Northcliffe Community Resource Centre

Post Draft Submission, DR70, to the Telecommunications Universal Service Obligation Review by the Australia Government Productivity Commission.

Submitted 16/1/2017

http://www.pc.gov.au/__data/assets/pdf_file/0016/212524/subdr070-telecommunications.pdf

Preliminary

My submission is intended to document issues affecting the 3% of the Australian population for whom the NBN Sky-Muster service is the only form of NBN coverage envisaged for the foreseeable future.

I intend to make points about the relationships between the USO, POTS services in satellite-only NBN areas, and the provision of ADSL internet services over POTS lines in those same areas.

In doing so I draw on the latitude provided by the USO review for submissions to cover 'related matters', as well provide for the possibility that the USO may one day be expanded to directly cover data services.

My submission is made both on behalf of myself and of the not-fot-profit incorporated community organisation of which I am the Manager, the Northcliffe Community Resource Centre (NCRC).

Executive Summary

This USO review, if the hopes of some submissions are fulfilled, has the potential to cause Telstra Wholesale to make the decision to decommission POTS infrastructure in NBN satellite-only areas.

If this were to occur, it should be uncontroversial that the quality and reliability of voice communications for users will be compromised. The degree of that compromise and whether it would cause a breach of the USO principles, is one matter for debate.

An equally important, and eventually an even bigger issue for communications in our '3%' communities, is the effect this would have to remove ADSL services from individuals, families and organisations that rely upon them. Where ADSL services offer download allowances from tens, to hundreds, to thousands of GB per month, Sky Muster offerings are capped at around 60GB (plus a similar off-peak allowance available at the infeasible time of 1am-7am). Sky Muster services are almost certain to remain so capped and it is likely during the coming decade, congestion and slow-downs in the service will begin to occur due to the fixed nature of the satellite hardware which is in orbit.

The removal of the collective bandwidth capacity provided through ADSL and POTS lines in our '3%' communities, would drive a large part of this bandwidth usage through the Sky Muster infrastructure. While it may be possible by technical means to prevent this adversely effecting Sky-Muster VOIP services, there is no doubt that at some stage in the next decade the data requirements of our '3%' communities will exceed the total bandwidth capacity of the Sky Muster service. The

result of this will be congestion, slow down, and the 3% communities will become examples of failed communications policies.

If not immediately, at some point, the premature decommissioning of copper infrastructure, and decisions which lead to this decommissioning, would be seen as short-sighted folly.

Eventually decommissioning of POTS lines will be a desirable step, once other communications systems, voice and data, have been expanded and improved. The introduction of Sky Muster services should not be seen as this tipping point for our POTS services.

Sky Muster Does Not Provide Standard Phone Service Equivalency

Sky Muster modem equipment manuals currently state the service should not be relied upon for emergency (000) calls.

Many in our community have told me they do not consider Sky Muster to offer standard phone-call quality, or a sufficiently reliable service in comparison to POTS.

This view is shared by others around Australia in similar communities, as was shown in a long discussion thread, initiated by Professor Reginald Coutts, Coutts Communications, on the Facebook group, “Better Internet For Rural, Regional And Remote Australia (BIRRR)” which can be read here:

https://www.facebook.com/groups/BIRRR/permalink/614341598774531

If staff find time to examine this thread you will see the anxiety and poor experiences led to an overwhelming discussion consensus amongst the community that Sky Muster VOIP is not a suitable replacement for POTS voice services, contrary to Professor Coutt’s pre-determined conclusions regarding the issue.

As a user of Sky Muster services I experience short service drops (several minutes), several times each day. I experience longer service drops (one hour) at least once per week. An area for some improvement here is for Sky-Muster to consider the effects of scheduling service maintenance periods based on EST (Eastern Standard Time), ignoring the effects of this on their West Australian users.

As well as the reliability and technical issues of the satellite (eg. 1400ms latency of Sky-Muster user to Sky Muster user VOIP calls); the power required to operate customer satellite modems (thus their VOIP services) is also a point of unreliability. Over the past year our town has experience many extended power outages, longer than 6 hours each and ranging up to 20 hours. In an emergency situation, such as when we are bushfire affected, power can be out for longer periods. We have universally found that the POTS lines have not been affected during power outages or emergency events. UPS devices are not a viable power support system for the Sky Muster modem, which draws 70Watts, for outages more than an hour or two.

While mobile services have the potential, current and future, to meet emergency demands, there are many areas around our township where POTS services operate yet there is no mobile coverage. In addition our township, and three of the four neighbouring towns, are restricted to Telstra network access only.

USO, Sky-Muster, POTS and ADSL

I believe a more significant issue than voice services, which crosses the boundaries of the subject of the USO review into 'related matters', is the effect which the removal of POTS services would have of also removing the provision of ADSL in our communities.

