests and its new inlet particle separator proved effective in sand testing, Madden said. An engine that can cope with dusty, sandy environments is a requirement stemming from the wars in Afghanistan and Iraq.

Much is at stake with the engine program, as both companies are developing an engine specific to just two military helicopters and the possibility of selling the engine to the commercial market is slim.

But Madden is optimistic. "Either competitor, if you were to lose," he said, "you've still got the FVL [Future Vertical Lift] opportunity and that opportunity is either a 3,000 shaft horsepower or a growth or scaling up version, so there is some opportunity beyond

ITEP if we were to lose."

The Army is concurrently planning for a Future Vertical Lift helicopter expected to reach initial fielding in the early 2030s. Both the service and industry have said the ITEP would be available for FVL, but whether it is the right engine to suit the future helicopters' requirements when they are ironed out remains to be seen.

Madden acknowledged that the commercial market for engines of this kind is limited but a gap exists in that market that could be filled.

There are also some technologies ATEC has developed that could spin into other engines. Additionally, the company has done analysis on scalable engine designs and believes it could scale its engine up to about 4,500 shaft power, Madden said.

GE Aviation, which makes the legacy engine in Black Hawks and Apaches, plans to submit its GE3000 engine to the ITEP preliminary design competition.

Since wrapping up full engine testing as

part of the science and technology development phase, GE "continued maturing critical technologies" with the Army through the competitively awarded Future Affordable Turbine Engine (FATE) program, with goals even more aggressive than those in the ITEP program, according to a company statement.

The FATE program set its goals at 35 percent reduction in specific fuel consumption, 80 percent improvement in power-to-weight, 20 percent improvement in design life and a 45 percent reduction in production and maintenance costs relative to currently fielded engines.

GE also successfully tested a FATE inlet particle separator, compressor, combustor and turbines that validated advanced technologies like 3D aero designs, ceramic matrix composites and additive manufacturing, in which the company invests \$1.8 billion annually to develop. □

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EUROPE

Russian Actions Tighten Turkish Bonds with NATO, Qatar

By **BURAK EGE BEKDIL**
and **AWAD MUSTAFA**

ANKARA and ABU DHABI — Moscow deliberately expanded its dispute with the West over Syria when it flew jets over NATO member Turkey's border, observers believe.

At the same time, the situation may cause Turkey to draw more closely with regional partners, in particular Qatar.

During Oct. 3 and 4, Russian warplanes twice violated Turkish airspace during Moscow's bombing campaign in Syria aimed at bolstering the regime of Syrian President Bashar al-Assad. Then on Oct. 7, the Turkish military said that Syria-based missile systems harassed Turkey's warplanes while eight F-16 jets were on patrol along the Syria border.

Turkey also said an unidentified MiG-29 harassed its jets Oct. 6, prompting the Foreign Ministry to summon the Russian ambassador three times in protest.

The Russian Defense Ministry said that an Su-30 warplane had entered Turkish airspace "for a few seconds" Oct. 3 — "a mistake caused by bad weather" — but NATO on Oct. 6 rejected Moscow's explanation.

The incidents came at a time when Russia was sending more ground troops to Syria and building up its naval presence.

"That was a calculated Russian move," a NATO member state ambassador in Ankara said. "They want to challenge both Turkey and



FREDERICK FLORIN/AFP

Criticizing Russian Actions: Turkish President Recep Tayyip Erdogan speaks during a political rally in Strasbourg in eastern France on October 4. Russia's bombing campaign in Syria is a "grave mistake" and its support for the regime will be judged by history, he said.

NATO. The message through Turkey is clear: We won't let you decide on Syria's future."

A London-based Middle East analyst said that "the Russians humiliated Turkey by violating not just its airspace but also its rules of engagement."

"An attack on Turkey means an attack on NATO," Turkish President Recep Tayyip Erdogan said, citing Article V of the NATO charter.

Turkish Prime Minister Ahmet Davutoglu said on Oct. 7 that Turkey did not want the conflict in Syria turning into a crisis between Russia and NATO nor between Russia and Turkey.

However, he said: "Let me put it

bluntly: Turkey's rules of engagement are valid for Syria's, Russia's or another country's warplanes. The Turkish Armed Forces have been issued with open instructions."

Some diplomats think Turkey is bluffing and would avoid any conflict with Russia.

"The Turks have got to understand that the Russians are serious about Syria," said a diplomat from an Eastern European country. "The Russian move was a strong message to both Turkey and the Western coalition trying to shape Syria's future without taking Russian interests into consideration."

Regardless, at last week's NATO conference, Secretary General

Jens Stoltenberg reaffirmed his commitment to his partner nation, saying he was prepared to send ground forces to Turkey "to deter and defend against threats."

Stoltenberg also condemned as "unacceptable" the recent violations of Turkish airspace by Russian fighters. He criticized the "escalation of Russian military activity in Syria," saying it raises "serious concerns."

Asked about the collective defense of Turkey, Stoltenberg said: "Turkey is a strong ally, our second strongest Army."

Meanwhile, Russia's actions are tightening bonds between Turkey and its gulf cousins.

Turkey and Qatar are becoming particularly close in Syria, where they share similar support for anti-Assad groups that puts them at odds with Russian President Vladimir Putin's support for Assad.

"Both countries are caught in their perfidy in Syria where they either looked the other way on aiding extremists groups including al-Nusra and ISIL or kept covert relations with these groups in order to avoid direct attention to past mistakes of literally aiding and abetting," said gulf based geopolitical adviser and analyst Theodore Karasik.

In the current situation, Karasik warns that Turkey and Qatar may suffer the most from Russia's actions in Syria.

"The Kremlin knows that its robust backing of the Syrian government augmented by Iranian IRGC [Revolutionary Guard] and Hezbollah may upset some of their other allies who want to see Assad transition out of power and eliminate the threat of extremists," he said. □

Esteban Villarejo in Brussels and **Aaron Mehta** in Washington contributed to this report.

ASIA & PACIFIC RIM

Saab Pitches Collins Sub Upgrade to Australia

By **NIGEL PITTAWAY**

SYDNEY — Although it is no longer in the race to supply Australia's future submarine, Saab Kockums is proposing an upgrade to a number of the Royal Australian Navy's Collins-class boats, based on Sweden's Gotland-class midlife upgrade.

Speaking at the Pacific 2015 Maritime Exhibition in Sydney last week, a Saab senior executive said the company respected the Australian government's decision to exclude it from the Collins replacement program but saw a Collins midlife upgrade as a cost-effective measure to maintain capability in the interim.

"In Australia, you have decided on a new submarine program, which is fantastic, but it's not going to be here for a number of years and it is a very big undertaking," said Gunilla Fransson,

Saab's senior vice president, Security & Defence Solutions. "I think there is an opportunity to make sure that the Collins is as close to a modern and new submarine that you can get, by increasing its capability and delivering a cost-effective solution for your underwater capabilities."

Australia is looking to acquire up to 12 new conventional submarines under Project Sea 1000, but has a tight timeline if it wishes to avoid further full cycle docking overhauls, which will need to be performed on at least two submarines if the Collins needs extending beyond 2030.

