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**SPECIAL
OPERATIONS
OUTLOOK
2022**



SPECIAL REPORT

Introduction To Special Operations Outlook 2022

By James H. Smith, U.S.

*Special Operations Command
Acquisition Executive*



■ If I were building my dream car, I would start by modernizing a 1969 muscle car. Why? I would want to uphold the greatness of the street appeal: the chassis, the wheels, the stance. But I would also update my dream car because I would want to adapt to the positive changes in the environment since 1969: GPS, satellite radios, cameras, air bags, etc.

Finally, I would want to upgrade my dream car by being an

early adopter of the innovations that are just at, or over, the horizon: artificial intelligence-enabled driverless features and alternate energy options to name just a few.

Innovation, by itself, is often illustrated by the clean whiteboard — the blank sheet — the invention of a dilemma to drive radical change. Modernization, on the other hand, at its best, upholds the greatness of enduring qualities, while updating outdated or obsolete features and sets the conditions to upgrade to emerging features as a first mover.

There is much to preserve in special operations forces acquisition. First and foremost is the focus on our operators. The first SOF Truth, “humans are more important than hardware,” is enduring.

Another is the value proposition of special operations forces as being uniquely global, partnered and joint. To support these operators, special operations forces acquisition has attributes that we will preserve. We’ve always sought to team with industry to provide equipment and services to the force by being transparent, inclusive and competitive.

To be transparent, we established a point of entry for indus-

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Defense Dept., photo

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try ideas, Engage SOF (eSOF), and tracked the metrics. Our eSOF portal had over 320 entries in 2021. On average, we took 35 days to respond to every proposal. We also knew how important feedback is to industry so we began tracking our Contractor Performance Assessment Reporting and quickly achieved a 98 percent timeliness rate — well above the Defense Department average.

The SOFWERX platform is designed to be inviting to all industry partners — whether traditional or nontraditional — it recently invited the 65,040th partner to its ecosystem.

The Vulcan portal provides an online repository for any industry partner to post their technology and for government personnel to conduct market research and provide feedback. In 2021, over 20,000 registered government Vulcan users conducted 12,800 assessments of technologies loaded in Vulcan.

The Small Business awards continue to exceed goals. We have an affinity for small business and nontraditional contractors because we see ourselves as a small business within the defense acquisition enterprise.

Competition remains the single strongest tool to get best value for operators. In fiscal year 2021, we competed 70 cents of every dollar.

As we modernize, we will preserve transparency, inclusivity and a proclivity to compete.

But the environment in which we conduct acquisition has changed over the last 20 years, and we need an update. SOF acquisition is at its best when we adopt the culture of the operators we support. They are known as the “quiet professionals.” To support them, we must become quieter as well. The way we protected information in the past will not work in the context of integrated deterrence. What worked against ISIS and Al Qaeda is — and frankly has been — inadequate for China and Russia.

We need industry and academic partners to join with us in taking additional measures to secure supply chains. We need to ensure that our collective cyber networks do not provide an entry point that puts SOF operations at risk.

We need to think carefully about how we solicit requirements, how we announce contract awards and what information is releasable to the public. I've had this conversation with partner nations. They are equally concerned that their information will be safeguarded by us in the acquisition enterprise. We need to be cognizant of the reality that seemingly benign bytes of information, when aggregated by a challenger — and they will be aggregated — can provide operational relevant information that disadvantages U.S. operators.

While the threats evolve, so do the opportunities. We have updated SOF acquisition practices based on new legislation,

authorities and policies. Congress recently extended and expanded our pilot to accelerate small business awards by working through the SOFWERX platform. We've seen a 200 percent increase in small business participation and a 60 percent decrease in time-to-award. We've been early adopters of the Defense Department's agile acquisition pathways. Although only published in January 2020, we already have 47 Middle Tier Acquisitions and six Software Acquisition pathway programs out of 82 programs — transforming the speed of delivery for these critical capabilities.

Industry can help us realize the full potential of other opportunities through experimentation with physical prototypes and digital engineering of virtual prototypes. This year we'll hold three Technical Experimentation events to provide a realistic operational venue for industry to demonstrate their mature capabilities and receive feedback from operators.

We're also providing foundry events where we can experiment together on emerging concepts and technologies focused on topics like “Future SOF Teams: Diversity of Skillsets and Traits for 2040” and “Next-Generation Effects and Precision Strike in Competition and Conflict.” If you want to experi-

ment with SOF, look for our announcements on sam.gov and through the SOFWERX ecosystem.

While there is no substitute for physical experimentation, digital engineering provides immense opportunities during the design and development stage. In the past, we had the luxury of physically prototyping several dry combat submersibles in order to inform the requirements for the submersible we are now producing. However, the next dry combat submersible will be

more complex and too expensive to build multiple prototypes. We're asking industry to digitally prototype their concepts for the next submersible, and we believe digital engineering will be a common arrangement for more intricate acquisition as we seek to provide interoperable capabilities for the Joint Force.

As we modernize, we'll pursue the needed updates to program protection in view of evolving threats and acquisition practices enabled by new authorities and technologies.

For the third leg of SOF acquisition modernization, we need to upgrade through the early adoption of emerging technologies that are peculiar to the force. Today, that includes reliable and effective counter-unmanned aerial systems that can support small teams and their partners in remote, austere and contested areas.

That includes the next generation of intelligence, surveillance and reconnaissance tools to replace the over-reliance on manned and unmanned aircraft. We believe next-generation ISR consists of the fusion of data provided by cyber-based



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That includes aircraft and vehicles that can traverse longer distances at faster speeds while avoiding detection to access any terrain. And that includes surface and undersea vessels that are fully partnered with the Joint Force.

We're also investing in those technologies that are just over the horizon — but needed now. Operators will need capabilities that give them an unfair advantage in information warfare and influence operations. They will need to understand the radio-frequency environment the same way their ancestors understood physical terrain.

They will need untethered logistics to greatly reduce their reliance on water, battery and ammunition resupply for themselves and their partnered forces. And they will need means of protecting their identities and their families as they operate in areas of increasingly ubiquitous technical surveillance.

For these capabilities, they will require the ability to move data and communicate with themselves, their allies and partners and the joint force, without detection, in increasingly contested environments.

As we modernize, we will provide the venues and resources to upgrade by being the first movers for relevant and game-changing technologies.

For industry partners, as we pursue these technologies, we'll remain true to our enduring commitment to transparency, inclusivity and competition. Where possible, we'll default to our SOFWERX ecosystem and sam.gov, but some of our efforts will require going quieter.

