

CANBERRA – Chief of Air Force Angus Houston said the 13,300-strong Royal Australian Air Force has moved from being a platform-centric force towards being networked and well-balanced. He briefed defence industry leaders at the 31 Defence Watch function that the RAAF is also “expeditionary”.

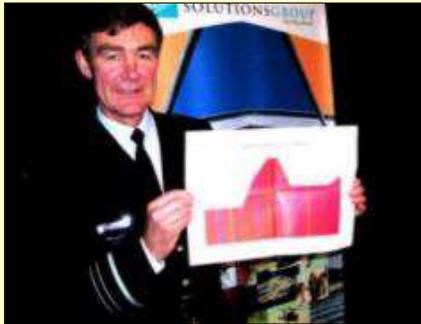
Over 13 years to 2000, the RAAF dwindled from 23,000 to 2000 after it outsourced heavy maintenance and domestic support. Ageing aircraft meant logistics funding didn't cover the expense. When a new type, such as the C-130J came in, it costs more than the C-130Es to support.

At that time, the separation rate was about 14 percent and there were other people pressures.

“We now have the lowest separation rates for a generation. Until recently we were running along at 4.4 percent separation – when you equalise that probably running about 6 per cent,” the chief said.

“We're saving an awful lot of money. Every single fast jet cockpit

## RAAF: an expeditionary culture



**The CAF comments that this chart (pictured last week) displays strike power at 1000nm.**

Afghanistan, to Learmonth to combat people smugglers, to Bali, Solomon Islands and the Middle East, more than 5000 in the RAAF now have operational experience. In operations, they had achieved up to 95 percent availability.

“We have an enduring vision: to be a balanced expeditionary air force capable of the swift and decisive application of air and space power in joint operations or as part of a coalition force,” he said.

“The first key word is balanced. We need high-end capabilities, as well as the capabilities to support the Army – C-130s, transport aircraft and the like.

“It's very important that we continue to maintain a lethal and capable air combat force. Control of the air will remain an imperative.

is full. We have all of our pilot positions and Air Force filled at the moment.

“In fact we have more pilots than we need. With throttling-back recruiting we've reduced our training but essentially our people are staying. Their morale is good; they're enjoying the challenges of operational service.”

With deployments to Timor; then

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## How they got it wrong

By Dr Carlo Kopp

The May 14 Defence Watch briefing contained a number of unsupportable assertions. In relation to F/A-18s armed with cruise missiles like JASSM vs F-111, Defence stated: “Because we'll be able to carry two follow-on stand-off weapons, strike capability is more survivable than the current one.”

This is a non-sequitur – the original plan for the F-111C was to carry up to four such weapons. A single

F-111 armed with four follow-on stand-off weapons vs a pair of F/A-18As each carrying two weapons, exposes one rather than two aircraft. The much faster and low-flying F-111 is exposed for a shorter time. The argument also neglects the cost advantages in using one F-111 vs two tanked F/A-18As to do the same job.

Defence also stated: “. . . those aircraft that will carry the follow-on stand-off weapons will also carry air-to-air weapons as well, and they can protect themselves, they can look after themselves and they don't have to be escorted.”

Defensive fighter escorts are only

required where there is a prospect of encountering airborne Sukhois, especially if supported by AWACS. Under these conditions the self-escort model is problematic, since the Sukhoi has a decisive BVR radar/weapons range advantage over the heavily loaded and slower F/A-18A. If the strike-tasked F/A-18A attempts a head-to-head BVR engagement, the Sukhoi Su-27/30 wins every time.