There is no off-the-shelf solution that will meet Australia's requirements for a larger (greater than 4,000 tons) conventional submarine and a competitive evaluation process (CEP) is underway to evaluate proposed de-

signs from DCNS of France, TKMS of Germany and a submarine design from Japan.

However, the slow progress of the program is causing concern that the submarines cannot be designed, selected and built in time to avoid a Collins life extension.

The CEP is due to be concluded at the end of November, with a decision on whether the evaluation will move forward with one or two designs. Each of the bidders has to provide three alternative proposals for the construction of the new submarines, ranging from an offshore build, a hybrid construction model (where the first boats are built in the manufacturer's own yard before transitioning to local construction), to full construction in Australia.

"The CEP for the future submarine project is woefully inadequate as a vehicle for collecting

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Pakistan, China Finalize 8-Sub Construction Plan

By USMAN ANSARI

ISLAMABAD — Pakistan has finalized its long-negotiated submarine deal with China, with four to be built in China and four in Pakistan. Analysts believe the submarines will go a long way toward maintaining a credible conventional deterrent against India, and also largely secure the sea-based arm of Pakistan's nuclear triad.

Minister for Defence Production Tanveer Hussain announced the news last week while opening a new exhibition center at the Defence Export Promotion Organization.

Construction is to be undertaken simultaneously in both countries, but Hussain did not say when construction would commence or what type had been selected.

Most analysts believe the subs will be the air independent propulsion (AIP) equipped variant of the S-20, which is an export development of China's Type-039A/Type-041 class diesel-electric submarines.

Though Chinese submarine technology is reported to have improved considerably, Tom Waldwyn, research analyst in the Defence and Military Analysis Programme at the International Institute for Strategic Studies, said, "the capabilities of Chinese submarines are not something which can be easily determined as it benefits countries on both sides to keep this a secret.

"The export version of the Type 039A, the S20, is believed to be AIP optional and should the Pakistanis opt for this capability it would give them greater operational flexibility through increased endurance. Other than being AIP optional, it is currently unclear what other differences there would be between a Chinese Navy Type 039A and an export version," he said.

Hussain also highlighted a transfer of technology agreement, with a training facility established in Karachi for this purpose.

State-owned shipyard Karachi Shipyard and Engineering Works (KSEW) already has experience with submarine overhaul and construction and will build the subs.

Analyst, author and former Australian defense attache to Islamabad Brian Cloughley says joint construction suits both parties, but even with a transfer of technology, Pakistan will still be reliant on China.

"It is in the interests of both parties to have as much as possible manufactured in Pakistan, but of course the really high-tech systems will have to come from China, as it's simply not cost-effective for Pakistan to gear up to make them," such as the AIP capability, Cloughley said.

Cloughley believes construction will likely commence next year: "Given the way KSEW has been managed and expanded over the past few years I expect construction could begin as early as mid-2016. There has already been liaison and training in shipbuilding and the training center is formalization of this on a rather larger scale, with the focus entirely on submarines, of course."

These submarines have been linked by analysts to securing the sea-based arm of Pakistan's nuclear triad. However, according to recent Chinese media reports, Pakistan's access to the military grade Chinese Beidou-II (BDS-2) satellite navigation network is perhaps of equal importance.

Mansoor Ahmed, Stanton Nuclear Security junior faculty fellow at the Harvard Kennedy School's Belfer Center and expert on Pakistan's nuclear deterrent and delivery systems, said the ability of Pakistan's submarines to accurately position



NAVY OFFICE OF LEGISLATIVE AFFAIRS VIA WIKIMEDIA COMMONS

Pakistan Naval Power: Most analysts believe the subs in the China-Pakistan partnership will be the air independent propulsion-equipped variant of the S-20, which is an export development of China's Type-039A seen in this 2010 photo.

themselves is critical to their nuclear-deterrent role and the country's strategic assets as a whole.

"The BDS-2 satellite system will greatly enhance Pakistan's access to much needed ISR capabilities required for deployment of strategic forces at sea on submarine platforms. Unlike India, which is seeking to build a dedicated fleet of SSBNs [ballistic missile submarines] armed with SLBMs [submarine-launched ballistic missiles], Pakistan's force posture is purely defensive and India-centric for which AIP-equipped conventional submarines provide a reliable solution in terms of maintaining a cost-effective deterrent at sea," he said.

He says these submarines will generally be quieter than India's Arihant SSBNs and deployed within striking distance of India's coastlines armed with the submarine-launched variant of Pakistan's Babur cruise missile.

Ahmed does not believe all eight submarines will be assigned the deterrent role as they also will be required to undertake conventional patrol duties "equally important

given the pressing need to continue to improve Pakistan's existing sea-denial capability in the face of the exponentially expanding and modernizing surface and subsurface fleet of India's Navy."

Therefore, three or four conventional AIP-equipped submarines (though with limited range compared to nuclear-powered submarines) and armed with nuclear or conventional land attack cruise missiles "might offer the best bang for the buck for Pakistan in existing circumstances."

However, Pakistan has been particularly concerned with India's growing anti-submarine warfare (ASW) capabilities.

Accurate assessment of this is, according to Waldwyn, unavailable. "Whilst India has undoubtedly made significant improvements in recent years in its ASW capability in terms of equipment, the necessary data with which to evaluate Indian ASW operations does not currently exist in the public arena."

Nevertheless, Ahmed says Pakistan is taking no chances as the submarines "on their own would

not constitute an 'assured' second strike platform in the traditional sense, especially in the face of the growing asymmetry in favor of Indian ASW capabilities.

"India will have the luxury to deploy a significant portion of its ASW assets [including several P8-I aircraft] and its own fleet of AIP-equipped submarines against Pakistan's small submarine fleet during a crisis; especially once it will be assumed that some of the Pakistani subs are equipped with nuclear-armed cruise missiles, making them a prized target for the enemy," he said.

"A triad for Pakistan, based on its 'full-spectrum' deterrence posture, will consist of at least 10 different types of ballistic and cruise missiles, of which the naval Babur will comprise the sea leg, and taken together these offer much greater redundancy, survivability, and targeting and operational flexibility to the decision-makers to employ these assets in counter-force or counter-value roles," Ahmed said.

Therefore, he said, China has been instrumental in helping complete the naval leg of Pakistan's "nuclear triad" that had been a critical gap in its "full-spectrum posture."

"The second-strike capability for Pakistan, flows from the survivability of its strategic triad [which is largely solid fueled and road-mobile] than reliance on any one system or 'leg' of the triad," according to Ahmed. "Taken together, it makes it impossible for India to eliminate Pakistan's entire capacity of inflicting unacceptable damage regardless of any 'massive retaliatory strike' by India, and maintaining sufficient survivable strategic capability by Pakistan is essential for securing deterrence stability in the region." □

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AUSTRALIA SUBS

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data and it won't produce sufficiently detailed information for a well-informed, value-for-money decision," Andrew Davies, from the Australian Strategic Policy Institute, said on Oct. 8. "The agreement on that point is so strong across the board. We note Warren King [the previous head of Australia's military equipment procurement and sustainment agency, the Defence Materiel Organisation] today calling for an extra year in the CEP."

