## Small drones will soon lose combat advantage, French Army chief says

Rudy Ruitenberg: 7-9 minutes: 6/19/2024

PARIS — The advantage now enjoyed by small aerial drones on battlefields including in Ukraine is but "a moment in history," French Army Chief of Staff Gen. Pierre Schill said at the Eurosatory defense show in Paris.

While anti-drone systems are lagging and "leave the sky open to things that are cobbled together but which are extremely fragile," countermeasures are being developed, Schill told reporters during a tour of the French Army stand at the show June 19. Already today, 75% of drones on the battlefield in Ukraine are lost to electronic warfare, the general said.

"The life of impunity of small, very simple drones over the battlefield is a snapshot in time," Schill said. "Right now it's being exploited, that's clear, and we have to protect ourselves. Today, the sword, in the sense of the aerial drone, is powerful, more powerful than the shield. The shield is going to grow."

This year's edition of Eurosatory featured dozens of anti-drone systems, including shotguns, cannons and missiles, while companies including Safran, Thales and Hensoldt presented soft-kill solutions to eliminate drones by electronic means. Schill said vehicles in France's Scorpion collaborative combat program will all be anti-drone systems in two years time, linking their detection capability with turrets that can fire a missile or a 40mm airburst grenade.

First-person view drones currently carry out about 80% of the destruction on the front line in Ukraine, when eight months ago those systems weren't present, according to Schill. The general said that situation won't exist 10 years from now, and the question could be asked whether that might already end in one or two years. Schill cited the example of the Bayraktar drone, "the king of the war" at the start of the conflict in Ukraine but no longer being used because it's too easy to scramble.

The general said he doesn't consider that the war in Ukraine calls into question the French choice of a maneuvering army built around medium armor, with a focus on speed and mobility. The vehicles that the Army is introducing as part of the Scorpion program -- the Griffon, Serval and Jaguar – can be equipped with either active or passive protection, even if a strong emphasis of mine protection means they're "quite massive."

## **Griffons, Servals**

The French Army is receiving around 120 Griffons and 120 Servals every year as part of Scorpion, as well as more than 20 Jaguars. The vehicles are equipped with "extremely powerful" information systems, and a vehicle such as the Griffon may contain more lines of code than a Rafale fighter jet, according to Schill.

Vehicles developed before the Scorpion program, such as the Leclerc main battle tank, are being reconfigured to become part of the collaborative combat system, which for example allows a target detected by one vehicle to be attacked by another. Scorpion was "extremely ambitious," works, and has met expectations, according to Schill.

"Everything we had planned is perfectly in place, but it's just a question of cost effectiveness on certain capabilities," the general said. Something not considered five years ago is the rapid development of microprocessors, which means the gathered data can now be analyzed within the vehicle rather than externally. In combination with on-board artificial intelligence, that will allow for capabilities such as immediate threat detection, including of drones.

When looking to draw lessons from Ukraine, there needs to be a distinction between what is situational and related the type of terrain and battles being fought, and what is structural, the general said. The war in eastern Europe doesn't mean the issues of the past 30 years around risk and crisis management will disappear. "We must remain a versatile army."

The French choice has been to not separate the army into distinct parts suited for different theaters, for example an intervention army that is agile and mobile and a mechanized armor army prepared to fight a war like the one in Ukraine today, with "perhaps more rugged, lowered vehicles, but which, when they hit a mine will kill crews."

Schill said he wants to preserve the "warrior aspect" of the French army, in which every soldier is aware they can be deployed in operation, rather than a soldier in a territorial defense army "who will never do anything."

The pace of military drone development means that Army can't commit to large buying programs, because an acquired capability can become obsolete in five months, according to the general. Schill said today's drones fly better than those two or three years ago, with more computing power onboard that is capable of terrain-based navigation or switching frequencies to escape jamming.

Drones can't be compared to 155mm shells, which can be stocked and will remain relevant in 10 years time, and the Army needs to find "the right system in this fast-moving world of new technology," Schill said. The challenge is creating an industrial model that can produce in mass if necessary, and sufficiently standardized.

Future buying of electronic gear such as drones but also small radios and smart phones may be done in batches to allow for technology evolution, for example renewing equipment at the brigade level rather than multiple-year programs to equip the entire Army with a new piece of equipment, Schill said.

## 'Just not possible'

The general also commented on the future French-German Main Ground Combat System, which will consist of several vehicles, some of them manned and others automated, combining anti-drone weapons, close-defense anti-aircraft capabilities, missiles and a canon. Putting all of that on a single tank would create a vehicle weighing 80 metric tons, which "is just not possible."

Development of the system is going to 10 to 15 years because the land-based robotics are "not completely mature yet," according to Schill.Schill said he doesn't know whether the right main gun for the future tank system will be 120mm, 130mm or 140mm, saying that will depend on issues such as stealth and mobility requirements, as well as what the gun bore would add in terms of penetration. KNDS, which is involved in the MGCS program, presented a gun that can swap its barrel to fire either 120mm or 140mm shells.

The French Leclerc tank probably won't get a second upgrade beyond the current XLR version being rolled out, according to the general. He said the French-German agreement is for the next-generation system in 2040, making the Leclerc question a secondary issue.

It'll be in France's interest to piggyback on any capability additions made by the United Arab Emirates, another Leclerc user, between now and 2040 as a way to finance intermediate innovations, Schill said. The introduction of the MGCS won't immediately mean the end of the Leclerc, which the general expects to be in service in the French Army until 2045.

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