Defence stated: “The follow-on stand-off weapon – two of them can be carried by an F/A-18A – and we will be able to engage, deploy more

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*"We need to be expeditionary for the defence of Australia, because all of our combat elements, other than one fighter squadron, live on the east coast or in the south of Australia. To respond to any contingency in an Australian context, we need to be able to deploy our forces to our bare bases in the north. That requires an expeditionary capability."*

*"If we're capable of that, we should have the flexibility, the adaptability and the responsiveness to be able to do whatever else Government requires."*

*"The vision emphasises joint operations – as part of a coalition operation. Essentially the future's all*

*about a networked Australian Defence Force. Unless we do that we're not going to get the full power of the system. The power of the system will exceed the sum of the individual parts.*

*"You get a lot more combat effect from a system than you will from a series of disparate platforms. When you're looking at comparisons between defence forces, you don't go back to the old platform-centric way."*

*Houston also praised the new Air Force culture. "It's an adaptive culture," he said. "It's a values-based leadership culture; that emphasises our people.*

*"If you get the right culture, you get the right results. People are values-based; and values are all about behaviour. You get the right results*

*in an environment where innovation and creativity can flourish.*

*"If we can harness the intellectual power of all those young people that we have in the Royal Australian Air Force, we are going to be a much better air force."*

*"The culture is creating a learning environment, which demands people-oriented leadership, where we're very open and very accessible.*

*"Our people are absolutely magnificent. We have the right people. We recruit the right people. Our culture is right.*

*"Also our doctrine is right. We don't know what's going to happen in the world tomorrow. We need flexibility, so we have to have that expeditionary capability."*

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aircraft out there, more weapons and engage more targets than we can right now."

If we pessimistically assume a minimum of 18 F-111s armed each with four weapons we get a fleet capability to deliver 72 weapons to about 1000nm. As available tanker numbers limit the number of F/A-18As usable for the strike role, using four tankers (less one spare) we optimistically get around 24 to 28 usable F/A-18As, each with two weapons, for a total of 48 to 56. At best the F/A-18A/tanker solution provides about 75 percent of the capability inherent in the F-111.

Defence stated: "There's no doubt, as the diagram shows, that if we kept the F-111 we would have an even greater capability because it would give us more aircraft."

Australia needs significant growth in overall strike capability. That alone is a compelling argument not to chop RAAF strike capability by F-111 retirement.

Defence stated: "Fitting the F-111 into the networked airforce of the future would be extremely expensive."

This is nonsense. JTIDS/Link-16 is available in standalone terminals or combined TACAN/JTIDS/MIDS terminals. The improved data modem is now available as a standalone terminal, as will be the new JTRS modem. All terminals will be soon available as software radios running on general purpose VME processors, drop-in hardware compatible with the F-111 Block C-4 system. Given the existing software to provide situational awareness PPI displays on the F-111 cockpit displays, integrating such terminals into the existing F-111 avionic system is a small engineering task.

Defence stated: "Post-2010 we go into an environment where we would have to totally upgrade the F-111 over what it is now, to make it survivable in the likely environment. . . . We'd have to do another full avionics update to equip it with systems such as Link-16, the protection systems and all the other systems that it would need . . ."

This also is nonsense. Adding new EWSP equipment and networking capabilities are incremental tasks – by definition these cannot be called "another full avionics update". The ALR-2002 warning receiver is a 'drop-in' replacement for

the ALR-62, and the existing bays for the ALQ-94/137 can easily fit replacement jammers if the recently added Elta 8222 jammer pod is deemed inadequate. The Block C-4 upgrade sees Mil-Std-1760C interfaces fitted, providing compatibility with all new-generation munitions – this money has already been largely spent, unlike the F/A-18A upgrade.

Defence stated: "It would be an incredibly expensive undertaking for an aircraft that is basically '60s technology; '60s technology means that it is very difficult to maintain and to get a large number of aircraft on the line ready for operations."

This statement directly contradicts earlier comments in the same briefing about outstanding F-111 availability.

It also misrepresents the cost of adding hardware into the 1990s and post-2000 generation avionic suite now fitted – the AUP, AMP and BUP avionics are not 1960s technology.

The airframe and engines may be 1960s technology, but neither have any bearing on the cost of fitting new EWSP equipment, networking equipment and other enhancements, like a new radar.