The Collins-class boats were built by the Australian Submarine Corp. (now ASC) in South Australia, and though the yard today supports fleet sustainment, including full cy-

cle docking (FCD) overhauls, submarine construction in Australia finished with the delivery of the sixth and final boat in 2003.

Davies warned that if delays to the already tight introduction of the Sea 1000 submarine occur, the resultant FCD work to extend the Collins boats to avoid a capability gap will not be easy.

"A further FCD wouldn't be more of the same because it is taking the boats beyond their design life and a significant technological refresh would be needed to keep them competitive until late next decade," he said. "The engineering work to plan for that really should be underway now. We know studies have been done and that there are no show stoppers, but I don't think any serious work has been done. It really needs to start now, and the FCD of the remaining boats could

benefit from it as well."

The Collins submarine was designed by Kockums (now Saab Kockums) and developed in parallel with Sweden's Gotland-class boats so the two share a similar heritage.

In late June, Sweden's Defense Materiel Administration signed a contract with Saab Kockums for the midlife upgrade of the Swedish Navy's three Gotland submarines, to be completed in the 2018-2019 time frame, while simultaneously committing to building the new A26 class boats.

"The Gotland is a 'cousin' of the Collins class and it's been a quality submarine that the customer has been very happy with," Fransson said. "And I think that the [midlife upgrade] is very much in line with the necessity for the Collins class. In my view you

have an opportunity here to not only sustain Collins but to upgrade it to a submarine that is modern and new, like we are doing with Gotland."

Fransson said if Saab's proposal for a Collins midlife upgrade is accepted, the work would be undertaken in Australia.

"You sustain the Collins boats here in Australia and I don't see any reason why you could not upgrade them here," she said. "Saab would certainly like to position ourselves to support Australia in an extended Collins life of type. You have a very capable local submarine company in ASC, which certainly has the capability to perform the work, together with Saab Kockums and other local Australian companies." □

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ASIA & PACIFIC RIM

Challenges Await Completion of Indian AF Net-centric System

By **VIVEK RAGHUVANSHI**

NEW DELHI — The \$1.3 billion contract the Indian Air Force awarded to state-owned Bharat Electronics Ltd. (BEL) to complete a homegrown network-centric warfare system could face integration challenges with the other services and will not compensate for a shrinking air fleet, analysts said.

The integrated air command and control system (IACCS) receives data from a variety of radars and generates reports from mobile observation posts, integrating other data elements from Air Force bases and civilian agencies to create a real-time comprehensive picture.

"The algorithms [for IACCS] have been indigenously developed in coordination with the IAF [Indian Air Force]," said Daljit Singh, a retired air marshal. "Hardware like workstations and routers would have been imported."

The second phase of IACCS will add four major radar networks to the fully automatic network-centric system to top the five networks in operation which the Air Force currently uses along its border with Pakistan.

The second phase will establish nodes for use along the border with China and Bangladesh, and for central and southern India, the official added.

Meanwhile, military officers say the net-

centric systems being developed by the Indian Army, Navy and Air Force should be integrated. But they are divided about whether assistance will be needed from foreign companies such as Raytheon.

Another Air Force official, who requested not to be named, said integrating the services' network-centric systems would be a difficult task for domestic companies.

"Radar networking requires in-depth integration," the official said. "Since all three use different kinds of radars, integration is quite a challenge. I do not think BEL can integrate all three. They will have to approach companies like Raytheon or Thales or ELTA, etc., for the same. Companies who have implemented EUROCONTROL in the European Union are the best bet for BEL. Massive software integration tasks require huge manpower costs."

A Defence Ministry official said that in the long run, the net-centric systems of the three services will be integrated, and that it should be possible to accomplish it domestically.

"The Indian Army is in the process of contracting BEL to provide similar software to meet the requirements of the Army. There is an agreement to integrate these systems [with the Air Force] to ensure exchange of relevant information," Singh said.

Nirdosh Tyagi, retired IAF air marshal said that while it will be possible to integrate the



INDIAN AIR FORCE

Air Force C2: India has awarded a contract to complete an integrated air command and control system.

systems, the services use different systems.

"Due to differences in types of assets, all three services do not have identical networking requirements. Even in a totally integrated inter-services environment, every bit of information will not be required by all. It would be possible to integrate these systems to the extent operationally desired," he said.

The first IAF official said the IACCS eventually will operate similarly to the NATO Air Command and Control System, which will result in automation of all planning and execution of air operations.

"The IACCS will in reality mature into sort of an independent air command-and-control structure and integrate all the air assets of the Indian Air Force including space-based assets like satellites and surveillance systems," he said.

But Air Force officials and analysts are unanimous that the IACCS will not compensate for the service's dwindling fleet strength. Against an immediate requirement

of 42 squadrons, only 35 are operational.

"Force multipliers cannot ever be substitutes for force, as adversaries also endeavor to build their own IACCS systems without undertaking combat force reduction," said defense analyst Kapil Kak, a retired air vice marshal. "Over the next 15 years, IAF would have no alternative to rebuilding its combat squadron strength to the sanctioned and critically needed level of 45 squadrons. Inability to do so would enormously weaken India's conventional deterrence and operational preparedness to face the awesome combined air power challenge from China and Pakistan."

"IACCS improves operational control of assets due to networking," Tyagi said. "It is not a substitute for fighters. For example, IACCS would help in detection and engagement of enemy aircraft effectively, but fighters would still be required in requisite numbers to neutralize the intruders." □

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AFRICA

Chinese Aviation Firm Expands Presence in Africa

By **OSCAR NKALA**

GABORONE, Botswana — A Chinese aviation company reported progress in its ambitious African expansion plans to set up an aviation training center, two regional marketing offices, two maintenance and support centers, and three spare parts warehouses to promote sales and maintenance for Chinese-made aircraft.

Speaking at the Aviation Expo China 2015 held in Beijing last month, Zhang Guangjian, general manager of International Aero Development Corp. (IADC), a subsidiary of Aviation Industry Corp. of China (AVIC), said the strategy includes the construction of a civilian aviation training center in South Africa, and two maintenance and product support offices in Tanzania and the Republic of Congo. Three warehouses for spare parts also are planned for Kenya, Zimbabwe and the Congo.

The IADC was set up under AVIC to promote global exports of Chinese-made civilian aircraft. The new centers will also promote sales and maintenance services to a large fleet of Chinese-made African military aircraft, including fighter jets, trainers, helicopters and UAVs.

"We plan to use these installations to help our civil aircraft industry expand its presence in Africa's central and northwestern regions," Zhang said. "Compared with Western counterparts, our aircraft have proven more suitable for operations in Africa because they are more adaptable to tough use and bad infrastructure. They have enabled our African friends to operate good aircraft at an affordable cost."

