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Our next speaker this morning is a man who has been described as charming, handsome, and a true intellectual heavyweight of the industry.

I am speaking, of course, about me.

While it is slightly unusual for the MC of an event to also be a speaker, Grahame Lynch has allowed me to exercise my legal privilege as a former CommsDay editor to moonlight as an MC at today's event, and I thank him – and you all – for your indulgence.

Today I would like to speak about regional telecommunications issues, and I'll approach this in three parts.

First, I want to look at the gordian knot that is regional telecommunications policy – and how the solution is not to untangle the knot – but, as in the Greek legend, it must be cut.

Second, I will talk about the blade which we will use to cut the knot – because for the first time since the dawn of competition, we have a commercial technology capable of providing metro-equivalent voice and broadband services to 100% of the Australian landmass.

And finally I want to discuss mobile black spots, and how a new approach is needed to improve both connectivity and competition in regional and remote areas.

So first let me turn to regional telecommunications policy.

I described regional telecommunications policy as a 'gordian knot' a moment ago: An impossible tangle of the Universal Service Obligation and the Regional Broadband Scheme, overlaid with the Mobile Black Spot Program, Regional Connectivity Program, *and* various State and Territory funding programs – all of which are broadly trying to solve the same problem.

Australia's approach to funding regional telecommunications infrastructure has resulted in a patchwork of subsidies, levies, and funding grants which often provide overlapping solutions to the exact same group of end-users.

These overlaps are found across three areas: overlapping coverage, overlapping funding, and overlapping taxes.

Let’s start with overlapping coverage.

A person living in regional Australia today may have access to:

1. a standard telephone service provided by Telstra (funded by both carriers and taxpayers under the Universal Service Guarantee),
2. a broadband service provided by NBN’s Fixed Wireless or Satellite network (initially funded by taxpayers in the form of NBN equity, then subsidised by carrier levies under the Regional Broadband Scheme),
3. an ADSL service under Telstra’s copper continuity obligation (funded by both carrier levies and taxpayers under the Universal Service Guarantee),

4. a mobile voice and broadband service (funded by taxpayers under the Mobile Black Spot Program),
5. A non-NBN fixed wireless voice and broadband service (funded by taxpayers under the Regional Connectivity Program, if they're in a Sky Muster coverage area).

This hypothetical home in regional Australia has a fixed voice service, a mobile voice service, and four separate fixed, mobile, wireless, and satellite broadband services – all of which are based on legacy technology solutions and are cross-subsidised by a mix of industry levies and taxpayer grants.

And while the home in this example is hypothetical, it is also an accurate representation of what the current policy patchwork creates.

While each of these individual programs has improved access to telecoms in regional Australia had no market intervention taken place, they have also been economically inefficient by having little or no regard for the other funding programs already in place.

Here's another way of looking at it – across the Australian landmass:

- 100% of premises have access to at least one broadband provider via the NBN,
- 100% of premises in regional areas now have access to at least two broadband providers, when you include Starlink,
- 99.5% of premises have access to at least three providers when you include Telstra's mobile coverage which provides both voice and broadband[1],
- 98.5% of premises have access to at least four providers (inc. Optus mobile coverage)[2],
- 96% of premises have access to at least five providers (inc. TPG coverage).

So that's the overlapping coverage. Next let's look at the overlapping funding.

[1] 22 March 23, Hansard, Standing Committee on Communications and the Arts Inquiry into Co-investment in multi-carrier regional mobile infrastructure, statement by Telstra representatives

[2] April 2023 Optus submission to Standing Committee on Communications and the Arts Inquiry into Co-investment in multi-carrier regional mobile infrastructure,

NBN's fixed wireless and satellite networks were initially paid for by the taxpayer in the form of equity injections into NBN Co.

But this funding has also been topped up over time to expand and enhance speeds and coverage – for Fixed Wireless in particular.

Last year almost half a billion dollars was pledged towards further Fixed Wireless upgrades[3], which will also alleviate pressure on the NBN satellite network, making it more competitive against non-subsidised commercial alternatives.

The NSW Government provided another $50 million top-up for Fixed Wireless upgrades[4] under its Regional Digital Connectivity Program.

The Connecting Victoria Program set aside more than $70 million for NBN Co to upgrade its network in regional areas, including Fixed Wireless.[5]

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[3] https://minister.infrastructure.gov.au/rowland/media-release/first-major-milestone-delivered-under-better-connectivity-rural-and-regional-australia-plan?utm_source=miragenews&utm_medium=miragenews&utm_campaign=news
[4] https://www.nsw.gov.au/snowy-hydro-legacy-fund/regional-digital-connectivity-program/nbn-regional-nsw
[5] https://www.nbnco.com.au/corporate-information/media-centre/media-statements/media-release-third-stage-of-nbn-co-and-victorian-government-investment-announced

NBN has received almost $80 million for 28 projects under two rounds of the Regional Connectivity Program, predominantly for switching satellite areas to fixed-line technologies – again alleviating pressure on Sky Muster and enabling it to be more competitive.

And there is nothing preventing mobile network operators from applying for funding to build new coverage in these same areas under the Mobile Black Spot Program, now onto its seventh funding round.