We will ask industry partners to go quieter as well. Modernization is, by definition, change. Our operators have always been well-served by our industry partners. To sustain and improve upon that level of service will require us jointly to deliver capability at a tempo and at a security awareness level that ensures they are prepared for the most contested environments against the most advanced challenges.

The muscle car vignette provided a means of defining modernization but, if I'm honest, my dream car would not be self-driving. It would have a 5-speed stick shift with a clutch on the floor. But standard transmissions are hard to find anymore.

Sometimes, modernization is making the old new again. Special operations forces were born during a time of great power competition and strategic deterrence. The "old" techniques of program protection and security need to become new again while not losing the agility we've acquired over the past few years.

This is our collective challenge. I look forward to partnering with our teammates in industry to modernize SOF acquisition — quietly. **ND**

James H. Smith is the acquisition executive at Special Operations Command, MacDill Air Force Base, Florida. He is responsible for all special operations forces acquisition, technology and logistics.

Armed Overwatch Program Nears Source Selection

BY JAN TEGLER

Despite the U.S military's shift to great power competition with China and Russia, Special Operations Command says it still needs aviation platforms that can support isolated commandos conducting irregular warfare in remote areas.

To fulfill the mission known as "Armed Overwatch," the command launched an initiative in 2020 to acquire 75 near-production-ready manned, propeller-driven turboprop aircraft.

Two years later, in the wake of demonstrations and evaluations that narrowed the field of aircraft competing for the program to three — L3 Harris' AT-802U Sky Warden, Textron Aviation Defense's AT-6 Wolverine and Sierra Nevada Corp.'s MC-145B Coyote — the command is on the verge of selecting one of the aircraft.

However, the vagaries of the defense budget have called the timing of the program into question. Enactment of the fiscal year 2022 defense budget arrived months late on March 10. With it came congressional approval of Special Operations Command's request for \$170 million to buy six aircraft.

The appropriation marks the start of Armed Overwatch as a program of record, according to Ken McGraw, a public affairs officer at the command.

Eighteen days later, the Biden administration introduced the Defense Department's fiscal year 2023 budget proposal debuted with a request for \$246 million to purchase nine additional Armed Overwatch aircraft as well as required support equipment, and training and mission-planning devices, pending congressional approval.

That puts the three companies vying for Armed Overwatch and the command itself in a waiting game. Asked when the first six aircraft will actually be purchased, McGraw said they will be bought "after source selection is complete."

He declined to share details on when this will happen, stating only that "USSOCOM plans to award a production contract before the end of this fiscal year."

Thus, with just six months remaining in fiscal 2022, it remains unknown which aircraft will be chosen.

Also unknown is how a congressionally directed independent assessment of Armed Overwatch from the Pentagon's Office of Cost Assessment and Program Evaluation, due along with the 2023 budget request, may impact how many aircraft are ultimately purchased.

Armed Overwatch aircraft would replace the 28 U-28A Draco intelligence, surveillance and reconnaissance aircraft

now in-service with three operational squadrons in Air Force Special Operations Command, as well as eight trainers.

The aging Dracos have been worked hard supporting special operations teams since they began flying in 2006. Armed Overwatch aircraft are intended to perform a similar intelligence, surveillance and reconnaissance role as the U-28, adding strike capability to perform close-air support for special operators.

With the ability to employ munitions including air-to-surface missiles, precision-guided rockets and bombs, and .50 caliber guns, Armed Overwatch aircraft would “collapse the stack” of aircraft including AC-130J/Ws, A-10s, F-16s and other tactical jets plus unmanned aircraft that provide surveillance and close air support today “into a smaller number of platforms,” according to Air Force Special Operations Command commander Lt. Gen. James Slife.

In a February 2021 Aerospace Nation podcast with retired Lt. Gen David Deptula, dean of the Mitchell Institute for Aerospace Studies, Slife loosely described the requirements for Armed Overwatch aircraft.

“What I would envision is a light footprint, a multi-role capability that has the ability to provide the intelligence needed to remain aware of the threat, and to take action where necessary ... without drawing a lot of attention to our host nations that may be hosting those operations,” he said. “That is what the future looks like in my mind, and so, you know, the Armed Overwatch platform would be ideally suited for that type of an operational environment.”

Special Operations Command has been tight-lipped about its source selection process and specified that contractors forward all questions from the media to them, effectively shutting down communication with two of three companies.

But they come in two general configurations. Textron’s AT-6E — an armed version of the T-6 trainer currently in service with the Air Force’s Air Education and Training Command, and the

AT-802U — an armed conversion of Air Tractor’s AT-802 crop duster — are low-wing, single engine turboprops. The two aircraft can be disassembled to fit into a C-17 for transport to a deployment location then reassembled there.

Luke Savoie, L3 Harris’ president of intelligence, surveillance and reconnaissance said, “Being able to disassemble our [AT-802U] aircraft in under six hours, reassemble it in 12 hours and provide a capability overhead an airfield or in a region is incredibly important.”

Sylvia Pierson, Textron Aviation’s director of communications and marketing, wouldn’t comment on how rapidly the

L3 Harris’ AT-802U Sky Warden



Textron Aviation Defense's AT-6 Wolverine



Sierra Nevada Corp's MC-145B Coyote



AT-6E can be disassembled or reassembled. She noted that the airplane “is capable of quick disassembly and reassembly. In fact, we are using this method for shipping aircraft on another contract, so it is not a challenge.”

Both two-seaters carry a variety of ordnance and reconfigurable sensors, communications and data links as well as advanced targeting systems. They can operate from unprepared runways, and be rapidly rearmed and refueled by small ground-based support teams, he said in an interview.

Sierra Nevada’s MC-145 is a high-wing, twin-engine aircraft derived from the short takeoff and landing, light cargo and passenger-carrying Polish PZL M28 Skytruck, a type already in use with AFSOC as the C-145A Combat Coyote. The MC-145 can self-deploy, carrying its own support team, special operators or casualties – in addition to its aircrew.

An airborne-operable rear cargo door offers the flexibility to deploy paratroops or palletized munitions including extended range Joint Air-to-Surface Standoff missiles. The Coyote can carry weapons on four wing hardpoints externally like the AT-6E and AT-802 or internally including glide munitions, up to eight common launch tubes or a “Coyote” unmanned air system. Like its single-engine competitors, it can carry a variety of sensors, data-links and communication payloads.

Maj. Alex Biegalski, a former U-28 pilot with 2,000 combat hours, who now flies MQ-9 Reapers for the New York Air National Guard in Syracuse, said MC-145’s signature is another feature that differentiates it.

A mantra for special operations forces is to “be discreet when you go to remote places,” he explained.

