

Lockheed studies unmanned F-16

GRAHAM WARWICK/ATLANTA

LOCKHEED MARTIN IS proposing a demonstration of automatic in-flight refuelling as the first step towards developing an unmanned tactical aircraft based on the F-16.

Modified F-16s are being studied to meet emerging US requirements for a new class of aircraft called uninhabited combat air-vehicles (UCAVs).

One concept under study is a long-endurance defender based on an F-16 with a large wing and conformal fuel-tanks, and hypersonic missiles for tactical-missile defence, or the Hughes AIM-120 advanced medium-range air-to-air missiles for cruise-missile defence.

As a first step, Lockheed Martin is proposing modifying F-16s now in storage to provide a demonstra-



The pilot is surplus to requirements in unmanned F-16 developments

tion and early operational-capability. The long-endurance defender represents an interim step before development of an all-new UCAV.

The company is also studying a smaller, unmanned, derivative of a stealthy, agile, tailless-fighter design as a potential all-new UCAV.

Lockheed Martin says that the strongest interest is in using UCAVs for suppression of enemy air-defences (SEAD), and the company is conducting simulations of missions involving unmanned F-16s armed with Texas Instruments AGM-88 high-speed anti-radiation missiles. The UCAV F-16s are used to knock out air defences ahead of manned F-16s. UCAV control is from the ground, but could be from an aircraft.

In the long-endurance-defender concept, the modified F-16 could remain on station for 9h before being aerial-refuelled. The company is also studying concepts for in-flight re-arming. The automatic-refuelling demonstration for which funding is being sought would involve a manned F-16 equipped to rendezvous automatically with the tanker. □

Northrop Grumman and Rafael upgrade Litening for F-18 bid

NORTHROP GRUMMAN and Rafael of Israel are working to upgrade the Litening airborne laser designator and navigation pod in anticipation of a US Navy competition to equip McDonnell Douglas F-18E/Fs and refit F-18C/Ds.

The upgraded Litening is being fitted with a third-generation forward-looking infra-red (FLIR)

system and advanced laser. The revised pod will be integrated in "April or May", says Litening programme manager Norm Dyson. The pod is being developed by Rafael and the Combat Support Systems unit of Northrop Grumman's Electronics and Systems Integration division. Flight testing is targeted for mid-year, when the pod will be integrated with an

Israeli Lockheed Martin F-16.

The pod will then be returned to the USA for planned demonstrations and evaluations, including it is hoped, one for the US Navy on an F-18. The improved pod will feature a 3-5 micron FLIR in place of the current 8-12 long-wave FLIR, as well as improved diode-pumped laser.

"We have not been given an

export licence for the advanced FLIR," says Dyson, who explains that the upgraded Litening is only on offer within the USA.

If funding for the US Navy programme is received, the competition could see a fly-off later during 1997. Other companies expected to bid for the multiple RFPs include Lockheed Martin, Loral, and GEC Marconi. □

Germany agrees Eurofighter price

GERMAN defence minister Volker Rühle and Eurofighter industrial partner Daimler-Benz Aerospace (DASA) have agreed an overall weapons system price for the Eurofighter EF2000.

The price, including integrated logistics support, has been fixed at DM125.4 million (\$79 million) — some 28% lower than earlier estimates — bringing the overall cost of Germany's planned offtake of 180 aircraft to DM23 billion.

While the Bonn Government still declines to confirm that the finance ministry is to help bail out the programme, which was hard hit by 1996's defence spending cuts,

sources in Bonn say that Rühle has agreed a funding package with finance minister Theo Waigel. The finance ministry is to pay DM1 billion, divided equally over four years and starting in 1998, towards the programme.

This still provides no clue as to how Germany will fill the 1997 funding gap. Rühle is expected to give the crucial and much-delayed go-ahead for the production investment phase of the programme in the first quarter of this year, but has been unable to scrape together the DM390 million DASA insists it needs from the 1997 defence budget. □



F-18F is landed on John C Stennis

THE McDONNELL DOUGLAS F-18F had its first US Navy aircraft-carrier landing on the USS *John C Stennis*, the navy's latest carrier, on 18 January. The aircraft is undergoing a two-week series of initial sea trials as it enters the final year of a three-year flight-test programme. Production of the first F-18E/Fs earmarked for the Navy will begin this year.