



Lockheed Martin sees the attack of heavily defended fixed targets as a prime role for UCAVs

# Persistent ambitions

**Despite its poor record with unmanned air-vehicles, the USA wants to fly an uninhabited combat-aircraft by 2001 – in technology-demonstrator form**

GRAHAM WARWICK/WASHINGTON DC

**U**NMANNED COMBAT-aircraft are coming, but they will not be going into battle any time in the too-near future. Harsh lessons learned developing relatively simple and inexpensive unmanned air-vehicles (UAVs) have made manufacturers and operators alike extremely cautious in planning the introduction of more costly and sophisticated uninhabited combat air-vehicles (UCAVs).

"The pot is getting ready to boil," says Armand Chaput, UCAV team leader with Lockheed Martin Tactical Aircraft Systems. "The UCAV is about to happen, the only question is when." The ingredients are only now being assembled, and the recipe is not yet clear. From the stew of ideas, however, has emerged a near-term focus in the shape of a US Defense Advanced Research Projects Agency (DARPA) and US Air Force plan to demonstrate technologies for a UCAV able to perform air-defence suppression and mobile-target strike missions, which could be available around 2010.

Several other programmes are emerging. Lockheed Martin has received a six-month US Navy contract to define a family of UCAVs which could be launched from ships and submarines to attack high-value fixed targets or suppress enemy air-defences (SEAD) within a range of 1,100km (600nm). UCAVs are also one of the options being considered by the UK Ministry of Defence for its Future Offensive Aircraft System, to replace the Panavia Tornado, and Lockheed Martin is working with British Aerospace on a feasibility study.

International interest in the UCAV concept is high, according to Chaput. There is a common thread in that interest, with UCAVs being considered prime candidates for tasks which require greater persistence (endurance) than is possible with manned combat aircraft. Principal among these operations is the SEAD mission, which is risky for manned aircraft. Others include mobile-target attack, theatre ballistic-missile defence and combat air-patrol in support of peacekeeping operations.

## HEFTY SCEPTICISM

Before unmanned combat-aircraft can become a reality, budgetmakers will have to be convinced that UCAVs can be built cheaply, operated reliably and used effectively. Developers will have to overcome a hefty scepticism about unmanned systems, fostered by expensive failures which have left the US military with few operational UAVs despite years of effort.

The US Navy and Marine Corps operate several Pioneer UAVs, produced by instruments company AAI and Israel Aircraft Industries (IAI) and acquired as an interim system pending development of the IAI/TRW Hunter short-range UAV for the US Army and Marines. The Hunter programme was terminated, however, after much-publicised operating problems, to be replaced by the Alliant Techsystems