A civilian-painted U-28 can discreetly land in Somalia in the middle of Africa. “It might look a little weird but it looks like a civilian plane. People step off it wearing civilian clothes,” he said.

“When you take an AT-6 with a bunch of bombs and other stuff on it, it looks like an AT-6 with a bunch of bombs on it,” he said. “There’s no paint job you can put on it that doesn’t make it look like a military airplane. You have to wear a flight suit, a harness, etc. So the signature with that isn’t great.”

The MC-145 looks much like “a cargo aircraft,” he added, allowing it to blend in better than rivals. Though AT-802U might be able to be disguised as an agricultural aircraft, Biegalski said that both low-wing planes are more obtrusive and “SOF teams aren’t going to want to be near it because they don’t want to be associated with it.”

Pierson said AT-6E is “small, nimble and easy to cover if required.” The larger, crop-duster derived AT-802U would be challenging to conceal. “Giant, armed agricultural equipment are a lot harder to hide and pretending that type of equipment belongs in the middle of nowhere is likewise rather difficult,” she said.

Queried on what role the competing airplanes’ respective signatures might play in selecting aircraft for Armed Overwatch, a SOCOM spokesman responded that “signature is always important.”

Maintenance and sustainment networks to support deployed Armed Overwatch aircraft will also warrant consideration. In

press releases and briefing materials, Textron stresses that AT-6 has “an established global logistics infrastructure” and “85 percent parts commonality with the T-6.”

Textron has operated two Wolverines for eight years and has “maintained them with a two-person team,” Pierson explained. The company has a global network of service centers and deploys “mobile service units in support of our customers worldwide,” she added.

Savoie said, “Air Tractor is the number one turboprop maker in the world by volume,” adding that the airplane’s existing international network supporting its aerial application aircraft in areas like Africa and Middle East is well placed to support AT-802U.

As mentioned, the MC-145 is capable of hauling some of the personnel and equipment needed to sustain it – as well as the C-145A from which it is derived – and is already operating with Air Force Special Operations Command in far-flung locations.

According to SOCOM, some of the first six aircraft to be purchased will be used for training purposes, not operational missions. But the command also said Air Force Special Operations Command will ultimately determine how the first aircraft are used.

Lt. Col. Frank Hartnett, Air Force Special Operations Command director of public affairs, said, “It’s too early to have the details on how these initial aircraft would be used in what specific roles.”

The same applies to the nine additional aircraft Special Operations Command requested. As new aircraft “are brought online, it can be expected operational test and evaluation efforts and training plan efforts will need to be supported” as the new weapons system “begins the path to operational capability,” Hartnett said.

This means it will be a while before the Armed Overwatch mission gets off the ground.

Biegalski said the condition of the U-28 fleet suggests that both commands need to put operational Armed Overwatch aircraft into service soon.

“For the past 16 years, U-28s have been flying 24/7 combat operations in multiple theaters plus thousands of home station training missions,” he said.

It’s an assessment Lt. Gen. Slife agreed with, in comments to Air Force Magazine in 2020. The U-28 has service life issues on the “visible fiscal horizon,” resulting from the number of hours it has been flying and the cycles of takeoffs and landings “because of how heavily we’ve operated those airplanes over the last 15 years or so,”

“What we’re trying to do is time this in a way that does not result in a decrease in capacity on the battlefield as we transition crews from the U-28 to the prospective armed overwatch,” he said.

Hartnett said AFSOC is “properly managing the maintenance and longevity” of the U-28, explaining that during depot-level maintenance inspections at 25,000 flight hours a wing replacement is done that “extends the overall service life to 50,000 total airframe hours.” **ND**

AFSOC Redefines Itself for Great Power Competition

BY MIKAYLA EASLEY

ORLANDO, Fla. — After providing support to ground operations in the Middle East for two decades, Air Force Special Operations Command is reinventing how it does business in new contested environments.

The rise of threats such as China and Russia have forced the Defense Department to shift its focus to potential great power competition — putting counterinsurgency in the rear-view mirror. For AFSOC Commander Lt. Gen. James Slife, that means innovating how to use the tools and platforms already in the command's arsenal while going after next-generation technology.

AFSOC's fleet includes a range of 21st century aircraft mostly acquired by the service after the 9/11 terrorism attacks.

"We've got capable platforms. We have the best airmen that I could ask for. We just need to think about the recipes we make with them differently," Slife said during a panel at the Air Force Association's annual Air Warfare Symposium in Orlando, Florida.

Slife pointed to AFSOC's work with the Air Force Research Lab on the Rapid Dragon Program as a way the command can use old platforms in new ways. The program is exploring the feasibility and operational advantages of airdropping long-range palletized munitions from cargo planes the Pentagon already owns, such as the C-130 and C-17.

In December, Rapid Dragon successfully dropped a pallet of Joint Air-to-Surface Standoff Missile Extended Range, or JASSM-ER, cruise missiles out the back of an MC-130J flown by AFSOC. The missiles targeted and destroyed an oil barge.

Slife said this is an example of deterrence.

"If our adversaries have to look at every C-130 and every C-17 and wonder what's in the back and whether that C-17 is in fact a long-range fire squadron, it changes their calculus," he said.

The next few years will be key for SOCOM's pivot away from counterterrorism operations as it takes on more diverse missions, said Lt. Gen. Tony Bauernfeind, vice commander of SOCOM.

"In [fiscal year] 2022, over 30 percent of our operations will be against great power competitors to assure allies, to make sure we're out preparing for the environment, to make sure we are forward and where we need to be to have the effects to provide the options that the nation needs," Bauernfeind said.

That percentage is going to grow through at least 2024, he

added.

At the same time, SOCOM is ramping up modernization "because we realize that there are capabilities that we have to invest in now to make sure the [special operators] ... are going to have the modernized capabilities they need in the future," Bauernfeind said.

One of these efforts is AFSOC's new intelligence, surveillance and reconnaissance platform known as "Armed Overwatch." The aircraft, which the command hopes will replace its U-28A Draco manned reconnaissance plane, is projected to begin procurement during fiscal year 2022.

Other next-generation ISR platforms, such as those that collect information in the space environment, and artificial intelligence and machine learning are also top modernization priorities for the command's aviators, Bauernfeind said.

While these modern capabilities will prepare special operations forces for the future fight, Bauernfeind said they still have direct ties to counter-violent extremist organization missions.

"We realized that as the services are hurrying up to focus more heavily for great power competition, that we have the imperative to make sure that we still have aviation platforms that support that need for the isolated teams ... somewhere

where we won't have large arrays of aircraft," he said.

