

## China pursues attack helicopter projects

CHINA IS developing a dual-strand approach to developing attack helicopters for the People's Liberation Army as part of long-standing plans to create an aviation corps with the size and capabilities to support large ground forces.

Details emerging from China reveal a heavily modified version of the Harbin Z-9 – which started life as a AS365 Dauphin co-production programme with Eurocopter in the mid-1980s – as well as another machine that resembles the Eurocopter Tiger. Armed versions of the Z-9 have also been developed.

The Z-9-derived attack helicopter has a tandem twin-seat fuselage combined with a larger fenestron and tail as well as a new dynamic system.

The helicopter is also equipped with a nose-mounted sensor, likely to be an electro-optical system combining infrared and television sensors with a laser designator, although a radar cannot be ruled out.

Weapons are mounted on stub wings. Unlike other attack helicopters, the machine does not appear to be equipped with a nose-mounted cannon.

The other attack helicopter emerging from the shadows is often referred to as the Z-10, although this designation is also sometimes applied to a transport machine being developed by Chinese Helicopter Research and Development Institute (CHRDI) with assistance from AgustaWestland and Eurocopter.

The Z-10 attack helicopter is a 5,500kg (12,000lb) -class, twin-engined machine, reportedly influenced by the Eurocopter Tiger.

This is supported by photographic evidence showing a number of similarities in fuselage shape and weapons carriage configuration, which replicates the Tiger's boxed missile system.

CHRDI is believed to have had access to other attack helicopters marketed in China, including South Africa's Denel Rooivalk, and Russia's Mil Mi-35 Hind and Kamov Ka-50. □

# Turkey launches attack on US technology export policy

PAUL LEWIS/WASHINGTON DC

THE TURKISH air force is criticising US technology export restrictions, claiming they are threatening contractual negotiations for six Boeing 737 Airborne Early Warning and Control (AEW&C) systems, and undermining an electronic warfare (EW) upgrade of the country's license-built Lockheed Martin F-16 fighters. Turkey's complaints about AEW&C technology access echo Australia's concerns when it opened contractual negotiations for 737 AEW&C in 1999.

The issue revolves around Turkish insistence on full access to source codes to ensure support self sufficiency for the AEW&C aircraft. Competitors were asked to supply software access as part of the request for proposals.

"Boeing is not completely backing its commitments," says Maj

Gen Aktug Atay, Turkish air force, chief plans and principles. "Continuation of this may jeopardise the programme," he told an American-Turkish Council conference in Washington DC.

The problem lies with the US Government rather than with Boeing. The former is negotiating the \$200 million foreign military sales element of the deal and has placed restrictions on the transfer of sensitive technology.

Industry sources express surprise the issue has come up again, particularly in the wake of the Australian problems and subsequent review of rules governing AEW exports (*Flight International*, 1-7 September 2000, P6).

Maj Gen Craig Rasmussen, of the US Office of Defence Cooperation-Turkey, says talks have just opened and the parties are "working" the issue. "Configuration of the aircraft has not

changed," he says. Despite the concerns and Turkey's recent economic difficulties, the Department of Defense aims to finalise talks by the third quarter of this year.

Similar problems are hampering Turkey's efforts to equip its F-16 Block 50s with a Thales EW suite. Atay says the "interoperability guidelines" are not being supplied to Thales for integration on to the F-16, adding: "We've waited a long time for US approval to integrate the system and this has created disappointment on our side. This policy will badly effect the F-16 modernisation."

Turkey, meanwhile, says it does not have enough "insight into the Joint Strike Fighter" to decide on joining the programme, though it has opened first-round negotiations with the JSF Programme Office to join as a level-two participant, which would require an investment of up to \$1 billion. □

## US Army Shadow UAV enters operational testing



Shadow testing has required the UAV to operate at operational flying rates

THE AAI Shadow 200 tactical unmanned air vehicle (TUAV) being developed for the US Army as the RQ-7A will begin initial operational test and evaluation (IOT&E) this month after completion of operational exercises at Fort Huachuca, Arizona.

The RQ-7A IOT&E flight testing, expected to last a month at Fort Hood, Texas, is to be conducted using only US Army personnel.

Operational tempo exercises concluded in March required the system to gather 74h of targeting data over five days. The UAV

exceeded the objective, using production hardware operated and maintained by soldiers who completed training during the Arizona field trials.

The trials, conducted as a risk-reduction exercise, used a low-rate initial production Shadow system of three air vehicles, three ground stations, a hydraulic launcher and logistics support elements. Thirty flights were flown amassing 97h, the longest flight lasting nearly 5h.

In 1999 AAI won a \$41 million low-rate initial production contract for four operational test and evaluation systems. A full-rate production decision is due later this year with the US Army planning to buy 44 RQ-7A TUAV systems worth over \$300 million.

■ General Atomics Aeronautical Systems has won a \$39 million contract to supply seven additional RQ-1A Predator UAVs to the US Air Force. □