AVIC says at least 80 percent of the trainer aircraft fleet operated by African air forces are Chinese-made. These include 24 variants of the Y-12 turbo-prop trainer aircraft,

which are operated by air forces including Kenya, Ethiopia, Mauritania, Zambia, Uganda, Sudan, Namibia, Tanzania and Eritrea.

The aircraft is produced by China Harbin Aircraft Manufacturing Corp. AVIC's regional field service center in Nairobi will include a training center and spare parts warehouse meant to provide technical support and after-sale for African customers of the Y-12 military aircraft.

AVIC subsidiary Hongdu Aviation Industry Corp. also established itself on the continent with the 2012 sale of six L-15 trainer jets to Zambia, followed by an order of 12 more L-15s by an unnamed African country during the 2013 Paris Air Show. The customer is widely believed to be Tanzania.

The China National Aero-Technology Import and Export Corp., another AVIC subsidiary, has sold 35 variants of its Karakorum K-8 light attack and trainer aircraft to

the air forces of Zimbabwe (12), Zambia (16), Ghana (five) and an unspecified number to Sudan.

Other Chinese military aircraft models operated by African air forces include the Chengdu JF-7, the MA-60 and Y-12 turbo-props and Harbin Z-9 helicopters, spread across numerous countries including Zimbabwe, Zambia, Namibia, Tanzania, Ghana, Nigeria, Mauritania and Djibouti.

At the Aviation Expo China, AVIC exhibited newer versions of the FC-1 Xiaolong and JF-17 Thunder multirole aircraft for export to global markets.

The company also unveiled a multirole combat UAV, the Wing Loong II. The medium-altitude, long-endurance drone can perform surveillance and reconnaissance as well as air-to-ground strike. It is manufactured by AVIC subsidiary Chengdu Aircraft Design and Research Institute. Its predecessor, the Wing Loong I, has been sold to

African and Middle Eastern countries including Nigeria, Egypt and the United Arab Emirates.

Chinese defense and aerospace writer and analyst Wang Yanan said the Wing Loong II will help China claim a substantial stake of the international UAV market, especially among African and Middle Eastern countries that already operate Chinese aircraft and air defense systems.

"The advanced drone will help China obtain a bigger share in the international market because it will be one of the most capable military drones in the market," he said. "The Wing Loong II is equipped with a satellite data link system, so it can operate in an environment with bad ground signals, which means it can be of great use to nations that have vast mountainous areas or plateaus. In addition, the drone will be very attractive to countries that operate the Wing Loong I as they have realized the capabilities and reliability of Chinese-made drones." □

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BizWatch

How 'Turkish' Will Turkey's TRJet Be?

By **BURAK EGE BEKDIL**

ANKARA — Campaigning before June's parliamentary elections, Turkey's government leaders portrayed TRJet, a planned dual-use future regional jet, as a "100 percent Turkish aircraft." The program now faces a debate over exactly how "Turkish" the aircraft should be — even before a contract for the deal has been signed.

Turkey has committed to buying 50 TRJet aircraft based on the Dornier 328 and 628 under a deal with US-based Sierra Nevada Corp. (SNC), and industry experts say the program may be much bigger.

Earlier this year, Turkey's top procurement panel, the Defense Industry Executive Committee chaired by Prime Minister Ahmet Davutoglu, authorized the procurement agency, the Undersecretariat for Defense Industries (SSM), to negotiate the contract with SNC.

"There has been progress in contract negotiations," SNC CEO Fatih Ozmen told Turkish daily Hurriyet. "We plan the TRJ-328's maiden flight in 2019, and the TRJ-628's in 2023."

But SNC President Eren Ozmen complains that Turkish authorities insist the local work share should be 70 percent.

"It is extremely difficult to have 70 percent local work in early stages of the program," she said. "We may reach that number in 2023."

The Ozmens estimate the size of the program will reach \$1.5 billion.

"There is no 100 percent local work in this [aviation] industry," Eren Ozmen said. "Some parts and engine may be imported. During [contract] negotiations we have been asked to commit to 70 percent [local work]. This can be attainable with the TRJ-628 [not the TRJ-328]."

SSM's head Ismail Demir, who is Turkey's top procurement official, said his office would determine what would constitute "the 70 percent" so as not to block the program.

"We've never talked of a 100-percent Turkish aircraft, we never will," he told Hurriyet.

Demir promised "flexibility" in talks



SIERRA NEVADA CORP.

Flight Plans: The target maiden voyage of the TRJ-328 (shown at the bottom of the above) is 2019 while the larger TRJ-628 (top) is expected to take flight in 2023, according to Fatih Ozmen, CEO of Sierra Nevada Corporation, which is partnering with Turkey to build the planes.

with SNC over local work share. "How much of the local work share should count as technology development, how much of it as exports ... time frames ... we'll determine all that," he said.

A senior procurement official said that the TRJet engine would not be a local development project. "We want this program to go ahead as sound and fast as possible. We know that we will be talking about an imported engine for what eventually will become a Turkish aircraft," he said.

Demir said: "We know that the engine would not be local in the early years of the program. But this [a local engine] too is our target. We want to go from one stage to another," he said.

Industry sources say that what SNC and SSM would agree on the local content for an indigenous program would be critical in determining the share of local and foreign work in similar Turkish programs.

"There are several indigenous programs Ankara claims will build '100 percent Turkish' systems, and foreign players do not know what business they can do with these. The deal on the local work share in TRJet will give an idea," one senior western industry official said.

The TRJet program envisages the eventual production of four models of the aircraft — a jet (TRJ-328) and a turboprop (TR-328) with 32 seats, and a

jet (TRJ-628) and a turboprop (TR-628) with 60 to 70 seats.

SNC sees a market size of 500 to 1,000 aircraft for the TRJ-328 alone, and a similar number for the TRJ-628.

Turkey acquired intellectual property rights for the Dornier 328 and Dornier 628 from SNC, which later signed a memorandum of understanding with Ankara-based STM, a state-controlled defense technologies company, for joint work on the regional jet program — a program designed to meet Turkey's civilian and military requirements.

The modernization of the TRJ-328 will be performed by German, US and Turkish engineers. The first five aircraft will be manufactured in Germany for EASA certification purposes. The remaining 45 of the initial 50 and beyond will be produced in Turkey. The TRJ-628 will be completely designed in Turkey "with the DNA from the 628."

Any modifications for different configurations, including military ones, will be performed in Turkey. The company expects the military and intelligence configurations to be later orders. Those configurations do not change the base aircraft configuration.

Procurement officials say the military aircraft versions would serve in ambulance, maritime patrol, VIP shuttle, transport and intelligence roles. □

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The Hawkei is set to become the latest addition to the Australian Defence Force fleet.

RANDOM NOTES

Hawkei Wins in Australia

Australian Prime Minister Malcolm Turnbull announced on Oct. 5 that Thales Australia will supply 1,100 4x4 Hawkei protected mobility vehicles (PMVs) and more than 1,000 trailers to the Australian Army in an AUS \$1.3 billion (US \$916 million) deal.