Slife added that for future counterinsurgency missions, AFSOC will likely need to consolidate the number of aircraft it uses.

"We're not going to be able to rely on having a stack of airpower over every single target that needs to be actioned," he explained. "It's all about collapsing that stack ... [with] fewer airplanes that are

multi-role, that have the ability to execute those missions in multiples."

Meanwhile, Slife emphasized the importance of collaboration with U.S. allies and partners to deter near peer threats, which includes helping partners develop their own capabilities while simultaneously increasing the AFSOC's global access.

"If we are in 60 places around the globe, that's 60 places where the United States has some level of access, some level of influence, the ability to understand the environment. Those are really, really valuable opportunities," he said.

AFSOC hasn't had the capacity to engage its aviation advisors in as many places across the globe as it would like, but the command is working to expand its capacity and boost influence worldwide, Slife noted.

While it may not be feasible for the military to be forward at every operational environment, it needs to develop and sustain relationships with like-minded allies and partners around the world, Bauernfeind added.

"Those relationships last a lifetime, and you never know when you're going to need those relationships," he said. "It's important that we continue on those, and the efforts of AFSOC in building those is critical to our success." **ND**



LITTLE BIRD

THE FUTURE OF SOCOM'S 'KILLER EGG'

BY YASMIN TADJDEH

Special Operations Command's A/MH-6 Little Bird — affectionally known as the “Killer Egg” — made its debut into the American psyche following the release of the classic book and movie “Black Hawk Down.” In it, Little Birds ferry commandos in the besieged city of Mogadishu, Somalia, and sealed the helicopter's place in pop culture history.

Hollywood aside, the now iconic aircraft — originally manufactured by McDonnell Douglas and now Boeing — has been a mainstay in Special Operations Command's inventory for decades, offering commandos a niche capability not found in other air platforms. The helicopter's small size, agility and speed make it an ideal rotorcraft for getting in and out of hairy situations, experts say.

The exclusive user of the aircraft is the 160th Special Operations Aviation Regiment — also known as the Night Stalkers — out of Fort Campbell, Kentucky. The mission set for the A/MH-6 are light attack and light assault, respectively.

“The aircraft provides a unique and highly-capable platform for employing extremely lethal and accurate fires as well as inserting small numbers of special operations forces into a variety of combat environments and special mission situations,” said Army Maj. Jeffrey Slinker, a public affairs officer at Army Special Operations Aviation Command.

The platform offers special operations forces two hours of flight time, has a maximum cruise speed of 126 knots, a range of 179 nautical miles, and a maximum service ceiling of 20,000 feet, according to Boeing, which declined to be interviewed for this story and referred questions to SOCOM.

Despite the platform's success, the Little Bird — which was introduced in the 1960s — continues to age. So what is in store for the future of the Killer Egg?

For one, Slinker says the platform isn't going anywhere. So far, no requirements have been put forward to replace it.

“There is no definitive plan to end the service life of the Little Bird,” he said. “The H-6 platform was officially introduced in 1966. While the majority of these aircraft were eventually phased out of service, ARSOA identified a significant utility in keeping the airframe in service. With continued maintenance and upgrades, there is currently no service life end in sight.”

These upgrades consist of a “zero-time” aircraft primary structure, he noted.

“Zero-time refers to the amount of time on the aircraft at upgrade,” Slinker said. “As with many military vehicles, ‘new’ doesn't always mean new. For example, previous iterations of upgrades to the H-6 platform required modifications to an airframe that may have been 40-plus years old. Zero-time means

the structure of the aircraft will be ‘brand new’ off the line with no flight time logged.”

Additional modifications include new modernized glass cockpits and an upgraded aircraft performance package, Slinker said in an email to *National Defense*.

Special Operations Command is currently fielding these upgraded aircraft at a rate of seven systems per year, he said.

However, there has been some discussion in the helicopter community that the aircraft could one day be replaced by a platform developed by the Army's Future Vertical Lift, or FVL, family of systems — particularly the future attack reconnaissance aircraft. The service has been working for years to develop a new set of rotorcraft that can replace its aging Chinook, Black



Hawk, Apache and Kiowa Warrior platforms. Sikorsky and Bell were selected by the Army in 2020 to build systems under the FARA effort. Sikorsky is offering its S-97 Raider and Bell its 360 Invictus, according to the Congressional Research Service.

However, Slinker threw cold water on the idea that FARA could replace the Little Bird.

“There has been no aircraft proposed under FVL so far that replaces the current aircraft for the light assault role required by SOCOM,” he said.

The main challenge for an aircraft like FARA or another in the FVL family is finding a platform that is “small enough, maneuverable enough, transportable enough and simple enough to conduct the light assault/attack role of the A/MH-6,” he said.

Aviation expert Richard Aboulafia, managing director of Aero-Dynamic Advisory, an Ann Arbor, Michigan-based aerospace consulting firm, said that while technically conceivable, replacing the Little Bird with the future attack reconnaissance aircraft would be unlikely because the platform would be too big.

“Even if FARA goes ahead, I just don’t see it producing anything relevant for this. These are really small, small agile machines,” he said. “Nobody’s designing a new one.”

A tiltrotor platform would be unfeasible for SOCOM, he

said.

“That’s the exact opposite of what these guys want for this mission,” Aboulafia said. “Good luck flying through buildings and chasing cars.”

A coaxial rotor would also pose difficulties. “Maybe that’s a little better, but that’s still bigger,” he said.

While there once was a civil market for the Little Bird, the platform has since been replaced by inexpensive light turbine aircraft such as the Robinson R66, Bell 505 and the Airbus H125, Aboulafia said.

Those “really don’t have the power and agility of the Little Bird,” he said. “Maybe they could be up-engined and re-transmissioned and whatever else, but why?”

With a new aircraft likely not on the horizon, Slinker said SOCOM will be focusing on upgrades to the platform.

“Weight reduction initiatives and affordable, reliable, simplistic performance increases [will] continue to make the A/MH-6 platform more relevant in the future,” Slinker said.

The platform currently carries weapons such as multiple calibers of machine guns, the full family of 2.75-inch rockets as well as laser-guided munitions, he noted. Currently, there are no plans to integrate new weapons onto the platform.

But with the Pentagon shifting its attention to great power competition with Russia — which recently launched an unprovoked war with neighbor Ukraine — and China, will the Little Bird play a role?

Slinker said: “There is always a need for the unique light attack/assault aircraft role” that the platform offers users.

However, Aboulafia believes the Killer Egg’s role will be limited.

“They’re just not for great power competition,” he said. It’s not relevant in terms of range, deployability and battlefield survivability, he added.

