

Getting the air power facts straight

Chief of Air Force Air Marshal Angus Houston submitted a rebuttal to columns in HeadsUp 305 when he appeared before the Joint Standing Committee on Foreign Affairs, Defence and Trade. We respond with the first part of a rebuttal.

- *Following my criticism of the RAAF exposing two F/A-18As instead of one F-111, the response said the F-111 does not provide redundancy, should the F-111 be lost or suffer a systems failure.*

THE ODDS of two slower F/A-18As at high altitude being detected and engaged near the JASSM launch point are greater than the odds of a single, faster F-111 being detected at 200ft AGL. In terms of systems failure induced aborts, the odds of a failure in one of two Hornets or their supporting tanker are greater than the odds of a like failure in one F-111. While the two Hornets have a greater chance of getting at least two JASSMs on target, they have a lower chance of getting all four on target.

- *The argument that a faster and lower flying F-111 is less exposed than the F/A-18A in the target area when launching JASSMs was challenged on the basis of the F-111 flying on a lo-lo-lo profile, rather than the typical hi-lo-hi profile.*

THERE IS no evident tactical

reason why an F-111 should be flown on a lo-lo-lo profile. This suggests a poor understanding of missile delivery profiles. Flying the F-111 on a hi-lo-hi profile puts it below the radar horizon of opposing, ground-based radars and, given the range of the JASSM, possibly below the radar horizon of an opposing AWACS as well. The F/A-18A at 36,000ft could be detected by a ground based radar at ~200nm, and by an AWACS at ~400nm, AWACS radar performance permitting. The F/A-18As' tanker could also be exposed.

- *In response to criticism of the higher cost of using tanker-supported F/A-18As vs unrefuelled F-111s, Defence said the F-111 is more expensive to run per airframe and there is no saving in aircrew numbers when using two Hornets.*

FACTORING IN the operational and crewing costs for 50 percent of the tanker required to support two Hornets, numbers published by Defence for F/A-18A and F-111 annual costs and US tanker costs show that the F/A-18A + tanker solution costs about 75 percent more than the unrefuelled F-111 per sortie.

- *In response to the observation that escort fighters are only required when airborne Sukhois*

could be encountered, it was argued that air-air missiles on strike aircraft complicate the options presented to an enemy.

HAVING ARGUED for many years that the RAAF should carry ASRAAMs on the F-111 instead of the Sidewinder, I am gratified to see the message is getting across. The ASRAAM has an analogue interface port, compatible with the F111's Sidewinder rails.

- *The criticism of radar/missile range inferiority of the F/A-18A vs the Su-30 was challenged by "the Sukhoi does not have a decisive range advantage over an F/A-18".*

THIS IS nonsense. Sukhoi radars have about twice the antenna area of the F/A-18A's APG-73 and transmit much more power. Radar range performance depends on these two parameters. Given both radars are similar pulse Doppler technology, the Russian radar inevitably outperforms the smaller APG-73. In the recent Cope India exercise, Su-30MKs achieved parity in long-range missile engagements against the USAF F-15C, equipped with the APG-63(V)2 phased array, larger and newer than the APG-73.

- **Part 2 next week.**

Chessell, Power to guide Tenix

SYDNEY – A former chief defence scientist, Dr Ian Chessell, and Australia's first astronaut, Dr Paul Scully-Power AM, will head up the new Tenix Technology Advisory Council.

The council will help steer existing and potential technology investment business across the Tenix group.

Dr Chessell is council president. Dr Scully-Power will support him as Tenix's chief technology officer.

Bletchley now a tourist venue

LONDON – Once the most secret place in Britain, Bletchley Park is giving the public a first look into the hut where Alan Turing worked on cracking Nazi Germany's supposedly unbreakable Enigma codes.

Turing's Hut 8 is included in an exhibition at the complex some 50 miles north of London.

Turing was part of the team that invented Colossus, the machine that enabled cipher sleuths to crack not only the normal Enigma codes but

the key Lorenz cipher that Hitler used. The cracking of the code was crucial to victory in World War 2..

Colossus used hundreds of valves, was the world's first programmable electronic computer. Its existence was a close secret.

The odds were hugely against Britain's best brains cracking the Nazi codes and their success was one of the greatest intellectual achievements of the 20th century.

Huts three and six worked on the German Army and Air Force codes, while huts four and eight concentrated on the German naval codes – crucial to the Atlantic victory.