Apache: built to survive

The modern battlefield is an

extremely hostile environment for helicopter operations. Ex-British Army Lynx pilot Hugh Northam assesses the

survivability of the McDonnell Douglas Apache

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he modern battlefield is probably the
one place where a pilot would not choose to be. Technology has intro-duced the 24hr flying day, and the require-ment to engage and defeat the enemy in all weather conditions.
The design for a battlefield helicopter to meet this requirement is more complex than for any other military vehicle, and to be successful it requires the effective use of high technology. But this has one inherent problem—cost. With this factor foremost, the battlefield helicopter does not only need rapid mobility, lethal fire-power, and the ability to detect, recognise, and engage multiple targets. It must also be able to operate around the clock in adverse weather conditions and provide the responsiveness and flexibility required by today's and tomorrow's battlefield commanders. Above all else, given the limited numbers that will be available, it must be able to survive.

McDonnell Douglas has produced the AH-64A Apache as a "Total System for Battle", but will it survive that battle? Survival of the fittest, according to the Oxford English Dictionary, is "The process of natural selection expressing the fact that those organisms which are best adapted to their environment continue to live, while those of the same related species which are less adapted perish." The manufacturer has indeed created a formidable weapons platform in the form of the Apache, incorporating a high level of systems: a target acquisition and desig-nation sight (Tads), a pilot night vision sensor (PNVS), a lightweight doppler navigation system (LDNS) together with a heading attitude reference system (Hars) in conjunction with the fire control computer (FCC), and an air data sub-system together with an array of conventional avionics enable this helicop-ter to act as a command module. However,
- the cost has escalated to such an exten that it might be deemed prohibitive by
some.

The story does not end there. This machine has been built to survive the war,
unlike some other military helicopters,
which are built to survive the peace.

McDonnell Douglas' AH-64 Apache is currently
only in US Army service, but the company is
wooing West Germany and Israel

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