However, the aircraft will likely continue to be a mainstay in SOCOM’s inventory for years to come, Aboulafia said. With an active production line available, Special Operations Command could replace small numbers of platforms or engage in block upgrades.

“SOCOM has a few dozen of everything,” he said. “You never know when there might be a contingency.”

The pricey aviation items that often eat up Special Operations Command’s budget are on the other side of the spectrum with the Little Bird, he noted, including CV-22 Ospreys and MH-47G Chinooks.

“That’s just a monstrosity of a different order of magnitude,” Aboulafia said. “Even if you wanted full up, replacement Little Birds, ... you’re talking about maybe \$5 million an aircraft ... as opposed to the \$70-something-million for a CV-22.”

He added: “They’re cheap and cheerful. So why not have them on hand?”

The Little Bird represents a niche capability that gives the platform longevity, Aboulafia said.

“Every so often you find aeronautical niches that are built that way,” he said. “You just sort of stake out this position [and] no one really comes after you in any meaningful way and you defend it.” **ND**

Army photo



U.S. Still Playing Catch Up in Information Ops

BY STEW MAGNUSON

It has been more than 20 years since 9/11, when the United States acknowledged that it had allowed its once formidable information warfare and strategic messaging capabilities to lapse into a state of decline.

At the time, al-Qaida was proving on a daily basis that it could effectively use modern day tools such as the internet to spread its anti-Western propaganda. The U.S. government had little capacity to counter radical Islam's messages after allowing its skills to atrophy at the end of the Cold War.

Two decades later, the Joint Chiefs of Staff's point man on cybersecurity and information operations said little progress has been made.

"I'm not sure how much has changed, other than we continue to watch ... our adversaries demonstrate tremendous competence in this area," Marine Corps Lt. Gen. Dennis Crall, director of command, control, communications and computers/cyber and chief information officer, Joint Staff, J6, said at the National Defense Industrial Association's Special Operations/Low Intensity Conflict conference held in Washington, D.C.

The last decade has only seen the problem worsen as social media grew in popularity and was then used by Russia to interfere in U.S. elections.

Rep. Mikie Sherrill, D-N.J., said, "We used to do this quite well. This was our mission — winning hearts and minds across the world. That's how we fought the Cold War. That's how we fought communism. And the reason we were so effective at it, quite frankly, is because here at home, we understood it. It was very clear to me growing up that living behind the Iron Curtain would be really the worst of all worlds."

Gavin Sundwall, a career foreign service officer in the office of policy, planning and resources for public diplomacy at the State Department, said, "The competition is fierce. Other actors, China, Russia, Iran are actively competing for control of information environments, and they're well funded. They're putting a lot of money into it precisely because — in the big scheme of things — it's low cost."

Sundwall, who recently served in Australia as minister counselor for public affairs and leader of strategy and affairs, saw firsthand how China was spreading its message throughout the region.

"This is low cost, high value for them," he added.

A State Department strategic resource review recently concluded that U.S. global competitors China and Russia combined invested significantly more than the United States in the competition for public influence, Sundwall said.

Russia spends approximately \$1.3 billion annually on broadcast media and strategic communications. China's annual public influence investments exceed \$10 billion, "and this is in addition to their robust disinformation and misinformation operations," he said of the two countries.

The State Department's total budget for all public diplo-

macy and public affairs efforts was \$1.44 billion in fiscal year 2021, including funding for cultural and educational exchange programs, as well as public diplomacy programs at U.S. missions abroad, a State Department spokeswoman said.

The terms "information warfare," or "information operations" includes military information support operations that are carried out by special operators.

Sometimes still referred to as "psychological operations," or psy-ops, these specialists use various means to influence local populations or leaders to help combatant commanders achieve certain results on the battlefield.

Strategically, information operations are used by governments to influence populations or other governments.

"Disinformation campaigns" — normally the realm of intelligence agencies — are covert efforts to intentionally spread false or misleading information, according to a policy brief by the Center for Security and Emerging Technology titled, "AI and the Future of Disinformation Campaigns."

Whether it is the State Department, Special Operations Command or the Defense Department, no single agency "owns this space," Sundwall said.

As for the military, Congress mandated that the Defense Department designate a Joint Force provider and Joint Force trainer in the information operations space and build a strategy, Crall said.

"We are grossly late," he said. "It's time to do it now, rather than talk about it, and appreciate and think about it. We need to act," he said.

Combatant commanders too often think of information operations as an afterthought, he said.

"We understand kinetic operations very well. Culturally, we distrust some of the ways that we practice information opera-



tions,” he said. The attitude is to “sprinkle some IO on that.”

Information operations need to be used — as commanders do in kinetic operations — to condition a battlefield, he added.

Special Operations Forces are optimally positioned to lead in this space, but that doesn’t mean that it’s a SOF-exclusive activity, Crall said. It should be done with military partners, allies and the intelligence community, he said.

“If I were to pick a place to really be the genesis to move this, I would be looking to our special operators to do that,” Crall said.

Sundwall said Special Operation Command’s psychological operations specialists should be empowered to take on these challenges as part of the government’s interagency information operations.

“We’re not as effective when conversations don’t take place early on to shape the local environment. And then the train has kind of left the station,” he said.

“I’ve seen it work really well. I’ve also seen it work not so well,” he added.

The State Department has “a robust interagency presence in this space. And we’re stronger when we work together,” Sundwall said.

The State Department’s 183 missions overseas, the ambassadors, their country teams and their communication professionals are a strength that the department brings, he said. “And when they work hand in glove with SOCOM, great things can happen,” he added.

Crall said the focus should be on geographical combatant commanders and local experts. Messages shouldn’t be crafted in an office in Washington, D.C.

“Do you understand that environment? Do you speak the native language? Do you speak the number of dialects in that area? Do you understand anthropology, religion, history when it comes to context? Many of our messages that sound righteous to us fail miserably when introduced to very specific populations during different times,” he said.

Stock illustration



Who knows that audience better than those in the region — the combatant commanders, the ambassadors who are there and their staffs, and the intelligence community station chiefs, he added.

Meanwhile, Crall has seen a sharp decline in information operations skills in the military. Those who honed their craft at the end of the Cold War have retired.

“I’ve said goodbye to them years ago. They’ve gone on to their second careers, and many of them now are gone. We don’t build information experts who have deployed and have experience in areas like we did even a decade ago,” Crall said.

Both Crall and Sundwall said if the United States is to take on formidable opponents such as China and Russia in the war of ideas, it can’t be done “on the cheap.”

Crall said: “This requires an investment. It requires a purposeful investment with a real stable organization, and structure behind it. If it’s a pickup game ... and it’s sporadic and it’s not continuous, I think it is where we run into trouble,” he said.

