DIRECTCAM: live video on Fennec

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For Fennec helicopters used for airspace surveillance and defense, communicating in real time and in complete safety is an operational imperative. Within the framework of their missions (MASA for Active Measure of Air Safety), the crews maintain a permanent dialogue with the control and command centers, in particular the National Air Operations Center. The objective is to exchange information on the behavior of intercepted targets. This is the background to the DIRECTCAM defense technology project, which aims to test a new real-time video transmission system between a Fennec helicopter and its control center on ground. The project is being carried out by the French defense innovation agency (AID) in close collaboration with the French defense procurement agency (DGA), and is being developed by the French company ASMAN Technology, which is expert in data links. The experiment was carried out by the 3/67 Parisis helicopter squadron of the French Air Force.

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DIRECTCAM

Shorten the decision-making loop when faced with situations deemed suspicious in air traffic.

The exchange of information between the Fennec and the command and control centers is currently done by radio. The innovation proposed by the DIRECT CAM project consists of live transmission, even when the helicopter is not in direct view of the receiver, which is currently not the case with other systems. The transmission of video data will allow control centers on the ground to access more information more quickly and thus enrich their knowledge of the tactical situation. This new solution will also help the crew to identify the intercepted aircraft.

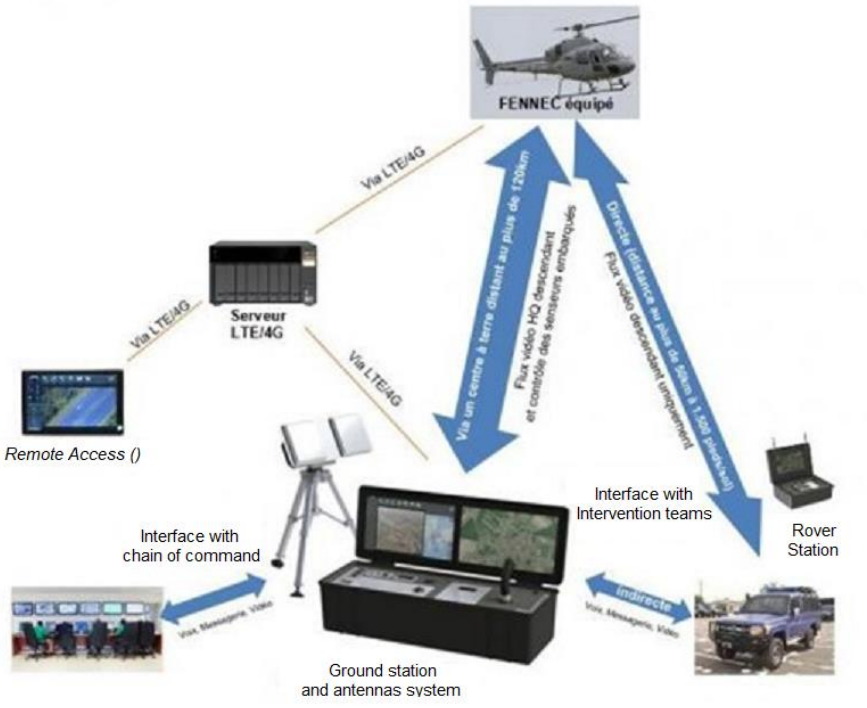
Direct cam image

How does the solution proposed by the DIRECTCAM project work?

The tested system consists of:

- Equipment integrated on the helicopter:
  - Electronic boxes
  - Dedicated uplink/downlink antennas
  - Tablet PC
  - TC-300 optronic turret
- A ground station.

Within the framework of the DIRECTCAM project, ASMAN Technology implements the data transmission solution developed in France by AeroDataLink allowing the broadcasting of video streams to a fixed or mobile station on the ground located up to more than 120 km from an altitude of 2,500 feet/ground (762 meters).



Direct cam image

The video broadcast is done either via the encrypted broadband directional link or via the LTE/4G network (subject to coverage of the area overflown). This double encrypted broadcast secures the broadcast (in case of failure of one of the two channels) to a fixed or mobile command center.

The ground station operates independently and can also be interfaced to the networks used by the intervention teams in charge of surveillance or integrated into a command chain. Depending on the operational requirements, the ground station can be static, semi-permanent or fully mobile.

A similar operational capability could be used for all missions carried out by the Fennec for the protection-defense of sensitive sites, to contribute to interministerial missions on national territory, or in external operations as part of the support-intelligence contract.

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