

**COMMUNICATIONS
ALLIANCE LTD**



**Communications Alliance Satellite Services
Working Group (SSWG)**

Submission to the Panel Conducting a Cost-Benefit
Analysis and Review of Regulatory Arrangements
for the National Broadband Network

14 MARCH 2014

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INTRODUCTION

The Satellite Services Working Group (SSWG) of Communications Alliance Ltd is pleased to have the opportunity to make a submission in response to the Panel's Framing Paper.

The SSWG is a grouping of satellite-related companies active in the Australian market and includes satellite operators, satellite service providers, manufacturers and ground-segment installers. (A list of SSWG members is at [Attachment 1](#)).

Please note that SSWG Members Optus and NBN Co. will each lodge their own submissions in response to the Framing Paper. Optus, NBN Co. and Foxtel have not contributed to the development of this submission on behalf of the Communications Alliance SSWG.

This submission seeks to present two main arguments. These are that:

- Modern satellite technology is a viable access technology for the delivery of high-speed broadband services in Australia. In a new-look multi-technology mix for the NBN, satellite services should not be considered to be merely a 'last-resort' consumer-grade option for the most remotely located Australians, but rather should be deployed wherever its natural advantages make satellite the most logical solution; and.
- The Vertigan Panel should consider the potential to create a win-win for consumers and NBN Co by allowing private satellite operators to play a greater role in the provision of high speed Ka-band services as part of the NBN project. Such a move has the potential to lower the risk profile of the overall NBN project, accelerate roll-out and give access to additional capability through the use of alternative and complementary satellite resources.

About Communications Alliance

Communications Alliance is the primary telecommunications industry body in Australia. Its membership is drawn from a wide cross-section of the communications industry, including carriers, carriage and internet service providers, content providers, equipment vendors, IT companies, consultants and business groups.

Its vision is to provide a unified voice for the telecommunications industry and to lead it into the next generation of converging networks, technologies and services. The prime mission of Communications Alliance is to promote the growth of the Australian communications industry and the protection of consumer interests by fostering the highest standards of business ethics and behaviour through industry self-governance. For more details about Communications Alliance, see <http://www.commsalliance.com.au>.

Satellites and the Current NBN Framework

This submission focuses on the Panel's remit to make appropriate recommendations for structural change to the future Australian communications industry framework. The structural changes herein also, inevitably, have implications for the current regulatory framework.

This submission takes note of:

- The Vertigan Review Framing Paper reference to the fact that: "the panel is mindful that these (fixed line) networks need to be considered in the wider context of wireless and satellite networks....."; and
- One of the three Key Issues identified in the Framing Paper being: "how best to ensure end-users have ready access to fast and affordable broadband and affordable and reliable voice services – this includes the issue of servicing rural and remote areas in a cost-effective manner."
- The commitment in the April 2013 Coalition policy plan for "Fast Broadband and an Affordable NBN" that: "(The Coalition) will consider opportunities to realise value from the (NBN) satellite contract by seeking private operators or owners for the NBN satellite service, if this enables price and service levels for regional consumers to be improved".

The SSWG believes that the Vertigan Review needs to take a longer term view of the way that communications networks and consumer needs and desires are evolving. Structural decisions made in the present day will have implications for the communications environment in Australia in the 2020 timeframe and beyond.

As discussed below, structural changes to the way that satellite services are deployed as part of the new NBN also have the potential to reduce some of the risks associated with the project, reduce the associated capital burden and improve the NBN business case.

In its present formulation, the NBN Satellite System is positioned as a consumer-grade service aimed at 3% of the population in remote and rural Australia. Such a grade of service comes with a guarantee after the effects of contention of only 300 kbit/s. Hence, many regard the service as inferior to their expectations of a future broadband service. Despite this, in reality advertised rates of 12 Mbit/s or better may be experienced by consumers. Within these design constraints, the system of two Ka-band satellites is likely to have superfluous capacity which could be utilised more effectively in a restructured policy setting and industry solutions which allow for more creative use of the space segment asset to the advantage of the Australian taxpayer.

