

By Dr Carlo Kopp

You have to ask how the Defence bureaucracy goes about developing capabilities. There is prima facie evidence of a developing trend to guess first, and justify later.

The intention to retire the F-111 early is one case study. It followed a long campaign by F-111 opponents in Defence who argued all manner of reasons why the aircraft should go. They made two public claims: that the aircraft was structurally unsound and that it would become prohibitively expensive to maintain.

There was in fact no basis. Fatigue life, with proper wing management, will run until at least 2020.

Moreover, there remains a large pool of available wings in the US and the Cold Proof Load Test facil-

ity is available to verify structural integrity.

Condemning operating costs was also unsupportable. Unclassified data show there is a consistent trend of operating cost reduction. The contractor's ageing aircraft engineering program caps or drives down Amberley depot support costs, while improving reliability and reducing downtime.

At the same time, unsupportable claims were made about "no loss in strike capability".

The Defence Watch briefing saw a major change in the retirement arguments.

We are now expected to believe that putting a JASSM or similar weapon on to the F/A-18A and tanking with five medium-sized

## Justifying the unjustifiable

A330-200s will actually increase the RAAF's strike capability.

Clearly the arithmetic of how many weapons of a given size can be carried to what distance by what number of aircraft has been ignored as irrelevant, just as demands on tanking and escorts.

We are also to believe that F/A-18As with inferior radar/missile range to potential opposing Sukhois are capable of "self escorting" by carrying AMRAAMs and ASRAAMs, in addition to air-to-ground munitions. The radar range equation, missile kinematics, regional AWACS and datalinks were ignored as irrelevant.

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## Hornet data link used for support

ST LOUIS – Boeing has successfully demonstrated the transmission of a Super Hornet's systems status data from an airborne F/A-18F to the Automated Maintenance Environment (AME) on the ground.

The demonstration uses network centric capabilities to raise effectiveness of a weapon system.

Using a tactical link, aircrews can transmit data to base operations. The ground station automatically routes the data to sea- or land-based operational maintenance centres.

"Because maintenance crews receive the data before the aircraft lands, they can be ready and waiting with the right support equipment, the right part, and the right technical data to return the aircraft to flight status," said Chris Chadwick Boeing vice president for F/A-18.

No hardware or structural work is required – only software changes. The software-only change allows this capability to be easily moved to the operational fleet.

## RAAF looks at targeting pods

SYDNEY – The RAAF has put out a restricted RFT to equip Australia's F/A-18 Hornet fighters with the latest target designation systems, under a project worth more than \$100 million.

The target designation pods will improve the detection, identification, precision targeting and damage assessment in Hornet strike and offensive air support.

The project will equip the Hornets with a proven, self-contained, targeting and laser designation system – upgrading the Nite Hawk forward looking infra-red pod.

Defence will assess three systems: the advanced targeting forward looking infra-red (ATFLIR) pod manufactured by Raytheon, the Pantera pod manufactured by Lockheed Martin, and the Litening AT pod manufactured by RAFAEL and Northrop Grumman.

The pods produce a monochrome image of the target area on a screen in the cockpit. The pilot can pre-

cisely designate the target.

The decision on the preferred replacement will be made next year. The first squadron is expected to be equipped with the new system by early 2007.

## First JSF in assembly jig

FORT WORTH – Workers at Lockheed Martin's mile-long factory in Fort Worth have begun assembling the forward fuselage for the F-35 Joint Strike Fighter.

Last Monday workers loaded an F-35 structural bulkhead into an assembly tool, marking the official start of forward-fuselage production. Wing assembly starts soon.

The F-35's first flight is planned for 2006. The F-35 will set new standards for assembly precision. New milling machines are accurate to within 50 microns – about one-third the width of a human hair – to ensure that the F-35's outer shape is exact and meets its low observability requirements.

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We are now expected to believe that the F-111 is non-viable in the longer term since it would be "prohibitively expensive" to retrofit with digital datalinks and new EW equipment – despite both hardware fits involving largely box or board additions in the digitally bussed, software-based F-111 weapon system. Fifteen years and a billion dollars of investment into digitising the F-111 have been ignored as irrelevant.

Not a single argument presented by the Defence bureaucracy to justify F-111 early retirement holds up. The twisting and turning over the last six months suggests that Defence has no confidence in its own reasoning.

At the root of this issue is the guesswork performed in estimating

future F-111 costs and potential cost savings – using inappropriate models inappropriately. Under DCP budgetary pressures the illusory budgetary windfall from killing off the F-111 would have become an irresistible attraction.

Without proper analysis, the Defence bureaucracy thought wrongly early F-111 retirement would be a good idea and sold that idea to Cabinet with no consideration of the consequences should this guess be wrong – which it clearly is. What we are now observing are dubious claims to explain away a failure in analysis methodology which probably arose as the DCP was being restructured.

When the "support cost" guess collapsed, the justification abruptly shifted to survivability; as

those lost credibility, erroneous claims about integrating networking suddenly materialised. Perhaps the next argument will be that it is painted the wrong colour.

This guesswork around the F-111 parallels the guesswork around the JSF. Two years ago the Defence bureaucracy, without the benefit of the planned AIR 6000 analysis, guessed the JSF was the best solution. As media reports since have shown, the guessed assumptions on delivery dates, cost, stealth and aerodynamic performance are all beginning to unravel.

What is clear is that the Defence bureaucracy has guessed its way into a force structuring and budgetary disaster which, if implemented, will cripple the RAAF for decades, Australia's strategic position – and the public purse.

## Hunter chalks up 50K hours

SAN DIEGO – The US Army unmanned aerial reconnaissance system supporting has achieved a significant operational milestone by reaching 30,000 total flight-hours.

The achievement by the Northrop Grumman-developed RQ-5 Hunter UAVs reflects the expanding role that UAVs are playing in US and allied combat operations.

The first Hunter UAV flight was in 1990.

Alpha Company of the Army's V Corps' 1st Military Intelligence Battalion reached the 30,000 hour mark on June 23 at the end of an operational mission in Iraq.

To date, the Hunter fleet has flown more than a third of its total hours – about 11,500 – in combat missions over the Balkans and Iraq.

Hunter UAVs will remain in service well into the next decade.

In recent years, Northrop Grumman has made several improvements to Hunter to reduce its life cycle costs and improve its performance.

In 2002, the company modified and extended Hunter's wing, a change that improved flight performance and enables the system to carry weapons. System improvements will ensure Hunter's transformational role as the interim Extended Range Multipurpose UAV, the Army's next-generation tactical UAV program.

## Roads become fighter base

TAIPEI – Taiwan will turn part of a busy highway into an emergency runway for two Mirages this week, reviving a military drill last practised 26 years and revived as China prepares to stage a mock invasion.

Both sides are holding summer war games to test combat readiness.

"A back-up military runway is a necessary means to ensure our air fighting power if airfields are destroyed by the enemy during war-time," the defence ministry said.

The drill is part of the annual Han Kuang, or Chinese Glory, war games that culminate in joint-force exercises in August.



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