Regional Telecommunications Review - Peri-urban areas Public Consultation

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[redacted]

Regional Telecommunications Independent Review Committee 2021

From the information provided that outlined what the committee is particularly interested to hear views on in several separate topics. I will address the issues collectively and this will consolidate my submission somewhat, though some aspects may be repeated in different contexts.

- **the reliability of local mobile and broadband services**
- **the role of telecommunications during COVID-19 and natural disasters**
- **the effectiveness of Government programs like the Mobile Black Spot Program**
- **how telecommunications can support regional development**
- **the potential of emerging communications technologies**

Thank you for allowing me to be involve in two of the online meetings.

I am fourth-generation in mechanical engineer and with forty years of working in broadcast television, primarily on live outside broadcasts and communications with both analogue and digital RF with microwave and satellite as well as with IT and I retain a strong interest in these.

My wife and I now live, and we work on a property in the Yarramalong Valley hinterland at Ravensdale in the Central Coast of NSW, having moved from the centre of Parramatta seven years ago. When in Parramatta we had good ADSL-II and a Telstra coax cable service.

Ravensdale is a rural region less than twenty kilometres from residential areas around Wyong and Tuggerah. These centres are 26 and 30 kilometres away and form a part of the fastest growing regions of NSW.

The 2016 Census for the localities around us gave populations of: Ravensdale - 64, Yarramalong - 468, Cedar Brush Creek - 114 and Wyong Creek – 434. These figures are for those dwellings identified as occupied and equates to a combined total population of 1,080. However, there are many other dwellings that are only used as weekenders.

Due to the financial issues, the Central Coast Council are consolidating their two offices and the council chambers are being moved from Gosford to Wyong, some twenty-two kilometres

north. This will inevitably put further stresses and pressure on development and infrastructure in this part of the coast.

The Yarramalong valley is an area vulnerable to flooding and bush fires. Our local community suffers from what has now become a serious digital divide in the provision of communications infrastructure and services.

Good and reliable communications are key to so many aspects of living out in this rural hinterland region.

We face number of issues with communications out here, non-existent, or patchy mobile coverage, lack of real maintenance on the local PSTN exchange, residents having to subscribe to numbers or concurrent services to maintain a degree of connectivity, in this Peri-Urban location.

To maintain adequate connectivity, I know of several families in our valley, who pay for up to four and five different services concurrently. Some also maintain a satellite phone service for emergencies. One family have mobiles on two carriers, a landline, Skymuster and a voice service as well as a separate Satellite phone,

Among our community, I am noticing that there is a serious lack of understanding of the technologies available and of what infrastructure they are subscribe to. I believe that this is not made easier with the nature of the promotions we see in the media, that often will use totally incorrect terminologies.

Residents in the Yarramalong village, who are less than 2Km away from the Black Spot mobile tower, are unable to use the 4G service due to the terrain and its position on the valley floor and flood plain. This location is totally inappropriate as it does not even provide acceptable coverage to a good part of the local terrain or the village where it is located.

It may have been the cheapest option with access to a dark fibre and power.

Alternate local sites were offered at the time that would have more than adequately covered the whole valley from just one site. Unfortunately they were not taken up.

This Yarramalong mobile tower fails in numbers or areas on the road to the north and completely three kilometres from us.

As Yarramalong now have a tower. the trees and local vegetation around it need to be kept to a minimum to stop the RF power being absorbed thus defeating the purpose of the facility. Damp or wet vegetation is a primary cause of loss of signal power.

As you will be aware terrain can also make propagation of RF signals unreliable, a fact that very few seem to appreciate. RF signals rely on 'line of sight' and use analogue sub-carriers that the digital component is imposed on, to transmit and receive.

Recently the facility was unable to be accessed during a flood event to allow a generator to be connected, so the site became unusable for several days. This tower is also dependent on the local Yarramalong exchange and unfortunately that also failed, with the batteries limited capacity. The equipment that relies on grid power to operate becomes unusable.

I fully appreciate that in no way are we unique as a community that is so easily cut off. We need the reliability of a landline voice service at an absolute minimum. This is stated in the advice to all satellite users, that landlines should be retained.

This raises the issue of the Telstra Universal Service Guarantee, that has not been imposed on the new players, such as NBN-Co, Optus and TPG in this field.

The increasing age of the DSLAMS in our local exchange is a concern.

This local equipment needs to be upgraded and better maintained and not allowed to deteriorate into the potentially unusable condition that now exists, whereas a replacement of the exchange facility would have financial benefits with associated maintenance contracts etc.

In a natural disaster or emergency such as a bush fire or flood high priority broadcasts should be available on all communications systems.