While not all POTS customers in NBN-Satellite areas can access ADSL, due to line quality issues and the technical constraints of ADSL, many can. ADSL users are particularly prevalent in township areas. While POTS lines remain in place I would expect most town users will choose to use ADSL services in preference to Sky Muster services. The larger download allowances available are important to families and businesses in particular.

This view is based on the close contact my organisation has with community members and regular assistance we provide to them with internet connection issues. For instance we publish articles in our local paper for those interested in connecting to the internet. A recent example:

http://northcliffe.org.au/resources/ALC/A%20Little%20CRC%20January%202016.pdf

We are a not-for-profit incorporated community organisation. We rely on ADSL2 to provide a 600GB download allowance. We consume 50-80% of our download allowance depending on seasonal factors. The usage includes : our kids computing club, device and security updates (eg. Windows PCs, customer X-boxes), cloud based backups, wifi access for visitors and locals, public computer access, government service access (for which we provide free access to computers), and other many and varied uses. These are all legal uses providing a community benefit. Many are critical communications functions. By offering this public access to the large download allowances of ADSL2 plans we are able to provide a much needed supplement to those relying on the smaller download allowances of the Sky Muster Satellite, who live too far from the telephone exchange to qualify for ADSL.

A recent phenomena has been families, who have either Sky Muster or Telstra Mobile Internet services at home, bringing their children's x-boxes into the centre for updates and downloads. While the NCRC can provide access for the community to ADSL services, this helps alleviate the communications shortcomings experienced by Sky Muster users who need to limit their usage.

I personally, in my own home, rely on ADSL2 to provide a 100GB download allowance in my home. In the next 2 years I expect to need an increased download allowance of up to 200GB. My usage is varied including software downloads, regular video streaming, cloud based services, and offering guest wifi to my visitors. I also run a small web business as a sole-trader called 'Karri Country Online'. I am dependent on the internet and services like those I can offer help keep communications technology functioning and affordable in the bush.

Sky Muster has no announced plans and no technical capability to expand on the download allowances currently on offer, which are capped at 60GB per month. For most users and usage cases the employment of the additional offpeak data, from 1am-7am, is infeasible.

Some Tests

Sky Muster service does not offer, at any price, the data capacity which many organisations and individuals seek. The sales of large data plans on existing ADSL infrastructure demonstrates the demand for data beyond the Sky Muster 60GB monthly cap on 'peak' usage. A desktop test could ascertain how many ADSL users in the '3%' communities access greater than 60GB of data per month.

As demand for data grows the 60GB will not be able to be expanded without massive investment in new satellite infrastructure. A desktop test could identify the likely arc of this demand gap.

What needs careful thought and further examination is the effects of these pressures on the Sky Muster service as a whole. This may or may not have the potential to directly effect the delivery of USO voice services, if these are being carried by VOIP over the Sky Muster service.

The movement of bandwidth from ADSL to Sky Muster will certainly effect the collective delivery of data services. There are fewer technical solutions to mitigate this problem. Data 'prioritisation' will eventually move past the low hanging fruit and will be de-prioritising data which is important to the customer.

A desktop experiment which would clarify some of these issues could be run as follows.

*ascertain the average bandwidth used by ADSL services in '3%' communities (those for whom the only form of NBN offered is Satellite)

* extrapolate what the average bandwidth used by such ADSL services is likely to be in ten years, taking into account data growth estimates as well as the speed restrictions of ADSL

*compare both these derived figures to the total actual and potential total bandwidth on the Sky Muster satellites

If any of these measures fall short then Sky Muster is not able to support universal access to data and telephony in Australia, without the assistance of copper line ADSL delivery.

Supplementary Request

I would support the USO being revised to recognise the important of data in modern communications. While it is obviously not possible to mandate copper lines be universally guaranteed to be able to carry digital data, it may be possible to require:

Any copper line currently proven to be capable of supporting ADSL services, should be maintained at this level, until an ADSL equivalent service is available. An ADSL equivalent service should be defined in terms of data allowance and not bandwidth/speed alone. This would mean the USO effectively taking over some of the functions and language of the previous Australian Broadband Guarantee policies.

Conclusion

The potential for severe degradation in data communications in our 3% communities, as a result of this USO enquiry, may not be immediately obvious in hindsight. However should this occur both the

oversight bodies, the NBN and the Government will rightly be held responsible by affected regional communities.

It will be very reasonable for our communities to become angry when they find that a peverse effect of the interaction of NBN policy, USO policy, and government capital investment, is to downgrade their communication services and access to the emerging internet economy.

The review should also remind itself that many rural users have invested large personal sums in establishing long copper runs to enable POTS services. For many these capital works will be extremely recent 'sunk capital'. Governments should expect to see demands for compensation from those who have their copper infrastructure disabled.

Premature removal of copper line voice services will be seen as a huge blow by our 3% communities in the short term. Removal of copper line data services will be the bigger blow, and it may take several years to realise the greater importance of this second issue.

I strongly urge the USO review to consider the impact of its findings on the retention of POTS line services, including data services, in our 3% communities.