AIRCRAFT DEVELOPMENT VLADIMIR KARNOZOV / MOSCOW

MiG-29 upgrade planning focuses on commonality

Potential deals in Malaysia and India could give RSK a single baseline for its fighters

RSK MiG has abandoned plans to produce the MiG-29M, and is instead launching the MiG-29M1/M2. The aircraft is also being called the MRCA in its bid to meet a Malaysian air force "multirole combat aircraft" requirement.

The single-seat M1 and two-seat M2 have 90% parts commonality, with differences confined to the cockpit area. The MRCA will also have significant commonality with the aircraft carrier-compatible MiG-29K/KUB offered to the Indian navy, differences include a lighter undercarriage and a brake parachute instead of an arrestor hook. The wing remains the same, including the folding mechanism.

Nikolai Buntin, MiG-29K/MRCA chief designer, says earlier plans to produce 8-10% of the MiG-29M/K's airframe components using aluminium-lithium alloy have been dropped, as the weight saving was only 100-120 kg (220-260lb), while production cost would have increased significantly.

The K/MRCA avionics system is based around the the Phazotron-NIIR Zhuk-M radar, integrated with a Ts-90 central processor, and an improved optical sensor and helmet-mounted sight – all linked with a 1553 standard databus.

The cockpit includes two 150x200mm (6x8in) displays produced jointly by Thales Avionics and Elektroavtomatika. The pair are also co-operating on the MiG-21-93 upgrade and MiG-AT.

Internal fuel on the K/M1 has been increased to 5,100kg compared with 4,400kg in the original MIG-29K, due to "better use of existing volumes", says Buntin.

The aircraft will be powered by Klimov RD-33M Series 3 engines with 1,000h between overhauls, and a 2,000h life. Maximum thrust per engine is increased from 18,300lb (81.3kN) to 19,400lb, with plans to boost this to 20,900lb. An initial MiG-29M1 prototype appeared at last month's MAKS 2001 air show and is due to make its first flight this month.

Also on display was the MiG-29OVT with KLIVT thrust-vectoring nozzles, which is being prepared for first flight later this year. Head of RSK Mikoyan engineering Vladimir Barkovsky says it is equipped with a digital flight control system developed by MNPK Avionika that uses thrust-vectoring for pitch, roll and yaw control.

Malaysia already operates standard MiG-29s, having split a combat aircraft purchase with the USA, which supplied Boeing F/A-18Ds. A competition for additional aircraft is under way, pitting the MiG-29MRCA against the F-18F and Sukhoi Su-30.

DEFENCE

Iraq's air defence system boosted

Middle Eastern intelligence sources are pointing to the shooting down of a General Atomics RQ-1B Predator unmanned air vehicle (UAV) by Iraqi air defence, proof that the country has received external help to develop its capabilities in spite of international sanctions.

REUTERS

Iraq's air defences have shot down a Predator

The US Air Force reported the Predator missing on 27 August during a mission over southern Iraq as part of Operation Southern Watch. Although the USAF says the disappearance could be the result of a crash or enemy action, the incident comes a month after Iraqi air defences targeted a USAF Lockheed U-2 reconnaissance aircraft.

The sources say assistance has come mainly from China. Infrastructure improvements include linking air defence sites with a fibre-optic network, which enables improved, more secure communications between units.

According to one assessment, improvements to the surface-to-air missiles include equipping the SA-2 Guideline (Fakel S-75 Dvina/V-750) batteries with an infrared terminal guidance sensor and upgraded boosters and radar.

Electro-optical terminal guidance would allow the missile to be fired in the direction of a target and then guided towards the aircraft without the need to turn on air defence or missile radars. Both can be jammed while the former can be targeted by anti-radiation missiles. There has been speculation that Iraq received such a system from the Yugoslav regime of Slobodan Milosevic in the late 1990s.

Intelligence sources say recent USAF and UK Royal Air Force attacks have damaged Iraq's air defence system, though not sufficiently to prevent a random kill, especially when the target is on a routine flight path.

CONTRACTS

■ **Elta** has been selected to supply the electronic support measures/electronic intelligence system for the **Royal Australian Air Force**'s Boeing 737-based Wedgetail airborne early warning and control aircraft. The contract is valued at $64 million. Elta will supply the systems as a subcontractor to **BAE Systems Australia**. Elta's ESM/ELINT systems have previously been selected for the RAAF's Lockheed Martin AP-3C maritime patrol aircraft fleet.

■ **Australia's Department of Defence** and **Boeing** have signed a 10-year deal to support RAAF F-111 strike aircraft at their Amberley base in Queensland. Boeing Australia will be responsible for aircraft and airframe component maintenance and logistic support.

■ **Eurofighter** and the four-nation government management agency **NETMA** have signed the contract to develop and procure the Interim Training Device (ITD). The ITD will be delivered in the third quarter of next year.

■ **Boeing** has begun installing new mission computers and software in the **Royal Saudi Air Force**'s five E-3 Sentry Airborne Warning and Control System aircraft in a $60 million contract. Two aircraft will be retrofitted in Seattle this year and three next year. ■ **BAE Systems** is to upgrade the mission planning systems for **Italian air force** Alenia/Embraer AMXs, Panavia Tornados and Lockheed Martin C-130H/Js under a contract from **Datamat** potentially worth $5.4 million. The upgrade includes the latest core software, aircraft-specific software modules and 12 portable workstations.

■ **Raytheon** is to supply 48 AIM-120C-5 advanced medium-range air-to-air missiles to **Israel** and eight to **Thailand** in a deal worth almost $22.5 million including spares. ■ **Symetrics** has won a $16.8 million order to supply its ALE-47 countermeasures dispensing system to the **Royal Netherlands Air Force**.

■ **Delta Air Lines** will train maintenance personnel for **US Air Force** Boeing C-40As (military Next Generation 737s) under a five-year contract worth $5.7 million.