Submission No 2

Inquiry into Australian Defence Force Regional Air Superiority

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Submission to the Inquiry on Australia's Regional Air Superiority through to 2020

Summary
The F-35 Joint Strike Fighter is to replace the F-111 and F/A-18. The acquisition is premature as a production F-35 has yet to fly. In addition, the type employs several new technologies which may suffer teething problems, thus delaying the type's entry into Australian service. This submission outlines an alternative solution based upon acquisition of F/A-18E and F model aircraft as an interim type from 2009. Introduction of the F-35 taking place in 2020 when the type in more mature. Other options and alternatives are also discussed.

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Introduction

This submission refers to the second item of the Defence sub-committee's Terms of Reference:

(b) any measure required to ensure air superiority in our region to 2020.

The current plan to replace the F-111 and F/A-18 Hornet with the F-35 Joint Strike Fighter may seriously compromise Australia's air superiority within the region. The F-35's entry into Australian service could be delayed due to problems associated with new technologies that aircraft employs. The Hornet will thus be required to remain in service longer than anticipated. Some Hornets may have to be withdrawn due to reaching the end of their fatigue lives prior to replacement by the F-35. The problem is exacerbated by the fact that only 71 Hornets will be available to perform air superiority tasks once the F-111 is withdrawn in 2010. This submission outlines an alternative solution which removes such compromises. Other options and alternatives, such as keeping the F-111 in service until 2020, are also discussed.

Existing plans

The Australian reported on 4 January 2006 that the first F-35 Joint Strike Fighter is to arrive in Australia in 2014. If this date is correct, the remainder of the aircraft will be ready to assume the air superiority rôle by 1 January 2019. Some of Australia's existing force of 71 Hornets aircraft will need to be available to provide air superiority within the region through to at least 2018. The delay in the complete withdrawal of the latter type is necessary while pilots and maintenance personnel are trained on the F-35. Production versions of the F-35 have yet to fly. As the type incorporates several new technologies, it is possible that first production aircraft, currently planned for 2012, may be delayed. The initial aircraft are destined for US service.

A significant delay in the project due to problems with the new technologies will delay the arrival of the first Australian aircraft by 12 months or more. Such delays have afflicted two aircraft acquisition programmes recently: that of the C-130J Hercules and the Navy's Sea Sprites. The possibility of a delay due to technical issues must therefore be taken seriously.

Any delay has serious implications for Australia's ability to provide air superiority within the region. The youngest Hornet is at least 17 years old, with the earliest aircraft exceeding 20 years of age. Under current plans, the Hornets will be at least 10 years older when they start to retire. Airframe fatigue is of major concern and will become worse as the aircraft age. A substantial delay in the introduction of the F-35 may potentially leave Australia without a fighter.

Some planning has taken place to replace those parts of the Hornet airframe most prone to fatigue damage but such a programme may itself suffer problems and therefore delays. The cost of the programme, even without delays, is also a consideration. Even if the programme is successful and suffers no delays, the aircraft won't be new and will be more costly to maintain than new aircraft.

The above only deals with technical problems. If the Hornets are used in a conflict, this may lead to combat losses. It will definitely reduce the service life of the remaining aircraft due to the tempo of operations. If the conflict is prolonged, it may also leave Australia without a fighter. It must be remembered that Australia has deployed Hornets to such conflicts in 2001 and 2003.

The existing plan is relatively inflexible and high in risk as it requires a great deal of contingency planning to avoid potential problems. Such planning also has a price tag, one that may prove quite substantial. Hasty decisions are also costly, particularly when potential problems were raised several years before but ignored.

A solution

The problems mentioned above can be mitigated by acquiring an interim type. I recommend the procurement of at least 100 F/A-18E and F/A-18F Super Hornet aircraft, the latter being a dual seat aircraft. The Super Hornet, although somewhat different to our Hornets, is sufficiently similar to ensure

transition can occur relatively quickly. As the aircraft will be new there will be no fatigue problems. Other maintenance problems associated with operating an elderly aircraft type are also eliminated.

To speed introduction into service, the aircraft should be completely standard with no modifications added that are unique to Australia (Australia has a reputation for specifying changes to aircraft it acquires, thus delaying introduction into service and raising the price of each aircraft). A contract for acquisition should be signed at the end of 2007, with deliveries to start in 2008. Initial aircraft will go to the conversion unit with the first operation aircraft replacing the F-111. The F-111 is due to be withdrawn from 2010.

All F/A-18Es and Fs will thus be in service by 2012, if not earlier. A potential gap in Australia's defences will thus be plugged. It is important to note that the aircraft must be bought, not leased, as leasing reduces the flexibility of this option.

Australian industry involvement is easily addressed as Boeing already operates in Australia. It has maintenance facilities at RAAF Base Williamtown, the main Hornet base which is near Newcastle, as well as at RAAF Base Amberley outside Ipswich in Queensland. The latter facility is used to service F-111s and is Boeing's main Australian centre for aerospace maintenance. As the Super Hornet is a Boeing aircraft, support is therefore available from the moment the type is introduced into service.

Introduction of the F-35

Once an interim type is introduced, planning can be directed towards acquisition of the F-35 in 2020. The solution given above has an additional advantage as it offers flexibility regarding the selection of aircraft for future acquisitions. For instance, the Super Hornet may be replaced by an equal number of F-35s, or a mix of a lesser number of F-35s and another type such as Unmanned Combat Air Vehicles (UCAVs) can be acquired. the US, UK and France are currently experimenting with UCAVs to supplement or perhaps replace existing combat aircraft. UCAVs are expected to enter US service before 2020.

Options and alternatives

An alternative to acquisition of an interim aircraft type is to retain F-111s until the F-35 is operational. This will extend the life of the Hornets as F-111s can perform some of the strike rôles. The disadvantage of this alternative is that F-111s are costly to maintain and operate. In addition, a prolonged conflict may still leave Australia without any combat aircraft.

One option is to continue to operate the Hornets but replace the F-111s with a dedicated strike aircraft such as the F-15E. The drawbacks are that we don't operate the type so introduction will take longer and, as we'll operate two aircraft types, support which have little in common, spares and support costs will be higher. Replacement of the F-111s with Super Hornets has some of the same disadvantages but do have some equipment in common.

Replacement of both the Hornets and F-111s with separate interim types, such as F-16 and F-15E respectively, is also an option. The disadvantages are exacerbated versions of those mentioned above for the F-15E

Conclusion

Delay acquisition of the F-35 until 2020 ensures that the type will be mature when it enters Australian service. Acquisition of an interim type to perform air superiority duties allows for an orderly introduction of the F-35.