

# **Submission to the Inquiry into The Current State of Australia's Space Science & Industry Sector**

by Ralph Buttigieg

Every few years various governments examine what, if any, Australian government activity in Space should be. There have been proposals for Australian Space Agencies, perhaps similar to what other medium sized countries like Canada have but these proposals don't go anywhere. We have had a few spasmodic programs such as Fedsat but nothing really consistent. The reason given is lack of funds, which really means no convincing reason has been given why governments should prioritize the expenditure.

This can be contrasted with the commercial sector. Optus has had a successful satellite business for decades and is now acquiring the fourth generation of communication satellites. They are doing so because there's a clear commercial need for them.

I therefore accept it's unlikely there will be any major government involvement in Space development unless there's a clear requirement.

I believe there is very much is a major requirement for Space assets by at least one important government organization, the Australian Defence Force. As a modern defence force they make use of space systems such as GPS and remote sensing. They have major satellite ground stations such as Pine Gap and the one at Geraldton WA. They have their own communication package on Optus C and ran Fedsat for the last couple of years of its life.

The Defence forces even seem to be acquiring Space capability by accident. Consider our new AWD Destroyers. They will have the AEGIS weapon system and be equipped with the SM-2 missiles. The more capable SM-3 could easily be used instead giving the RAN a killsat capability as was shown in the recent destruction of an American satellite by an AEGIS/SM-3 equipped US destroyer.

It's clear that our military reliance on Space assets will increase. To be sure of access we need our own systems not just rely on foreign satellites and launchers.

I propose that the ADF sets up some type of Space office which would co-ordinate and advocate military space utilization. Properly in the RAAF it would be charged with working with all the services and the civilian sector.

Here's a list of possible projects that the Defence Space Office could be involved in:

- 1) An independent ADF communication satellite to replace the current Optus C package. Developments such as UAVs will require satellite communications and there must be no question of their availability or security. At the same time they can consider other packages on the geostationary platform. How about a real time weather satellite sensor? It would be invaluable for both military and civilian users. AstroVision proposed such a system but that didn't get anywhere.
- 2) Australian reconnaissance satellites. I'm thinking of a small constellation that would concentrate on our region. It could follow up what was learned from Fedsat. We wouldn't have to rely on

foreign satellites for our own security.

- 3) Small satellite Australian launcher. There is considerable work happening O/S on quick response access to space. Such systems would be ideal to launch ADF military small sats. We should be looking at our own capability to contribute to their development and the acquisition of such systems. Again, there's a possibility for civilian space use too.

In general I think we need to consider utilization of all mediums for our security, : land, sea, air and space.

I thank the Senators for considering my submission.

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