The vehicles will be acquired under Project Land 121 Phase 4, which evaluated the locally designed Hawkei against the US Joint Light Tactical Vehicle (JLTV).

"The Hawkei will improve protection for soldiers and enable them to operate in high-risk areas," Turnbull said, during the announcement ceremony at the Army's proving ground at Monegeetta, northwest of Melbourne. "It is the only protected mobility vehicle in the ADF that can be transported by ADF helicopters. Under a \$1.3 billion agreement, the vehicles will be manufactured at Thales Australia's production line in Bendigo, creating 170 jobs there and another 60 jobs in Victoria."

Thales Australia has built the larger Bushmaster PMV

at its Bendigo facility for Australia and export customers since 2004.

Turnbull said the Hawkei will incorporate a next-generation communications management system, which will be developed in Australia by Thales.

Pilot vehicle production will begin in 2016 and deliveries will start from late 2017. Full-rate production will begin in 2018.

Reapers for Spain

For the first time, the US State Department has cleared the sale of MQ-9 Reaper unmanned aerial vehicles to Spain's military. The sale, which covers four General Atomics MQ-9 Block 5 aircraft and associated equipment, parts and logistical support, would be worth an estimated \$243 million.

News of the sale approval comes as US Defense Secretary Ash Carter is on a European swing that included a stop in Spain and a visit with the Special Purpose Marine Air-Ground Task Force for Crisis Response based in Morón de la Frontera in Seville.

"The Spanish Air Force intends to use the MQ-9s for homeland security, peacekeeping, peace enforce-



SSGT BRIAN FERGUSON/CENTAF NEWS TEAM

The US State Department has cleared the sale of four MQ-9 Reaper unmanned systems to Spain, pending congressional approval.

ON THE MOVE

Robert Gold has joined **Atrenne Integrated Solutions** as senior vice president and chief financial officer, the Minneapolis-based compa-

ny said. He was CFO of Culligan International.

Falls Church, Virginia-based **Northrop Grumman** announced two appointments:

■ **Kenneth Robinson** as vice president of operations for its intelligence, surveillance

and reconnaissance (ISR) division, part of Northrop's Information Systems sector. He was director of national and military systems operations for the ISR division.

■ **Dan Cloyd** as corporate director for naval aviation and ISR programs. He previ-

ously served in the US Navy where, as a rear admiral, he was the director for Maritime Operations, Fleet Forces Command. □

Send personnel news to onthemove@defensenews.com.





ment, counterinsurgency and counter-terrorism operations," according to the solicitor posted on the Defense Security Cooperation Agency's website. "The proposed sale improves Spain's ability to meet current and future threats by providing improved ISR coverage that promotes increased battlefield situational awareness, anticipates enemy intent, augments combat search and rescue, and provides ground troop support."

Spain intends to use the drones purely for ISR intelligence, surveillance and reconnaissance, so the vehicles will not be armed.

In addition to the systems themselves, the sale would include 20 Embedded Global Positioning System/Inertial Guidance Units (three per aircraft plus eight spares); two Mobile Ground Control Stations; five multi-Spectral Targeting Systems (one per aircraft plus one spare); and five Synthetic Aperture Radar, Lynx AN/APY-8 (also one per aircraft plus one spare).

Congress must still OK the sale, and then a contract must be drawn up and finalized.

Dutch Choose Sniper ATP

The Royal Netherlands Air Force has selected Lockheed Martin's Sniper Advanced Targeting Pod (ATP) to equip its F-16 fleet, the US-based company said.

The contract was awarded through the Dutch Defence Materiel Organisation and includes 29 Sniper ATPs as well as support equipment, training and sustainment. Pod deliveries will begin in the first quarter of 2016.

Under this contract, Lockheed Martin will provide sustainment support for the Royal Netherlands Air Force through a performance-based logistics program. Depot repairs will be performed at the Warner Robins Air Logistics Complex through Lockheed Martin's partnership with the US government.

Robots for USN

Bedford, Massachusetts-based Robot said its Defense & Security business unit has been awarded two indefinite delivery/indefinitely quantity contracts with a combined ceiling of \$96 million from the Naval Surface Warfare Center, Indian Head Explosive Ordnance Disposal Technology

Division.

The first contract, with a total ceiling of \$46.7 million, is for support services, upgrades and spares for Man Transportable Robotic System (MTRS) MK1 robots, modeled after the multi-mission iRobot 510 PackBot. An initial order valued at \$7.5 million has been received under this contract with work to be completed by September 2016.

The second contract, with a total ceiling of \$49.1 million, allows for the production of new MTRS MK1 robots, depot level repair parts, spares, consumables and approved accessories to support configuration management and engineering enhancements. An initial order valued at \$374 thousand has been received under this contract with work to be completed by September 2016.

\$1B Cyber Win

The US Department of Homeland Security has awarded Raytheon a \$1 billion contract to support and continue developing the Einstein breach detection and prevention system, C4ISR & Networks reported.

The Einstein system — which has been rolled out across more than 100 civilian federal networks — acts as a next-generation firewall, blocking known threat vectors at the ISP level and detecting anomalous traffic. Raytheon will be helping to upgrade and maintain the system under the five-year Development, Operations and Maintenance (DOMino) contract.

"The DOMino contract will provide services to operate and maintain existing Einstein capabilities and will also be used to design and develop new cybersecurity capabilities for the NCPS," DHS spokesman S.Y. Lee said prior to the award.

Along with maintenance, the development part of the contract will include upgrading DHS's intrusion detection, analytics, information sharing and intrusion prevention capabilities, Lee said.

The single-award, IDIQ contract has a five-year base, as well as an additional one-year add-on. □

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October 20-21, 2015
EAGLEPICHER TECHNOLOGY WORKSHOP 2015
Joplin, Missouri
www.eaglepicher.com

October 20-25, 2015
SEOUL INTERNATIONAL AEROSPACE AND DEFENSE EXHIBITION (ADEX)
Seoul, South Korea

October 21-22, 2015
NAVY SUBMARINE LEAGUE SYMPOSIUM
Falls Church, VA

October 26-28, 2015
MILCOM
Tampa, FL

October 26-29, 2015
NDIA ANNUAL SYSTEMS ENGINEERING CONFERENCE
Springfield, VA
www.ndia.org/meetings/6870

October 27-29, 2015
PRECISION STRIKE TECHNOLOGY SYMPOSIUM (PSTS-15)
Laurel, MD

October 27-29, 2015
NDIA ANNUAL EXPEDITIONARY WARFARE CONFERENCE
Portsmouth, VA
www.ndia.org/meetings/6700

NOVEMBER

November 2-5, 2015
DEFENSE AND SECURITY
Bangkok, Thailand

November 8-12, 2015
DUBAI AIR SHOW
Dubai World Central, Jebel Ali, UAE

NOVEMBER

November 30 - December 4, 2015
I/TSEC 2015
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Orlando, FL
www.itsec.org

I/TSEC is the world's largest conference and display of training systems capabilities in the world. Over 500 exhibitors join to present leading edge technology and innovative concepts related to the Training, Modeling and Simulation industries for over 14,000 visitors. Key government organizations and key industry partners from across all training domains are present to include, transportation, health care, gaming, and education. The venue is host to numerous collateral meetings and discussion opportunities take advantage of the large number of government and industry leaders brought together in one venue. This represents a huge offset to separate meetings requiring separate travel and logistical support. In many cases, cross functional meetings between government, industry and academia would be impossible outside this venue.

