UAVs GRAHAM WARWICK / WASHINGTON DC

USN plans three-tier UAV strategy

US Air Force defends RQ-1 Predator targeting accuracy as US Army plans to test armed Hunter unmanned air vehicle

The US Navy is focusing its plans for unmanned air vehicles (UAVs) on developing a family of systems comprising three tiers: tactical, medium-altitude endurance and high-altitude endurance. But the US Air Force and army face challenges in their UAV plans.

Under the tactical tier, the USN wants an expeditionary capability for real-time targeting, battle-damage assessment, reconnaissance, signals intelligence, nuclear, biological and chemical sampling, short-haul communications relay and mine countermeasures.

USN could opt for the RQ-4 Global Hawk as a high-altitude endurance UAV

The vehicle will be operated from austere land bases and possibly ships. It will have limited stealth and sensitive technology, and will be attritable (inexpensive and numerous enough to be expendable), according to a senior USN official.

Under the medium-altitude endurance tier, the USN wants to field a UAV capable of performing strike support missions in a medium-threat environment, with growth to a limited weapons capability for strike and suppression of enemy air defences.

This system, which could result from a melding of the navy's multi-role endurance and UCAV-N naval unmanned combat air vehicle programme, would require more stealth and manoeuvrability, and would be based on aircraft carriers, the official says.

Under the high-altitude endurance tier, the USN is looking for a long-range, long-endurance UAV capable of performing wide-area surveillance, reconnaissance, maritime patrol, stand-off strike support, signals intelligence, and long-distance communications relay duties.

This UAV will be "a very expensive asset and hence not attritable at all", the official says. The USAF's Northrop Grumman RQ-4 Global Hawk is an option and "a very attractive one", he says.

While the USN refines its UAV vision, the USAF has made moves to defend its General Atomics RQ-1 Predator medium-altitude endurance UAV against a report criticising its targeting accuracy.

A senior USAF official says the vehicle's sensor suite has been improved since initial operational test and evaluation was conducted in April last year. He confirms that the air force is interested in General Atomics' turboprop-powered Predator-B.

Funds for testing an armed Predator ran out before moving-target tests of laser-guided Lockheed Martin Hellfire missiles could be conducted, but the US Army plans to drop Northrop Grumman Brilliant Anti-Tank self-guided submunitions from an AAI Israel Aircraft Industries Hunter interim tactical UAV next year.

Development of the US Army's objective tactical UAV, the AAI Shadow 200, had been threatened by a spate of crashes.

An independent review has concluded that the failures were not systemic, a senior official says, and the army is continuing with its plans for initial operational test and evaluation scheduled for April.

ANTI-RADAR

Boeing to start EA-18 jammer flight tests in bid to sell electronic warfare variant of Super Hornet

Boeing plans to start company-funded flight tests of jamming pods on an F/A-18F this week in support of its bid to sell an electronic attack variant of the Super Hornet to the US Navy. The two-seat aircraft will be fitted with three ALQ-99 jamming pods for two flights to collect noise and vibration data. More flights are planned for next early year, says Paul Summers, director, F/A-18 derivative programmes.

For the later flights, the aircraft will also feature wingtip pods which will house the receiver antennas on the EA-18. The initial flights will be conducted at up to 35,000ft (10,700m), Mach 0.8 and 3*g*, typical of a stand-off jamming orbit, he says.

Boeing's proposal is based on re-using the ALQ-99 jamming pods carried by the USN's Northrop Grumman EA-6B Prowler jamming aircraft, which the EA-18 is intended to replace.

For the initial flight tests, the F/A-18F will carry three pods, one on the centreline and two on the mid-wing pylons, plus two fuel tanks on the inboard wing pylons, and air-to-air missiles on the wingtip and nacelle stations.

The flights are intended to reduce risks attached to the proposal, which has yet to be accepted by the USN, although it plans to request funds in fiscal year 2003 to begin work on a follow-up to the EA-6B.

According to the latest estimates, Summers says, the EA-6Bs need to be replaced from 2008. "We have to start [EA-18 development] in 2003 if we want to deliver by 2008," he says.

Boeing's proposal involves a five-year development effort costing "a little over $1 billion in then-year dollars", says Summers. The EA-18 will cost "$7-9 million" more than an F/A-18E/F built at the same time, he adds, depending on the number and mix of E/Fs and EA-18s produced each year.

Boeing's goal is to reduce the unit flyaway cost of the F/A-18E/F below $50 million by the end of the current multi-year procurement contract.