

DEFENCE PAUL LEWIS / WASHINGTON DC

Super heavylift rotorcraft pitched to replace CH-47

Three-engined compact aircraft would be able to transport twice the load of CH-53E

Sikorsky has unveiled its concept for a future super heavylift rotorcraft that would be capable of transporting twice the load of a CH-53E, yet would be smaller than a UH-60 Black Hawk utility helicopter. The machine is being pitched to meet the US Army's Advanced Manoeuvre Transport (AMT) requirement to lift its Future Combat Systems (FCS) over extended ranges.

The concept, revealed by Sikorsky president Dean Borgman during a presentation at a joint US Army and Army Aviation Associations' conference in Washington DC, is a throwback to the company's CH-64 and Hughes XH-17 flying cranes of the 1950s and 1960s. The vehicle features a co-axial rotor design with a 39.6m (130ft) diameter, wide-chord blades and a small, flat fuselage. Two versions are shown (see diagram): one unmanned and the other with a glass cockpit in the nose.

It would be powered by three engines similar in power output to the CH-53E with a gross weight of 62,000kg (136,600lb) and an empty weight of 24,400kg. According to

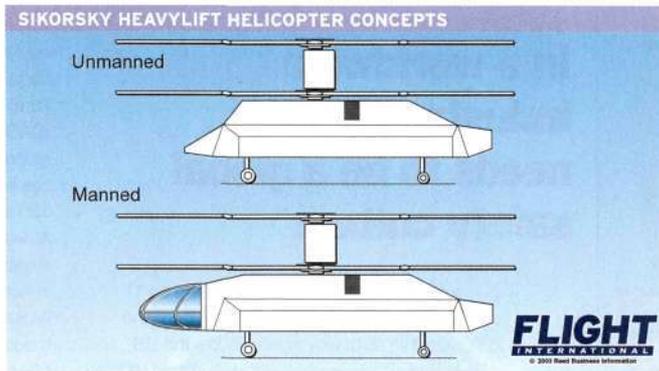
Borgman, the 160kt (296km/h) machine would be capable of lifting the 20t FCS over a 1,850km (1,000nm) range. This compares to the CH-53E's maximum take-off weight of 33,400kg and limited 93km range with 14,500kg maximum external payload.

AMT, formerly known as the Future Transport Rotorcraft (FTR), is intended to be a successor to the army's Boeing CH-47 Chinook and possibly the US Marine Corps' CH-53E, both of which are being modernised and remanufactured in the interim. Neither helicopter could lift the FCS, however, which

is due to be deployed from 2008, leaving the army relying on air force-operated Lockheed Martin C-130 fixed-wing transports.

In response to AMT, Bell has been promoting its concept of a Quad Tiltrotor (QTR), building on the smaller Bell Boeing V-22 Osprey technology.

Boeing Phantom Works is pushing its extremely short take-off and landing Advanced Theatre Transport (ATT), which features a partially tilting wing. The QTR and ATT are designed for internal loads and are structurally much larger than Sikorsky's concept.



GENERAL AVIATION

Z-11 helicopter gets go-ahead

China's indigenously developed Z-11 light helicopter has been cleared for commercial use. The Civil Aviation Administration of China (CAAC) has awarded Changhe Aircraft Industries the country's "first permit for civil helicopter production", according to the Xinhua news agency.

The Z-11, a Chinese copy of the Eurocopter AS350B, has been certificated to rules modelled on US FAR Part 29 airworthiness regulations. The 2,000kg (4,400lb)-class helicopter first flew in 1994, and examples have been supplied to the Chinese military for liaison, training and scout missions.

The Z-11 is powered by a 685shp (510kW) Chinese Liming WZ-8D turboshaft. In 2001, Rolls-Royce signed an agreement with Changhe's parent, AVIC II, to develop a twin-engined version of the Z-11 powered by the Model 250 turboshaft.

Civil orders for the Z-11 so far include an aircraft for China Central Television of Jiangxi Province, and another for Chongqing Three Gorges General Aviation Airlines. Likely customers for the certificated helicopter include a number of developing world countries that have purchased other Chinese general aviation aircraft.

DEFENCE

US special operations to get budget injection

Donald Rumsfeld, the US secretary of defence, has announced major changes in the US Special Operations Command (Socom), including increases to its size and budget.

The changes are expected to lead to the acquisition of additional Lockheed Martin MC-130 aircraft and Boeing MH-47 Chinook and Sikorsky Black Hawk MH-60 helicopters for the US Air Force and US Army's special operations forces, respectively.

Socom will be elevated from a "supporting command" to a "supported command" which will

enable it to plan and carry out its own operations worldwide rather than simply support other regional commands. Socom's budget will also be increased next year to a reported \$7 billion.

"Added funds are needed to pay for equipment losses that occurred in Afghanistan and elsewhere, and for additional equipment as well as extra forces," says Rumsfeld.

He confirms that some of this money will go towards the army's 160th Special Operations Aviation Regiment, which was heavily used in Afghanistan and the Philippines, and lost a number of specially

equipped MH-47E heavylift machines.

The army has said it wants to double the Chinook fleet to 78, upgrading the current fleet to a common MH-47G configuration. It also wants to upgrade its 69 MH-60K/Ls to -60Ms and buy another 30 new.

Air Force special operations also lost a number of MC-130H Combat Talon 2s last year and wants to buy as many as 54 new MC-X Talon 3s starting around 2006, probably based on the new C-130J airframe. The aircraft would partially replace older MC-130E Talon 1s. A follow-

on AC-X gunship to the AC-130H/U is also under consideration.

Boeing, in the meantime, has been awarded a low rate initial production contract to remanufacture and upgrade the first seven CH-47 helicopters for redelivery to the US Army in 2004. The first batch will include six MH-47G for army special forces and the first CH-47F for the regular army.

Another 17 will follow in 2004 including six MH-47Gs. The army plans to modernise 302 CH-47Ds, though this may be increased to the full 433-strong fleet, as well as 34 MH-47D/Es.