The Hon Joel Fitzgibbon MP, Minister for Defence

Dear Minister.

We are pleased to present this discussion paper on the analysis entitled "Strategic Needs and Force Structure Analysis: The Thinking Behind the F-22A and Evolved F-111 Force Mix Option".

The paper deals with the complex issues behind the future choice of Australia's fast jet combat aircraft, in two parts. The first part comprises an analysis of the current and future regional strategic environment, and the needs this imposes upon the composition of the future RAAF combat fleet. The second part of the paper analyses the capability, cost, risk and industry benefits of the resulting *F-22A and Evolved F-111 Force Mix Option*, as provided to Defence in response to the requests of Industry (and Academia) to "come up with innovative, cost effective solutions to meet Australia's defence capability needs".

We strongly concur with your statements that the Defence budget be spent more efficiently, and that Australia pursue acquisition of the F-22A Raptor fighter aircraft. This analysis demonstrates how this can be done, while saving around 16 billion dollars of taxpayer's funds, in comparison with the Howard Government's ad hoc plans to acquire the Super Hornets and Joint Strike Fighters. The analysis also shows, conservatively, that the *F-22A and Evolved F-111 Force Mix Option* provides superior capability at much lower risks, and significantly greater Australian Industry engagement than the Howard Government's legacy fighter plans.

The large influx of state of the art Russian aircraft, missiles and other high technology military equipment has transformed the region, in a manner few anticipated a decade ago. Concurrently, the enormous cost burdens of the Global War On Terror have severely compromised the ability of the US to maintain the large scale high technology forces which Australia has relied upon in the past to maintain regional stability. If Australia is to remain a credible, competitive strategic player in the region, and retain its independent political position, it will have to build a credible future Air Force; not the embarrassment produced by the previous Government.

Our analysis in 2000/2001 showed high strategic risks arising from the regional arms race, and we produced the *F-22A and Evolved F-111 Force Mix Option* at that time, in response to solicitations by the Department of Defence, with the aim of countering those risks. The AIR6000 project office at that time short listed the *F-22A and Evolved F-111 Force Mix Option* for detailed evaluation. This never occurred, as the Howard Government on the advice from non expert senior Defence officials made the extraordinary, arbitrary determination to pursue the less capable, riskier, more expensive Joint Strike Fighter, with disastrous long term costs to key high technology sectors of the Defence industrial base.

In the subsequent seven years, the capability, cost, risk and industry advantages of the *F-22A and Evolved F-111 Force Mix Option* over the Howard Government legacy plans have become ever more pronounced, as the costs, timelines and risks in the Joint Strike Fighter have spiraled upward, and the Russians exported ever more capable high technology weapons to the region. Expensive ad hoc band aids like the Super Hornets have only contributed billions of additional costs to the legacy plans, without adding an iota of credible capability to deal with advanced Russian technology in the region. Each change in Defence plans has increased the costs, decreased the resulting capability and increased the risks while reducing the Australian Industry content, putting at risk our ability to maintain self reliance.

With the United States currently under extreme funding pressures, Australia has a unique opportunity to help and at the same time gain important capability benefits. If the right acquisition strategy is pursued, as outlined in the original proposal, such assistance to our ally and the resulting capability benefits for Australia would be greatly enhanced.

We recommend the proposed RAAF force structure be tested at three levels:

- 1. Against the Defence 2000 White Paper and its later amendments, as well as the future White Paper;
- 2. Against the *Defence Planning Guide* and the stated strategic needs; and,
- 3. Against the *Australian Indicative Planning Scenarios* (AIPS) to determine the operations, tactics and explosive ordnance requirements.

We also recommend that those fellow domain experts who have been gagged, by their respective leaderships in Defence and overseas controlled industry, be given the opportunity to be heard and contribute to the debate on air combat capability, without fear of reprisal, to provide their considered expert opinions just as the four reviewers of this paper have been able to do.

We cordially offer this submission for your consideration, both as a benchmark solution and IV&V Model<sup>1</sup> for the planned review of RAAF fighter capabilities, and given the broader implications for regional foreign policy standing, Australian Industry, and Defence funding, as a submission to Government.

Yours Faithfully,

Dr Carlo Kopp, SMAIAA, MIEEE, PEng Defence Analyst and Consulting Engineer

## **Enclosures:**

1. Four letters from independent reviewers of the Discussion Paper on Analysis entitled, "Strategic Needs and Force Structure Analysis: The Thinking Behind the F-22A and Evolved F-111 Force Mix Option".

- 2. Private Citizens' Contribution for Ministerial Consideration as a Submission to Government on Australia's Future Air Combat Capability Force Structure.
- 3. Discussion Paper on Analysis entitled, "Strategic Needs and Force Structure Analysis: The Thinking Behind the F-22A and Evolved F-111 Force Mix Option".

IV&V Model – a basis for Independent Verification and Validation of other force mix options using comparative systems modelling techniques and tools.