The case exists for acceptance of an enterprise-class of service with a much increased baseline guarantee of, say 10 Mbit/s after contention, or better, in reality up to 100 Mbit/s - which would take up the balance of the full available satellite capacity. This would elevate the satellite service to peer status with other broadband solutions, but with the advantage of minimal establishment time in areas

where it may apply as a pioneer broadband service. There might typically be 10,000 such services available from the excess capacity available to parachute into needed areas, and first time response organisations plus corporate mining or other rural and remote enterprises would be spared the disadvantage of their geographic circumstances in a timely manner.

This reprise of service definition would require a change of Government policy on the target communities for the NBN Satellite Service, and a structure of ownership or management of the Satellite System which capitalises more on private sector experience.

A Bigger Role for Satellite Services in the New NBN?

The traditional strength of communications satellite technology in the non-military space have been in the provision of voice services, high-bandwidth data links, private networks and video distribution. In what is a continuing trend commenced 20 years ago, however, satellite technology has evolved toward the provision of broadband services, including through the deployment of increased Ku-band and Ka-band capacity that is better suited to broadband delivery.

In line with the recommendation in the NBN Strategic Review that the Government move to a multi-technology mix for a restructured NBN, the SSWG believes it is appropriate to re-think the potential for satellite technology to play an appropriately expanded role in the provision of broadband services to Australian consumers.

The recommendation in the 2010 NBN Implementation Study that satellite services essentially be restricted to serving the most remote 3% of the Australian population was in some ways understandable at the time. This conceptual view was, however, based on a fairly narrow view of satellite capabilities and what could be achieved via a nationally-owned two-satellite network.

Satellite services have the potential to be rolled out more rapidly than fixed services once appropriate capacity is in place, particularly given the smaller-sized satellite transceivers (antennas) that can be utilised in Ka-band services.

Satellite services can also be an important means of overcoming the recently reported difficulties that NBN Co will experience in providing service in many fixed-wireless designated areas, due to the unavailability of appropriate spectrum licences.

Satellite services are also a viable alternative for many Australian regional towns and communities that might otherwise have to wait multiple years for high-speed fixed broadband networks to reach them.

Private Sector Ka-Band Capacity to be Deployed over Australia in the Near Future

Ka-band capacity in the coming years will be available from both Geostationary Satellite Orbit (GSO) satellite networks and from Non-Geostationary Satellite Orbit (NGSO) satellite networks. GSO capacity will be available in Australia from the two NBN Co satellites, and other satellite networks within the region with a view of Australia within their footprint . One NGSO broadband satellite network has already been launched and is capable of serving Australia..

In a competitive market, other networks will obviously offer both consumer-grade and enterprise -grade alternatives to users in Australia where allowed. By the same token, if the excess capacity of the present NBN Satellite is not to be exacerbated further, there may be benefit in the NBN Satellite System offering capacity to other markets outside Australia. This would avert the situation of a partially stranded asset.

A Bigger Role for Private Satellite Operators?

The SSWG believes the Vertigan Review should consider closely the potential for private satellite operators to play a stronger role in the delivery of satellite services as part of the NBN.

As observed in the Broadband Policy that the Coalition took to the recent Federal Election, scope exists for the NBN satellite service to be privatised, with the two Ka-band satellites currently under construction for NBN Co to be sold to a private sector satellite operator or for the satellite package to be divested in some way. An existing fleet operator would also have the capability to service the Australian market more rapidly, through the use of a combination of the on-order satellites and the operator's existing satellite assets and orbital locations, thus providing a smoother and fully provisioned flow from the Interim Satellite service to the anticipated full NBN satellite service. This would reduce the impact of any construction and/or launch delays, which are not uncommon.

The potential benefits of such a move include:

- Earlier roll-out of high speed satellite services through the use of existing satellite assets while the 'NBN' satellites are still under construction or awaiting launch
- Immediate return to the Government of the proceeds of the privatisation, freeing up capital to focus on other aspects of broadband roll-out or other Government programs, with CAPEX demands being substituted by other mechanisms e.g. lease-back arrangements
- A significant lowering of NBN Co's risk profile through the mitigation of launch-failure risk and delays (typically up to 10 months) and a much-reduced risk that a catastrophic in-orbit satellite failure could impair services to end-users
- More flexible satellite service provisions through the use of additional satellite resources and/or orbital locations
- Removal of future capital exposure arising from the need to procure follow-on satellites
- Experience in creative solutions for a demanding and innovative market place

Consideration would also need to be given to the ground-segment assets, including satellite gateways, that NBN Co is putting in place and whether these should be included in any restructuring, or should remain owned and operated by NBN Co.

