

17 July 2015



Mr David Lee  
2015 Regional Telecommunications Review Secretariat  
Department of Communications  
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Dear David

**Re: Regional Telecommunications Review 2015**

Communications Alliance welcomes the opportunity to provide our response to the Regional Telecommunications Independent Review Committee on the *Regional Telecommunications Review 2015*.

The Communications Alliance Satellite Services Working Group (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. In providing this industry response we note that some of our members will be submitting their own responses.

In response to the Review Paper, Communications Alliance asked its members the following questions, listed below with the corresponding responses.

**Satellite**

1. **When the nbn™ long-term satellites are in place, does industry have a view as to how demand should be managed within individual pencil beams. For example if there is strong demand within a specific beam, which threatens to exhaust the available capacity, should:**
  - **the second satellite be used to supplement capacity?**
  - **Communications Alliance/CSPs/nbn™ work together to cooperatively manage the available capacity;**
  - **Options to infill capacity from LEOs/other GEO satellites, or other fixed wireless/mobile technology e.g., NGARA be explored?**

It was always intended to keep as many options open as possible, and therefore that each of the two nbn™ satellites would be able to be used to provide redundancy for the other satellite in the event of technical problems or failure. Equally importantly, each satellite is designed to be able to offer additional or supplementary capacity if the other satellite requires it, for example, in circumstances where the available capacity within a specific pencil-beam approaches or reaches full utilisation.

This is why an 'in orbit 1+1 model' was adopted, rather than co-locating both satellites in the same orbital location or 'slot' (which would have provided redundancy but not necessarily supplementary capacity).

nbn™ will monitor beam-specific demand to anticipate the timing of any potential need to use the capacity of both satellites to serve regional and remote areas that exhibit high demand for satellite broadband.

Should the two satellites eventually become unable to meet demand in specific areas, nbn™ will examine all the available options for adding additional capacity, including the potential use of other commercial satellites that have coverage over Australia, and alternative technologies.

The next-generation nbn™ satellite broadband product is being developed cooperatively with Access Seekers. All stakeholders are keen to ensure that it makes optimal use of the available capacity and has measures inbuilt – such as 'fair use' policies at the retail level, to guard against end-users finding themselves unable to take advantage of the satellite's throughput performance.

Communications Alliance is ready to assist nbn™ in any of these efforts as appropriate, including by leveraging the collective experience of through the collective experience and expertise of the members on the SSWG.

**2. If DPI, caching or other content management or prioritisation technologies were used to help prioritise traffic being delivered via the satellites, should such inspection occur at the CSP level or the network level, what other issues would arise?**

This is tricky because it's not entirely clear what the question is. The question uses a mix of OSI layer terminology and wholesale vs CSP terminology.

Looking at it technically, for efficiency reasons, DPI inspection shouldn't necessarily be restricted to any one layer of the OSI model. Indeed DPI often uses all layers to layer 7 (application layer) to determine what's happening and manage traffic types.

If the DPI inspection is to be performed by CSPs, rather than nbn™, this will typically occur at the Layer 3 network level – the layer at which prioritisation controls can be put in place. Such solutions can be costly, which might be prohibitive for some CSPs. Consideration might also need to be given as to whether actions by individual CSPs could impact the broader nbn™ network.

**3. Is satellite downlink, teamed with WiFi-based local access/reticulation seen as a model for servicing remote villages/hamlets, seen as a viable model for widespread use?**

This is a service model that can be effective in certain circumstances and has already been deployed in some remote indigenous communities. nbn™ is looking for further CSP engagement to better assess the potential breadth of applicability for such a model.

## Fixed wireless and mobile

- 4. Is the current mobile black spot model something that could be used on a larger scale to attract co-investment and accelerate mobile coverage expansion? What are industry's thoughts on more extensive infrastructure-sharing between nbn™ and Carriers to accelerate mobile coverage expansion?**

Both Carriers and nbn™ remain open to greater cooperation and infrastructure sharing. nbn™ has already given mobile carrier access to certain fixed-wireless facilities, along with associated back-haul. Potential exists for not just co-location, but also co-build. Industry expects this area of activity to accelerate over the next few years.

## General and Consumer Protection

- 5. How does industry forecast demand growth in regional and remote areas? Any forecasts to share?**

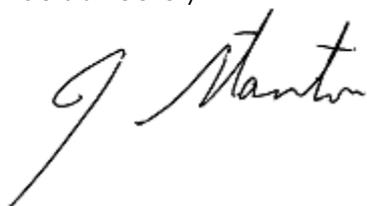
Communications Alliance does not have a substantive answer to this question.

Commentary from our members included that demand growth in regional and remote areas typically follows the pattern of local development – where new industries, developments and investments take place, the demand curve typically follows in line with the growing population and varies somewhat according to whether it is the result of a major corporate investment, such as a new mining venture, as opposed to 'organic' population growth.

nbn™ commented that its mix of technologies ascending from satellite access through fixed wireless, FTTN and direct fibre connect, are expected to be deployed progressively in line with population density and demand. A rapidly growing remote community using satellite-based access could be expected, over time, to migrate progressively through the different access architecture as growing aggregate demand justified each progression and to avoid congestion as the capabilities of each technology type came under pressure.

If you have any further questions with regard to the points raised in this submission please contact Mike Johns on (02) 9959 9125.

Yours sincerely



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cc. Deena Shiff