Sherrill said, “It’s an area where I think we’re lagging a little bit, and we really need to do more.”

It was appropriate to focus on counterterrorism messaging, but that came at a cost, she said. And that was letting major rivals move ahead in the information operations space.

“I think of it twofold,” she said. One is to make sure the American people don’t buy into the disinformation campaigns state actors such as Russia are propagating.

The other is U.S. strategic messaging.

“How can we promote our ideals abroad? And how can we make sure that we are winning the war of ideas, and enforcing what we need to do without going into a hot war? ... How are we going to win those, vis-a-vis Russia and China?” she asked.

Crall said some of the needed investment in information operations can go toward technologies such as artificial intelligence.

“What can help us in this is automation. When it comes to looking at content, scoring content, sentiment, everything that’s happening out in the web, we can really benefit from a thin AI layer on top of this,” he said.

But there are no shortcuts when it comes to cultural expertise. There should always be a human in the loop when making decisions, he added.

Meanwhile, adversaries are beginning to use AI to craft messages, Crall said.

The CSET policy brief said AI and machine learning are poised to amplify disinformation campaigns that are used by state and non-state actors to “shape global opinions, sow chaos and chip away at trust.”

Crall said: “A lot of that works. It’s not perfect. It doesn’t pick the right audience. It’s not always constructed properly. And there are obvious things. But as they go, what they’re doing, unfortunately, is they’re learning. And those machines are learning. And they’re getting smarter.”

Sundwall said: “We can’t do this on the cheap. ... We need to get bigger, more robust presence. We need to be able to find ways into conversations with audiences that matter, wherever they’re taking place.” **ND**

Special Operations Command Targets Vehicle Upgrades

BY YASMIN TADJDEH

NORFOLK, Va. — New vehicle upgrade opportunities are available for industry seeking to work with Special Operations Command.

“We have a pretty unique fleet out here in SOCOM that kind of touches different programs,” said Marine Corps Lt. Col. Alfredo Romero, program manager for Special Operations Command’s family of special ops vehicles.

The command’s inventory includes joint light tactical vehicles, purpose-built non-standard commercial platforms, light tactical all-terrain systems, ground mobility vehicles and more. There are platforms currently in concept, production and sustainment stages, Romero said during the National Defense Industrial Association’s annual Tactical Wheeled Vehicle Conference in Norfolk, Virginia.

One vehicle in the concept stage includes the purpose-built non-standard commercial vehicle, which is being pursued through an other transaction authority prototyping effort, Romero said.

“The idea of this vehicle platform was to build a vehicle from the ground up on the chassis, with the ability to change out

the skins,” he said. The command is designing the platform to have an extended service life with the ability to traverse longer distances.

Special Operations Command has recently completed some tests with the vehicle and is currently waiting for the results to come in before making its next move, Romero said.

Meanwhile, the Joint Light Tactical Vehicle, or JLTV — which is being developed through a joint program office for the Army and Marine Corps — is another project in the concept stage. The platform is a service-common vehicle being provided to SOCOM components, Romero said. In fiscal year 2023, the command will begin applying special operations forces-specific modifications.

Part of Special Operations Command’s acquisition strategy is to leverage platforms from the services, he said.

Whatever the Army and Marine Corps provides is “good enough for SOF,” Romero said.

The command then applies SOF-peculiar modifications to the platforms which offers users greater flexibility, he added.

Upcoming milestones include a SOF command, control, communications, computers, cyber and intelligence, or C5I, integration kit which will be tested in fiscal year 2022, according to slides shown during Romero’s presentation.

The JLTV will be one of SOCOM’s newer vehicles and will be a workhorse in the fleet, he said.

The command is also pursuing a hybrid-electric ground mobility vehicle 1.1 system. A prototype platform is expected to be completed by July and the command will then commence testing, Romero said.

Meanwhile, platforms in production include the light tactical all-terrain vehicle, which is a SOF-modified commercial-off-the-shelf system that can be internally air transported via V-22, H-53 and H-47. The platform includes two- and four-seat variants. It can perform missions such as offset infiltration, reconnaissance and medical evacuation.

The command is using Polaris’ MRZR Alpha for the vehicle, Romero said. The program is a collaborative effort between Special Operations Command and the Marine Corps.

“We are sharing the same common vehicle baseline,” he said. The platform is known as the ultra-light tactical vehicle within the Corps, he added.

“It’s an overall nice vehicle,” Romero said. “The user community here really likes this platform.”

MRZR Alpha

Moving forward, areas of interest for the vehicle include integrating autonomy packages, signature management systems and inserting a communications suite, he said. There is also interest in electrifying the platform.

The LTATV was slated to complete performance testing in March, according to Romero’s slides.

Meanwhile, the service is sustaining its fleet of mine-resistant, ambush-protected vehicles as well as its ground mobility vehicle 1.0 and 1.1 platforms, he said.

In general, as SOCOM looks forward, it is seeking lightweight armor for its vehicle fleet, he said. Current armor solutions are heavy and limit the available payload for users, as well as decrease the platform’s durability.

The command is also looking for new signature management technologies, he said.

“That is a big topic for us,” Romero said. “How do we do signature management on the move?”

Hybrid-electric technology is another area of interest, he said. “Anything that we can do to create that extended range and also that silent watch ... we’re all in on that.”

Autonomous and semi-autonomous vehicle technology — as well as augmented reality maintenance capabilities — are also areas that SOCOM is eyeing, Romero said. **ND**

Polaris photo



Special Ops Software Office Takes on Pentagon Bureaucracy

BY MEREDITH ROATEN

Special Operations Command is aiming to deliver software at a rapid pace, keeping up with industry standards for speed and flexibility.

Almost two years after it was stood up, the Special Operations Forces Digital Applications program office is barreling past the infamous Defense Department bureaucracy to attract nontraditional vendors.

While its original goal was to field software such as artificial intelligence and machine learning every six months, the office's program executive officer Col. Paul Weizer said staff have achieved a quarterly delivery pace and hope to move even faster.

When asked about his proudest accomplishment during his tenure at the SDA, Weizer said the office surviving was an accomplishment on its own.

"It's new and because what we were doing didn't align with the same strategy people had observed or witnessed in the past, there was some reticence in different areas that I think we overcame when people saw the potential and the attitudes and the desire to achieve something," he said in an interview with *National Defense*.

When the office was stood up in the summer of 2020, Weizer said he didn't understand how quickly it could move when he set the biannual goal of delivering capability — meaning anything from minor software bug fixes to major applications.