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DefenseNews



Commentary

EDITORIAL**RUSSIA'S ANTI-ACCESS/AREA-DENIAL CAPABILITIES**

Time for NATO's Response

After years of investment, Russia as expected is now deploying an array of capabilities tailored to undermine longstanding US and allied warfighting advantages.

New subs, long-range strike and air defense missiles, cyber, space and electronic warfare systems intended to present adversaries with complicated problems that are expensive to solve.

Such efforts by Russia, China and Iran are why the Pentagon is working so hard to find new ways to retain the military upper hand and counter these so-called anti-access/area denial, or A2AD, systems.

China too is investing heavily in specific capabilities to defeat US systems it views as most worrisome, among them America's fleet of large nuclear aircraft carriers. According to one of China's state-run newspapers, Beijing later this year will launch the Gaofen-4 geostationary earth observation satellite expressly to hunt US aircraft carriers that would be targeted by DF-21 and -26 ballistic missiles.

This answers those in Washington who continue to argue that China's intentions are opaque, misunderstood or misrepresented. China's plan is clear: field capabilities that keep America, its allies and their forces as far from its shores as possible.

As for Russia, 26 cruise missiles that were fired at targets in Syria from ships in the Caspian Sea were as much about supporting Bashar al-Assad as they were a naked demonstration of long-range strike power. While four of those missiles may have crashed in Iran, the message is that Moscow, just like America and Britain, has the weapons, intelligence, as well as command and control assets to mount such conventional attacks at range.

To further underscore its growing power, Russia recently sailed one of its new Kilo-class conventional submarines, armed with Kalibr missiles, from St. Petersburg to Crimea. The public transit was Moscow's way of reminding Europe that it can strike virtually any target at will.

Speaking at the Atlantic Council think tank in Washington last week, the commander of US naval forces in Europe and Africa and NATO's Allied Joint Force Command, Adm. Mark Ferguson, aptly described Russia's "arc of steel" spanning from the Arctic to Crimea. In the high north, Russia is re-establishing bases from which to project regional power. Anti-ship and ballistic missiles plus advanced air defense systems in Kaliningrad create a so-called A2AD bubble to hold NATO and US forces at bay while threatening its neighbors. It's investing \$2 billion to reinforce Crimea while its Mediterranean surface action group remains off Syria, where sophisticated weapons are being deployed along with the troops and aircraft to support Assad and create another A2AD bubble. The aim is to enable Moscow to achieve specific aims, like grabbing territory, but make intervention by US and NATO forces extremely costly. Further complicating the equation, Moscow regularly reminds NATO of its nuclear capacity.

To counter this strategy, NATO must marshal the political will to act swiftly to future provocations as forbearance has merely emboldened Putin. The new Very High Readiness Joint Task Force as well as increased training and exercises like Trident Juncture 15 are welcome, but not enough.

NATO must creatively counter Russian capabilities by novel thinking, new systems and keeping more troops and equipment near potential trouble spots so they can respond quickly to deter Russian aggression in a crisis. Size and speed matter as Moscow's strategy is to act fast to grab land or achieve other objectives, humiliating NATO, but avoid provoking a truly painful response. The alliance also must make clear that further transgressions of alliance borders will no longer be tolerated, including by imposing tougher economic sanctions.

Deterrence must remain NATO's mission, but the alliance must also better prepare for possible military confrontation, accidental or otherwise.

WORD FOR WORD

"We want a Future Fighting Vehicle like now. I mean like right now. I mean, we wanted to do it yesterday, right? Ten years ago."

Gen. H.R. McMaster

Head of US Army's Capabilities Integration Center

"For the Saudis, the main strategic objective remains the fall of Assad's regime — a goal irreconcilable with Russian interests."

Karim Bitar

Arab affairs specialist, Institute of International and Strategic Relations, Paris

LETTER**Israel Must Stop Playing Victim**

In response to the commentary by Uzi Rubin, "The Nuclear Agreement Boosts Iran's Missile Threat" (Oct. 5):

Israel and its supporters continue to cry "wolf" and will continue until they get the US to attack Iran. Iraq continues to fester and rather than liberate it, we have destroyed it. Neocons lied to us then and they are lying to us now. Let us look at some of the facts:

Israel has over 100 nuclear weapons. America play[ing] "see no evil, hear no evil" game is beside the point.

Israel has long-range delivery systems that can deliver nuclear weapons to Iran.

Israel has submarines that could deliver nuclear weapons from the Persian Gulf when it decides to attack.

Israel has a proven track record

of attacking its neighbors.

Iran, on the other hand, has been a victim of aggression.

America supported Saddam and Iraq when Saddam attacked Iran and used weapons of mass destruction that America and the West had given to Saddam.

Iran has never attacked another country in the last 100 years.

Iran does not have any nuclear weapons.

It is about time that America removed the blinders. Israel has played the victim long enough. They are an apartheid state that is far worse than what South Africa used to be. They are the victimizers now and do not deserve our blind support.

MOHAMMAD ARSHAD
Sacramento, Calif.

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It is time for Congress to repeal sequestration. Implemented in 2013 by the Budget Control Act of 2011, sequestration reduced funding to government departments with the bulk of the cuts coming from the Department of Defense.

Sequestration was never the planned approach but rather a



By **Rep. Kay Granger**, R-Texas, vice chairman of the House Defense Appropriations subcommittee, and **Gordon England**, former US deputy secretary of defense.

flawed default option if all else failed. Without congressional agreement for other actions, it was the only consensus way for the Congress to stop runaway government spending. By that measure, sequestration is a success and therefore it may be difficult to rescind. However, the required DoD cuts are now biting hard into military preparedness and damaging the country's national security. This problem needs to be fixed and fixed now.

Remaking Defense

Slash Regulations, Bureaucracy; End Sequester

Historically, it's very difficult for the Congress to deal with contentious legislation during an election year. Therefore, 2016 is out and by 2017 it may be too late. The time is now but DoD needs to take the initiative, to restructure more in tune to future threats and with dramatically less bureaucracy and a significant reduction in unneeded cost.

For at least the past 25 years, multiple organizations like the Defense Science Board and Business Executives for National Security have sounded the alarm that the DoD bureaucracy is too large and too unwieldy, and that its overall costs are growing beyond the nation's willingness to pay.

Wars are inherently inefficient and the conflicts since 2001 have pushed DoD farther in the wrong direction. The military is shrinking while an already bloated civilian bureaucracy has grown from about 700,000 in 2001 to about 740,000 today.

The Army's recently announced planned reduction of 17,000 civilians is good news but overshadowed by a corresponding reduction of 40,000 soldiers.