We need qualified people in the community given permission to access and maintain generators in an emergency and to fuel them to these two facilities. It is pointless using people from outside the local area who cannot access the sites in an emergency. We have residents who are highly qualified and more than capable of doing this.

As a broadcast technician, I had permits to access several Telstra facilities on a regular basis. On a previous occasion I offered to connect a generator to our local exchange during another power outage but could not get permission to do so and only came up against a brick wall.

Fortunately, in the most recent flood I was able to reconfigure equipment that I had and access someone else's Sky Muster to alert Telstra of issues that had occurred at the local exchange and the mobile tower due to the flooding. Without that Telstra would have had no knowledge of the severity of that emergency when several hundred people were totally isolated. In this community some people live in small pockets of only one or two houses.

There is also a mobile black spot tower at Boyds Lane on the Yarramalong Road at Wyong Creek, which suffers similar problems.

I can see no reason, particularly with the Black Spot initiative, why it should not be a requirement that the carriers co-operate and share their receive and transmit equipment as has now occurred in the broadcast televisions industry here in Australia for news gathering and for terrestrial transmissions. This would rationalize their costs and therefor the charges to consumers while also enhancing their overall footprint and services.

I have also subscribed to the AVST (Alternative Voice Services Trials Program) but at this stage I am unconvinced of its reliability as I can be told that it often is not working by those attempting to call. From social media, I know of other having similar difficulties with the phone service over the Satellite irrespective of the provider.

Where we are located about 6 Kms north of the Yarramalong tower we have invested well over $4,000 on equipment to get an acceptable 4G data connection. as the ADSL was totally inadequate for our needs. This is aside from the equipment we bought and tested that did not work, which is all an unrecoverable cost. I know of others who have invested many times that amount to achieve a similar result here in the hinterland. They also then have considerable expense every month for the large amounts of data they require for their businesses, requiring regular top-ups on the limited capacity of the mobile SIM plans offered.

With our son, we have an engineering company, working in transport, employing fifteen people in the heavy vehicle industry and have offices in Sydney, Melbourne, and Brisbane.

Reliable internet with a fixed IP address and low latency is an essential requirement for our engineering business that operates nationally. This is for control and security of the data we

hold for clients and government on the systems we administer. I also manage remote connections to services we provide to our clients all over Australia.

Satellite would simply not work with its latency, limited bandwidth, and its non-competitive cost.

It is also concerning that I am reliably told there is currently no forward planning for the development time required for a replacement of the Sky Muster satellite with its service life of just sixteen years, six of which have passed.

This rural area of the Yarramalong Valley also has no terrestrial radio or television reception, so along with its vulnerability to flooding and bush fires, the need for reliable communications is obvious.

The Starlink and Sky Muster options are too expensive and are not a solution for the average user.

Knowing the location of several unused cores of dark fibre less than 2.5km away from our location, that has existed for many years, and that direct fibre service are offered with free installation on just a three-year contract, it is a concern that although I have offered to take a twelve-year contract to have it installed here at my home and for our business, I came up with nothing but a brick wall.

Installing such a facility at our location, could service several other residents and home businesses or support other local community activities. Costs could be shared instead of paying the high fees for satellite that provides only a limited amount of data. This is particularly so when compared to the unlimited plans offered to people using the terrestrial or direct NBN services in other communities.

- **the role of telecommunications during COVID-19 and natural disasters**

With modern technology many businesses have been able to survive and thrive through the COVID-19 pandemic, due to advances and improvements in programs such as DocuSign, Zoom and Teams. This has enabled people to actively share screens and documents and to remotely administer systems and mobile devices.

In our own engineering business, we have a consolidated account with Telstra of around fifty services including a 200 x 200 direct fibre service into premises in Melbourne equipped with

facilities and security that I remotely administer, along with several other NBN services for our staff who are located around Australia. We also have over twenty mobile phone and four mobile broadband services, so I have a knowledge of the industry as a user.

The mobile services we use operate well for our staff throughout Australia to provide engineering support to the heavy vehicle industry and our clients as long as areas are serviced by Telstra.

Unfortunately communicating with Telstra as a business owner and a client for more than forty years is arduous and time consuming and can take up many hours a week. For us, dealing with their franchises is unacceptable and dealing with their shops as a business client is impossible.

The red tape involved in dealing with multiple people before one can access any form of support is tedious and should be made far more efficient, not by employing incompetent personnel who do not work from a script and parrot off inane platitudes.

Not being able to speak directly with support personnel or waiting for hours or in some case days for support is a time waster for both the service provider and the client.

For our company with a large consolidate account, the Telstra back-office accounting system issues us with well over two hundred pages of invoice every month. This must be carefully checked as it is invariably ridden with mistakes. Again, this is unnecessarily time consuming.