"Initially, that's a good goal because the government never delivers anything that fast," he said.

But through the speed of other transaction authorities and a greater prioritization of software Pentagon-wide, the office is meeting deadlines every quarter and aiming eventually for a two-week rate, he said.

This is fast even for other government programs that claim to use "agile software development," an iterative software process

that promotes rapid delivery.

The Government Accountability Office released a report last fall and found six of 36 weapons programs that used this process were delivering software in less than three months. The report, "DoD Software Acquisition: Status of and Challenges Related to Reform Efforts," said efforts to eliminate faster delivery cycles have been stymied by difficulty hiring experienced software developers.

"DoD officials noted that the department continues work to address challenges and acknowledged that the transition to Agile will take years and require sustained engagement throughout DoD," according to the report.

Other transaction authorities, or OTAs, have been a key tool for the office, Weizer said. When program officers start working on a project, they won't know exact specifications of the software they need. OTAs allow the programs to adapt as user needs change, he explained.

"They were able to negotiate, in situ, what's going on, to develop this capability," he said.

Using this type of authority also allows better relationships with software developers. Because software is constantly evolving throughout the development and production process, creators want flexibility, he said.

"Even in the production of software, they're still in development," he said. "That's the difference between a typical hardware program where, at some point, you lock down your design."

Meanwhile, Weizer said the office's efforts will contribute to the Pentagon's strategy for connecting sensors and shooters known as joint all-domain command and control, or JADC2.

The digital applications office was involved with the design of the JADC2 strategy early on, he noted. Though other programs are starting to go after an open systems approach, some are hemmed in by their focus on their individual services, he

said.

“Many of the other services kind of focus in their domain,” he said. “We’re advantaged in that we operate in the joint space on that.”

Mission command is one of the software programs SDA has identified as providing situational awareness in line with JADC2 by this summer, Weizer said. Because the government owns the code for the program, it can be adapted for use across the services.

Furthermore, the concept of JADC2 has helped the SOF community understand the need for investment in software capabilities.

Last year, the Digital Applications program obligated more than \$150 million toward software capabilities, according to the office. Weizer said the investment demonstrates that Congress and the Biden administration are focusing for the future fight.

“This is one of those consumers of investment, where we’re looking at those next things: refining AI, getting better focus in that area, machine learning, all the way to the edge,” he said.

One of the most advanced projects in the digital applications’ portfolio is Mission Command Systems/Common Operational Picture. Software developments created applications to generate a visualization for large volumes of data that is accessible in



real time.

Weizer said the project met its minimum viable product status in February and will be at minimum product viable release in late May. More than half of the 14 contractors working on the project are nontraditional, and a couple of them have never worked with the Defense Department before, he said.

Special Operations Command awarded the company CAE USA, a subsidiary of CAE, to lead the integration and architecture development efforts for the program last summer.

The program and CAE’s integrated digital ecosystem solution are directly related to the company’s modeling and simulation expertise, Daniel Gelston, group president of defense and security at CAE, said in a press release.

“Integrating data analytics, artificial intelligence and digital immersion technologies into a synthetic environment has the ability to create an incredibly powerful tool for analysis, planning, and decision support,” he said.

The office is using “iterative, agile, human-centered design to develop software with high impact mission outcomes” for mission command, according to a SOF year-in-review document.

The program was also first to go down the Defense Department’s new software acquisition pathway, which was created in January 2020.

Meeting the office’s goals has meant taking a more “hands

on” in software development, Weizer said. In other software development acquisition programs, submitting a request for proposals and hiring contractors gives vendors control of the software outcome, he explained.

“We kind of took the reins back,” he said.

Weizer created the chief software integration officer and hired Dan Lynch last March to bring technical expertise in software development to the team. Lynch said having a technical expert overseeing the four major programs under the organization’s umbrella allows them to benefit from each other.

“Historically speaking, a lot of DoD software has been: ‘Hey, write requirements, take three years, then deliver a product,’” he said. “And when you deliver that product, it’s fairly siloed off, you don’t necessarily share a lot of your information or you’re not encouraged to share.”

Pentagon leadership wants software solutions that military staff know everything about so they break down complex software into separate parts, Lynch said. Then, separate parts of the software solution can be applied to other needs across the joint force.

“We get these monolithic solutions that provide the application and provide the platform for the infrastructure,” he said. “But we don’t know how to separate it, and we don’t know what we don’t need.”

This can be where nontraditional contractors can come in handy, Weizer explained. Many traditional defense companies are interested in creating “soup to nuts” solutions, he said. Finding traditional firms who are willing to work together to provide the best elements of their product can be challenging, he said.

Of the more than 250 industry engagements in nearly two years, Weizer said more than 80 percent of his interactions involved nontraditional vendors.

Breaking down software into smaller components also speeds up the development and production process, Lynch noted. He said in the future, the software delivery rate may be as fast as weekly or daily.

If the Digital Applications program can continue to embed more personnel from software testing and security agencies in its teams, he said iterations of software could become more and more frequent.

“That gives us a lot of flexibility to meet future needs,” he said.

The Tactical Assault Kit portfolio is one area where Lynch said industry is showing progress breaking software down. The program fielded mobile situational awareness tools for SOF close combat air assistance among other missions, according to the office.

Additionally, industry still has to meet the military in the middle on intellectual property accommodations, Lynch said. Streamlining third party software integration will allow special ops forces to benefit from industry’s innovation.

“We’ve got a little ways to go to kind of get at this pace really fast,” he said. **ND**

Special Ops Snipers In Line for New Ammo

BY SCOTT R. GOURLEY

While many anxiously await the Army's decision on which of the two Next Generation Squad Weapon 6.8mm ammunition designs will be used by the Close Combat Force, industry efforts are being directed toward a spectrum of other special ammunition enhancements.

Examples stretch from .300 Win Mag to .50 caliber polymer case designs.

One recent representative example involves the .300 Win Mag.

For many years, military snipers utilized weapons like the MK 13 series or M2010 Enhanced Sniper Rifle, firing "A191" Department of Defense Identification Code ammunition, to achieve a "government-published" effective range engagements of 1,200 yards.

An ammunition performance challenge emerged in the 2000 to 2010 timeframe reflecting a new user requirement that called for an effective range of 1,500 yards with a decrease in the effect of wind drift on the projectile.

Ballistic experimentation with several different projectile options led to a product improved design that — among other things — replaced the 190-grain projectile in the A191 design with a heavier 220-grain Sierra MatchKing bullet, with overall results that met the new requirements. The two bullets also led to sub-designations of MK 248 MOD 1 and MK 248 MOD 0, with the MOD 1 compared to the A191 with some improvements and the MOD 0 reflecting the heavier bullet enhancements.