Unfortunately, cutting combat capability in DoD is faster and easier than reducing the civilian workforce. The DoD needs to work with Congress to reverse this process and simplify civilian reductions.

More troubling is the overwhelming burden of regulations that suffocate DoD operations and decision-making. Jacques Gansler, a former DoD official during the Clinton administration and now at the University of Maryland, reports that DoD regulations take up a crushing 186,000 pages. These regulations add cost to every DoD activity, every day. Worse, they stifle innovation, overwhelm companies doing business with the department and frustrate top military and civilian leadership. There are also important secondary effects.

Starting in the early 1990s, then-Defense Secretary William Perry rightfully suggested that defense companies should consolidate, thereby reducing overhead costs to help compensate for the "defense dividend." It worked, but with an unintended consequence.

Commercial firms shed their

defense sectors and the defense firms shed their commercial sectors. The result today is a defense establishment with almost no commercial ties and with little access to emerging commercial technology.

Defense Secretary Ash Carter recently visited Silicon Valley to further his initiative to make the DoD more commercial friendly. While commercial technology is not a panacea for defense, it would be a desirable outcome of a DoD restructuring. After all, nontraditional weapons are becoming more important, and our adversaries have open access to the world of commercial technology.

Since it seems fairly obvious that no highly competitive commercial firm will agree to the massive burden of defense regulations and bureaucracy, Carter's outreach is welcome.

Some will argue that commercial participation in defense is of little benefit since the US presently has the best weapons in the world, but we think otherwise. Research and development (R&D) is the lifeblood for any technology-based organization,

and our military is structured around a decisive technology edge.

Consider, however, that of the top 25 companies investing in R&D worldwide, none are in defense. In fact, if you combine the R&D expenditures of the top five US defense firms, that total would still not make it into the top 25. We therefore applaud Carter's outreach to Silicon Valley but only as a first step to a vastly broader DoD restructuring with the objective of much greater effectiveness and efficiency.

It's difficult for a lame duck administration with only 15 or so months in office to accomplish any new initiatives. But there is now a narrow window of opportunity for President Obama and Carter to leave with a legacy of positive change for the nation's national security. We strongly urge that the DoD work with the Congress to quickly make deep cuts in bureaucracy and in regulations. The Congress would welcome this initiative and would thereby more seriously consider rescinding sequestration.

The outcome that we seek is a much leaner, more effective and less costly military establishment and with adequate funding for procurement, operations and maintenance. Our citizens who foot the bill and our men and women who serve our nation deserve no less. □

Iran Nuclear ICBM Threat Not on Horizon

In the fall of 2012, Israeli Prime Minister Benjamin Netanyahu appeared at the United Nations, wielding a red pen on a cartoon drawing of a bomb to warn that Iran was on the brink



By **Greg Thielmann**, senior fellow, Arms Control Association, Washington

of building a nuclear weapon. US experts agreed that Iran's centrifuges and enriched uranium stockpiles would enable Iran to accumulate sufficient fissile material for a bomb within months. Iran already had a delivery vehicle for a nuclear warhead then in the form of two different medium-range missiles that could reach Israel. During the previous 12 months, Iran had conducted six flight tests of such missiles. The US intelligence community was concurrently assessing that Iran could test an intercontinental ballistic

missile (ICBM) with much greater range by 2015.

But it is increasingly clear that Iran's ballistic missile systems have not significantly advanced since then — an ICBM is nowhere in sight; and with the constraints on Iran's nuclear program in the July 14 deal, the most worrisome ballistic missile threat from Iran has been defanged.

In fall 2013, the US, Britain, France, China, Russia and Germany had entered into intensive negotiations with the recently elected government of Iranian President Hassan Rouhani. Those negotiations soon led to an interim agreement that froze and in some cases rolled back Iran's nuclear program and culminated in the Joint Comprehensive Plan of Action (JCPOA) on July 14, 2015. This comprehensive agreement, when implemented, will severely constrain Iran's nuclear program and ensure it is intensively monitored for many years.

Because the JCPOA will prevent Iran from arming its ballistic missiles with nuclear warheads, Iran's missile inventory looks far less formidable than it would

have without the agreement. Iran's ballistic missiles armed with conventional warheads are relatively inaccurate. They can inflict pain and suffering on civilians, as happened in the "War of the Cities" during the eight-year conflict with Iraq, but they are not a game-changer militarily, nor do they constitute an existential threat to any nation.

But this is not the only reason that the timeline of Iran's ballistic missile threat is moving outward. Iran's ballistic missile program under Rouhani has focused on short-range systems. There has not been a single flight test of a medium-range missile in three years. There has been no flight of the Simorgh space-launch vehicle, which was seen by some as a technological stalking horse for developing a longer-range military system. This inactivity has consequences for the readiness and reliability of existing systems and for research on new systems.

While eventual introduction of longer-range Iranian ballistic missiles is a valid concern, the imminence of such a development has significantly receded

from what it appeared to be in 2012. Even then, before the JCPOA was concluded and a new UN Security Council resolution adopted, nongovernmental missile experts had assessed that Iran was years from being able to deploy an operational ICBM, casting doubt on the validity of Iran emerging as an ICBM-wielding power in 2015.

Now, the US government is finally catching up with this reality in its public characterizations of the Iranian ICBM threat. Defense Secretary Ash Carter said in congressional testimony on July 29: "I wouldn't rule out that in 10 years, Iran could progress to an ICBM." Slipping the potential date for an Iranian ICBM by a decade is a needed dose of reality.

Yet even Carter's acknowledgement does not fully reveal the speciousness of the imminent threat argument some politicians are making about Iranian ICBMs.

Netanyahu and US Sen. Ted Cruz are among those who have asserted that Iran is building ICBMs that can threaten Los Angeles. Their political acumen may be impressive, but their

understanding of rocket science and geography is not.

The minimum range of ICBMs, 5,500 kilometers, was defined during the Cold War to correspond with the rough distance between the Soviet Union and the US mainland. The comparable distance between Iran and the United States is approximately 9,000 kilometers. So "not ruling out" an Iranian ICBM does not mean "ruling in" Iran's ability to target the US, even within 10 years.

The UN Security Council has now extended for up to eight years a proscription on Iranian nuclear-capable ballistic missile activity and trade. That the key missile technology supplier states are thus committed will be a major impediment to any acceleration of Iran's medium- and longer-range missile programs.

Faithfully implementing the Iran nuclear deal will ensure the specter of Iranian nuclear missiles continues to fade below the horizon. □

■ Send your opinion pieces to opinion@defensenews.com. Submissions must be roughly 800 words long and are subject to editing for space and clarity.





Interview

GEN. MARK MILLEY

US Army Chief of Staff

Gen. Mark Milley, who previously served as one of the top US commanders in Afghanistan, took over as Army chief of staff just a few weeks ago when Gen. Raymond Odierno retired.