For our community here in the Yarramalong valley and a village who rely on ADSL, there is an obvious lack of real maintenance, instead we appear to get repairs that are cobbled together, it is a problem. I hear of currently existing service requests that were made before Christmas 2020 that remain unresolved. Sometimes we are told that despite the faults being confirmed, the technicians cannot identify them.

As a proudly Australian corporation, Telstra should have a social conscience and be using Australian based staff and call centres instead of referring customers to call centres offshore or hiving queries off to local franchises. Dealing with consultants whose language skills are poor, with accents that are difficult to decipher and who have zero knowledge or understanding of technology, the local environment, or the regions is not showing any form of social responsibility. Telstra should be proudly Australian and exhibiting this.

There is every indication that dealing with overseas call centres contributes to the levels of Spoofed SPAM calls users here in Australia are subject to.

I am aware of businesses other than ours which have not fared well, having suffered very badly during this COVID-19 pandemic. This includes an essential service business here in our valley that has been forced to close. This was in part due to reduced patronage and the distance that the operator had to travel across LGA's, to attend the facility.

While businesses such as ours, are encouraged to decentralise, the costs to implement satisfactory and reliable communication can be prohibitive.

The cost disparity between a direct fibre service and what the NBN currently provides to premises connected directly to fibre is also a concern.

There would be obvious advantages to the Australian economy and the country, if the technology was rolled out equally, without disadvantage, as was the initial concept of the NBN. Without even or equal costing nationally and the support of reliable communications, the benefits will always be limited.

Unfortunately, this vision has not been fulfilled, due in part to politics, so the proposed model has not been achieved. In some cases, fibre to the node, that was originally installed, is already being replaced with direct fibre.

The result is that we as a community and a nation are now participating in this roll-out, at great expense, of what is a massive digital divide. This will be show graphically in information that Michael Kelland, who lives in the same valley, will provide in his submissions.

In our local community the availability of a reliable communications service that is accessible to everyone would greatly enhance the ability to diversify income generating businesses. This is aside from the requirement for reliable communications for safety and emergency reasons.

This lack of a good, reliable, and clear communications service is potentially quite dangerous and impacts the whole community to various degrees. The need for clear and reliable communications in any emergency is paramount particularly for organizations such as ambulance, police and the RFS. The issue of safety and support services in an emergency is a no brainer.

- **ways to help regional consumers get connected, stay connected and use their connection**

Better facilities would give older residents the ability to remain in their own homes with the use of a service such as Telehealth, instead of having to relocate to other areas where support and services are available to meet their individual needs.

Personally, I have assisted others including the elderly in the past, where I provide support for their IT and communications as my background in broadcast was heavily involved in troubleshooting.

I would happily participate in establishing a community IT and communications hub and training facility if funding were available to establish such a facility in our region, as the community would substantially benefit from this.

Service providers like Telstra and Optus could both roll out and implement a local community connection with people who can then assist individuals locally in person if necessary. Such a service could be an extension of the already funded Regional Tech Hub initiative.

Aside from the weather issues, from my years of experience with both terrestrial microwave and satellite communications, I believe that many of the difficulties that users experience with their satellite service can be attributed to the installation not being optimized to the “Box Centre” of the figure eight traverse that the satellite uses to maintain itself in a geostationary position.

If the installer does ascertain at what time of day the satellite is in its “Box Centre” position the signal optimisation may be at one or the other of the extremes of the figure eight traverse, and the received signal will potentially be second rate. This is because the RX equipment will at times be only receiving a signal on the half power side lobe instead of the optimum centre signal. In the event of a power failure or other outage the stability of the satellite service can take up to a week to right itself.

Claims that the satellite is “x distance” away, and it does not matter, is in no way correct as being off pan by the minutest degree will have a detrimental effect.

The claim that satellite dish design is broad enough to cope with the traverse does in no way compensate for a poor optimisation of the receive and transmit signal.

I am aware of four NBN Satellite service close to me where the systems all fail if the weather is at all inclement, I know that one failed last week where it was claimed this was do the light smoke from a Hazard reduction, I believe that same system also fails even in a drizzly day.

I have discussed these issues with others far more qualified and experienced in the science of RF than myself and they agree with what I have written.

Comments regarding these virtual meetings

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As I have written on the survey after the first virtual meeting, Michael Kelland and I were disappointed that our local Council was not represented at that one.

If it is allowed, we both would appreciate receiving a copy of the details provided by each participant, as we are all individually pushing for the resolution of similar issues. It may not be possible, but a collective of likeminded people could come out of these virtual meetings, we would all benefit.

Then there may well be an avenue for further group consultation and the ability to share our experiences.