The MOD 1 has historically been viewed as an Army load, while the MOD 0 has historically been viewed as a Navy load.

In January 2020, SIG Sauer Inc. announced that it had been selected to manufacture both of the .300 Win Mag rounds at the company's ammunition manufacturing facility in Jacksonville, Arkansas, for use in U.S. military sniper platforms.

"We've always felt that one of our core competencies is the manufacture of high quality, high precision, exceptionally accurate ammunition," offered Jason St. John, director of government products at SIG Sauer. "So the MK 248 program really fell into our wheelhouse, providing part of our foundation as a precision ammunition manufacturer. We were very aggressive and very competitive in our strategy, because we believed this win, and the performance of this ammunition, would help to put our ammunition line on the map."

St. John asserted that many of the user performance requirements have been pushing the pressure envelope for the .300 Win Mag cartridge, noting some user reports of things like "sticky bolts" on some of the earlier ammunition manufactured by other companies.

"We tackled the problem of high pressure through how we manufacture our brass," he said. "For example, we do things to make our brass a little bit harder in the head. We also do induc-

tion annealing [of the casings], because we wanted to solve the brass from a hardness perspective so that the 'sticky bolt' problem wouldn't be an issue.

Today, the issue is completely solved, he said. The company has made 25 deliveries for a total of over 2 million rounds, with 100 percent on lot acceptance testing, which is 10, 10-round groups fired through two separate rifles at 300 yards, with all shots less than one minute of angle.

"We're now 25 for 25 on over 2 million rounds delivered. And we're very, very proud of that," he said.

Another ongoing production effort focuses on ammunition for the Barrett MK 22 Advanced Sniper Rifle fielded by Special Operations Command and, more recently, by other Army elements.

Much like the MK 21 Enhanced Sniper Rifle of the mid-2000s, the MK 22 allows changing between different calibers to facilitate training / urban operations, anti-personnel and anti-materiel engagements. While the MK 21 design had focused largely on 7.62x51mm NATO [.308], .300 Win Mag, and .338 Lapua Magnum rounds, the MK 22 focus shifted to 7.62x51mm and two other relatively new designs: .300 Norma Magnum and .338 Norma Magnum.

"The .300 and .338 'Normas' are similar to the .338 Lapua in size," explained Emil Praslick, business development manager for Capstone Precision Group. "Essentially, they looked at the .338 Lapua case as a starting point, but wanted to load longer projectiles, such as a Berger 300 grain [bullet] hybrid at standard magazine length," he said.

They slightly shortened the case, which reduced powder capacity by just a few percent but didn't significantly change performance. They also tweaked the brass cartridge "shoulder" a bit, and maybe changed the case taper slightly.

"The result is a longer projectile you can still load and feed in the magazine," Praslick said.

The .300 Norma design reflected the efforts of "a couple of enterprising guys" who recognized the potential of all the powder in the .338 case and worked to reduce that case neck size to .30 caliber, he added.

"They realized that .30 caliber [Berger 215 grain hybrid target bullet] would go at 'warp speed,' he said. "For snipers, that's always a plus. If you have a very flat trajectory round, it gives the shooter more flexibility. He can make slight range estimation errors and has other options for tactics, like leaving one sight setting on the rifle and engaging targets at different ranges just by using different hold points."

Once the rifles were selected, a remaining challenge involved getting the ammunition out to the field.

Praslick said the "first batch of reference ammunition" had been loaded by Jeff Hoffman at Black Hills Ammunition.

"Jeff always does a great job of loading ammo," he continued. The next batch of ammo was let out on another contract which was won by UDC, who partnered with Capstone Precision Group as the producer for 800,000 rounds of .300 Norma and 200,000 rounds of .338 Norma in Mesa, Arizona.

However, acknowledging that the MK 22 rifles are being delivered to Special Operations Command and Army elements,



Left to
Right: .308
(7.62x51
NATO), .300
Win Mag,
.300 Norma

he observed.

“There’s really not a lot of ammo out there yet. Right now if you talk to talk to snipers and Special Operations Command, the guys are getting the guns first, and they’re like, ‘Hey, where’s all the ammo?’”

Fortunately, he quickly characterized the ammunition production as “pretty far down the road,” with the sniper rounds having already passed first article testing and lot acceptance testing.

“It’s shooting great and we’re just waiting on some paperwork stuff to ship it,” he said.

Along with new sniper calibers with enhanced tactical performance, other recent ammunition activities involve efforts to “lighten” venerable rounds like the .50 caliber. A representative example can be found in the .50 caliber polymer case rounds that have been fielded by Special Operations Command and recently tested by the Marine Corps. These polymer efforts are in addition to the 6.8mm polymer cartridge design currently being evaluated under the Next Generation Squad Weapon program.

SOCOM representatives have pointed to the weight savings of the .50 caliber polymer case rounds when compared to traditional brass case designs, crediting the lighter ammunition with the ability for platforms like the AH-6 “Little Bird” with the ability to carry more fuel, translating to more time on station with maximum ammunition load.

Joe Gibbons, plant manager at Nammo MAC LLC — formerly MAC Ammunition LLC — in Bay St. Louis, Mississippi, highlighted expanded interest in the .50 caliber polymer case cartridges, as well as expanded caliber explorations for the

design.

“Probably the biggest thing going now with our ‘.50 cal polymer’ is that we completed the delivery of the first order for our Marine Corps contract,” he explained. “And we have following order that we have started production for as well.”

Gibbons told *National Defense* that the initial rounds were used for a user evaluation by the Marine Corps at Camp Pendleton, California, in November 2021, with a second user evaluation planned for Marines on the east coast during March.

“The West Coast Marines said that they didn’t even want to wait for the East Coast Marines’ evaluation,” just go ahead and get them the ammunition. They’re ready to use it,” he said, adding that the evaluations focused on the M2 machine guns with quick change barrels.

Some testing with the Ranger Regiment at Fort Benning has been carried out, he continued. “And they are fully on board.”

It did a demonstration for the Maneuver Center of Excellence at Ft. Benning in December on Stryker vehicles. They have assigned a requirements writer, so they are completing a requirement.”

Looking ahead, Gibbons said that polymer ammunition developmental efforts include the .338 Norma Magnum, to meet needs of the emerging Medium Machine Gun program in that caliber.

“Of course, we are ‘gun agnostic,’ so we are working with everybody who is ‘in the game,’” he observed. “We have achieved some success, so the program continues, and we feel fairly comfortable with it. Additionally, we’re also doing some work in 7.62 mm.” **ND**