The Princeton graduate's nomination to be the next chief came as a surprise to many. He was commander of the US Army Forces Command at Fort Bragg, North Carolina, and gained notoriety as the officer who decided to charge Sgt. Bowe Bergdahl with desertion following President Obama's decision to exchange five Taliban commanders for Bergdahl's release last year. But his name was barely on the radar as a possible contender for chief of staff.

Q. What is your impression of the situation in Iraq?

A. At the very core of whatever solution comes out is going to end up having to be an indigenous solution to the problem of ISIS or the radical Islamic movement that is going on there. So what does that mean? That means now you are in the realm of local politics inside Iraq and Syria. So the Iraqi government is going to have to take a series of actions in order to appeal to the Sunnis, for example, outreach to the Sunnis, outreach to Sunni tribes.

The political piece, the internal politics for Iraq are fundamental to the long-term solution. The Iraqi government, the Iraqi security forces, military police are going to have to become more aggressive and more offensively minded relative to ISIS or ISO in order to defeat them militarily, and it is going to be the combination of political action and military action.

At the operational level and at the strategic level, many people have described it as a stalemate in that the Iraqi security forces, neither of the Iraqi security forces nor ISIS, have the military capability to overrun the other.

The Syrian government is a different situation. They may or may not, and probably do not, and they are probably more a part of the problem than the solution.

Q. What does that mean for our soldiers?

A. Well, that means our job right now, and I think appropriately, is to continue to build partner capacity, to continue to train, advise and assist the Iraqi government. We cannot, and I do not think we should, do it for them because that will not be sustainable over time.

I think a critical path, task for the Iraqi government is to outreach to the Sunni tribes in the Sunni regions of Iraq and to enfranchise them, to empower them.

Q. Would you consider putting more troops in Iraq?

A. I think that advising forward to a certain level, and I do not know what level, would be maybe brigade level, regiment level. I think typically my personal experience plus my reading of history through other operations, etc., is that the indigenous force or the force that you are advising typically performs better when advisers accompany them out into various operations. So that is on the one hand. On the other hand, you've got to weigh the complexity of the situation and the risk associated to the force, and there are judgment calls.

Q. So what is your take on what Russia recently has started doing in Syria?

A. They are throwing fuel onto the fire that already is inside Syria.

I've got to let this play out for a few more days and see what direction things go with the Russians inside Syria. I think it is worrisome, and it is something that I believe is complicating, not simplifying, the situation inside Syria.

Q. What were some of the takeaways from your travels to Europe?

A. In Europe you have got some significant, somewhat traditional geopolitical issues going on.

In Russia, they have three huge invasions in their history. So Russia has deep in their psyche, in the historical psyche of the country, a deep-seated fear and insecurity of foreign invasions

into the heartland of Russia, and they perceive the advance of the NATO boundaries, so to speak, to be threatening. And then there is also a whole series of internal political issues inside Russia, nationalism and so on. And then you have got a leader, President Putin, who is aggressive, he is opportunistic, he is relatively young, very assertive. He is quite popular inside his own country. You have got demographic issues with the Russian people. They are on a downward demographic slide. You have got significant internal economic issues inside Russia.

So what is Russia's intent going forward into the future? I do not know and I do not pretend to know, but I can tell you what their behavior has been since 2006, 2008 timeframe, and their behavior has been very aggressive and it has been aggressive in violation of a wide body of long-standing international norms.

So what does all that mean to us in the United States and NATO? It certainly has gotten everyone's attention. It is a very significant and very serious situation and it is unambiguously aggressive. I said in testimony that I believed Russia to be the number one threat to the United States and I said that because of capability and demonstrated behavior. So their capability, their conventional capability, has been modernized with this hybrid warfare concept, but also their residual capability from Soviet times of their nuclear arsenal, their nuclear weapons arsenal. Russia today, as they have been for many, many years, is the only existential, truly existential threat, to the US. They are the only country on earth that can destroy the United States.

Q. The Army's European Commander, Gen. Ben Hodges, has said we have to make 30,000 soldiers in the theater feel like 300,000. What are your plans there?

A. [Supreme Allied Commander] Gen. Philip Breedlove recognized the situation and he has asked for a variety of capabilities through the joint staff and Department of Defense, etc. So our piece of that pie, our contribution to that, is to go ahead and try to provide those capabilities to Europe. We have



MIKE MORONES/STAFF



US ARMY PROFILE

- **Budget:** \$149 billion (FY2015)
- **End-strength:** 980,000 (active, Guard, Reserve)
- **Deployed:** 140,000 troops in 150 countries.

Source: US Army

no intention, nor do I think it is necessary, to go back to the days of the Cold War and have 300,000, 350,000 American troops sitting in Europe. But there are other things that can and should be done.

So rotational forces, for example, we can and should and will rotate brigades and other capabilities through Europe to plus up the amount of ground forces. Air defense capabilities, engineering capabilities, mechanized armor capabilities, special operations capabilities and so on and so forth. Rotating units through on a wide variety of exercises and those sorts of things to demonstrate our capability, to exercise our abilities, tactical abilities, to exercise strategic movement ability from the continental United States into Europe. I still want to do that. In addition to that, we want to improve and enlarge pre-position stocks of equipment. And the purpose for that is because in the event of a contingency, that will speed up our response times to go ahead and move ground forces if required.

And then the other piece is building partner capacity. We have advisers in the Ukraine working with Ukrainian National Guard. We have got units doing joint exercises with the Baltic states in Estonia, Latvia, Lithuania. We have got units doing joint exercises in Poland. We have got them in Germany. We have got them in Hungary, Romania.

Q. What are your primary concerns with budget and end strength?

A. We have got one army that right now is, roughly speaking, about 980,000 troops. So we got one army, 60 brigades, 18 divisions, three corps and just shy of a million soldiers.

We will reduce the size of the active force by 40,000. That was announced already. Then we have to look forward now to the '17

budget, the '18. The [presidential budget for] '16 is on the Hill. That is the 40,000 cut. So now we have got to look forward and begin to shape the '17, '18, '19 budgets, etc. We are going through that review process right now.

I have said that readiness is my number one priority and I absolutely firmly believe that and that number one priority is not going to change in the four years that I am the chief of staff. To me the greatest sin that I can commit is to send soldiers into harm's way that are not ready — that they are undermanned, under-equipped, not properly trained, poorly led, and that will result in soldiers being killed or wounded. I cannot look myself in the mirror with that.

Q. So how do you preserve readiness as your number one priority?

A. What I have got to do is ensure that adequate money is committed to the manning, training, equipping and leadership functions which constitute readiness. I have got to make sure that units are resourced money-wise, budget-wise, to conduct sufficient home-station training and conduct rotations at the combat training centers. I have got to make sure that money is committed to ensure that their equipment has got spare parts and the maintenance of their equipment so that their equipment is in a combat-ready status. I have got to make sure that units are properly filled with the numbers of people

Q. If readiness is your priority, where does that put modernization?

A. I cannot ignore the future fight. That is modernization. So when I say my number two priority is the future, the future Army, I am talking about the modernization, the structure, the doctrine of an army that will exist long after I retire.

By **Michelle Tan** in Washington.



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