It is recognised that preparing for and executing such private sector involvement will take some time to achieve, during a period when maintaining overall roll-out momentum is crucial and efforts are also being made to integrate additional technologies – such as FTTN and possibly HFC networks – into the multi-technology mix that is the reworked NBN.

Bearing this in mind, the Panel might also consider a two-phase strategy whereby:

- In the first phase the satellite assets of NBN Co are leased to a private satellite operator, or operators, who could make use of capacity within their existing spacecraft fleets to bring forward the introduction of high-speed satellite services and then to supplement the capacity available from the on-order satellites; and
- In the second phase the privatisation is completed with potential for lease-back for Government programs.

Such a strategy – coupled with a reprised grade of service which avails of the excess capacity - will potentially bring earlier benefits to existing customers of the NBN interim satellite service who are presently experiencing slow internet speeds due to the contention for, and limited data rate guarantees of the available capacity. It might also provide a path around the dilemma whereby there is additional pent-up demand for the interim service but no viable business case for expanding that service, given the heavy Government subsidies involved in the provision of Ku-band end-user terminals.

The commercial/wholesale structure derives from the consumer-grade model previously discussed. However, a more dynamic approach to the base of users served would lead to an evolving partnership role with the private sector, with the combination providing a broadband satellite platform to access seekers. The model on which this platform is based should be an Open Architecture as opposed to a Vertically Integrated model. This would maximise scope for new and expanded long term value of the Satellite Service but would require transparency between wholesale and retail operations.

Regulatory Implications

Any policy and structural change to the NBN formulation will need to be accommodated within the regulatory framework. This submission does not seek to prescribe the fine detail of the regulatory changes that will be necessary if the structural ideas herein are acted upon.

The SSWG believes, however, that the principle that should be adopted when crafting such regulatory change include that:

1. Technology neutrality should be maintained. There should not be any prescription about the percentage of total customers, nor geographic location, circumstances nor category of customer that can be serviced by a specific technology. The essence of the multi-technology approach recommended by the NBN Strategic Review is that access technologies should be deployed where and to whom it makes the most sense to roll them out. Satellite service availability should not be restricted to 3 per cent (or any other prescribed percentage) of the Australian population. In any circumstance where satellite services are the most cost-effective option, and/or have significant advantages in speed of roll-out while also providing adequate high-speed data transfer rates, these services should be eligible for deployment – including in urban areas.
2. The regulatory framework should be tailored to encourage all infrastructure operators to consider being part of the NBN infrastructure, regardless of the technology they seek to deploy.
3. The NBN Satellite System should be re-positioned as a network which not only provides a consumer-grade baseline service within Australia, but also is capable of enterprise-grade service availability which can be offered to markets both in Australia and overseas. In this way, consumers and industry can look forward to a service which is on a peer level with other broadband offerings and at the same time significantly reduces geographic disadvantages. Competition should otherwise be allowed to decide the balance of market share attributed to satellite services.

Attachment 1

Satellite Services Working Group membership

Australian Private Networks (APN)
Australian Satellite Communications (ASCS)
Foxtel
Inmarsat
Institute for Telecommunications Research (ITR)
Intelsat
Ipstar
Kacific Broadband Satellites
KaComm Communications
Middletons
NBN Co
Newsat
Optus
Pivotal Satellite Pty Ltd
SES
Skybridge
Space Systems/Loral
Telstra
Thales
Viasat



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ALLIANCE LTD**

**Level 12
75 Miller Street
North Sydney
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**Correspondence
PO Box 444
Milsons Point
NSW 1565**

**T 61 2 9959 9111
F 61 2 9954 6136
E info@commsalliance.com.au
www.commsalliance.com.au
ABN 56 078 026 507**

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