But there's another side of overlapping funding – so finally, let's look at overlapping taxes.

Or what policymakers prefer to politely call "levies".

Today, the USO sees Telstra paid $230 million a year to deliver the Standard Telephone Service[6], predominantly via the copper continuity obligation.

[6] https://www.infrastructure.gov.au/sites/default/files/development_of_the_usg_-_summary_report.pdf

This is partially a direct Government subsidy of $100 million, and partially via the Telecoms Industry Levy (TIL) which collects ~$220 million, and combined this funding goes towards a range of things including the Standard Telephone Service.

Telstra contributes the largest share of the TIL – around half, or around $110 million in the most recent levy assessment for 2022[7].

Telstra's contribution to the TIL has decreased from $140 million in 2020[8], then $121 million in 2021[9].

Meanwhile, NBN contributed almost $30 million to the TIL last year – up and $16 million in 2020[10] and $20 million in 2021[11].

So, while Telstra's payment into the TIL has decreased by more than 20% over the past three years, NBN's has almost doubled.

[7] https://www.acma.gov.au/sites/default/files/2022-11/Telecommunications%20Industry%20Levy%20Assessment%202021-22.pdf
[8] https://www.acma.gov.au/sites/default/files/2020-11/Telecommunications%20Industry%20Levy%20Assessment%202019-20.pdf
[9] https://www.acma.gov.au/sites/default/files/2021-11/Telecommunications%20Industry%20Levy%20Assessment%202020-21.pdf
[10] https://www.acma.gov.au/sites/default/files/2020-11/Telecommunications%20Industry%20Levy%20Assessment%202019-20.pdf
[11] https://www.acma.gov.au/sites/default/files/2021-11/Telecommunications%20Industry%20Levy%20Assessment%202020-21.pdf

And as NBN's revenues inevitably grow, so will its share of the TIL.

So NBN is paying Telstra tens of millions of dollars a year to keep its copper network operational – in the same areas that NBN is subsidised to operate its own loss-making fixed wireless and satellite networks – which, as we know, are regularly topped up by various other funding programs.

And that's in addition to other funding crossovers in the Definitive Agreement between Telstra and NBN.

Not only do USO taxes overlap – NBN's fixed wireless and satellite networks are also subsidised via the Regional Broadband Scheme (RBS).

The 2023 Budget Papers show that the RBS amounted around $760 million last financial year, expected to increase to $790 million this financial year, and $880 million in the next two years.[12]

[12] https://www.infrastructure.gov.au/sites/default/files/documents/2023-24_infra_pbs_00.pdf

These funds offset NBN's Fixed Wireless and Satellite losses, expected to be $12.9 billion between 2009-2040.

Initially, 95% of the RBS is expected to be paid by NBN to itself, with competing operators paying the remaining 5%.

Telstra, of course, is one of the telcos paying the RBS levy.

The result is an absurd situation where Telstra pays the majority of USO levies to itself, and NBN pays the majority of RBS levies to itself – but Telstra and NBN are also paying each other to operate networks serving the same customers with overlapping technologies.

Combined, the USO and the RBS result in $1 billion of economically inefficient annual cross-subsidies for networks serving the same users.

So, we have overlapping coverage, overlapping funding, and overlapping taxes.

This is the gordian knot of regional telecoms policy.

And it is past time that it was cut.

And this brings me to my second point: the blade with which we cut the knot is Low Earth Orbit Satellites, or LEOs.

Universal Service arrangements have historically been established on the notion that regional and remote telecoms services are not commercially viable, and therefore must be publicly funded to ensure their supply.

But in the last 12 months, the foundations have completely shifted.

For the first time in history, there is a now a technology capable of delivering metro-equivalent broadband services to any location in Australia.

I am talking about Low Earth Orbit Satellites, or LEOs, which have solved the problem of universal broadband access so quickly and so effectively that it should cause us to pause and re-think if any subsidy programs are needed at all.

The overwhelming majority of premises in Australia now have a choice of infrastructure providers competing to provide their voice and broadband services.

But for that tiny proportion of premises without competitive coverage – less than half a percent of Australian premises – there is a vastly superior service available compared to current subsidised options.

The hundreds of millions of dollars spent annually on the USO to subsidise home phones no longer makes sense when LEOs provide universal voice and broadband access.

The hundreds of millions of dollars spent annually on the RBS no longer makes sense when LEOs provide vastly superior satellite services to Sky Muster.

People living in regional and remote Australia have never had access to truly metro-comparable broadband services before.

And now that they do, LEOs are forced to compete commercially against antiquated solutions – which are being heavily subsidised.

It was recently reported that Starlink had more than 120,000 active services in Australia.

Meanwhile NBN's Sky Muster peaked in the third quarter of 2021 at 112,000 active services and has been in steady decline ever since – now down to 93,000[13].

Now some may argue that NBN, as the statutory infrastructure provider, has an obligation to make Sky Muster available and therefore should receive some form of subsidy.

But why should industry and taxpayers continue to subsidise this outdated technology for decades to come, when customers are voting with their wallets through a market proposition that has sought no public subsidy?

Other providers like Amazon Kuiper and OneWeb are hot on Starlink's heels, so expect to see at least two, possibly three, LEO providers competing in the Australia market within a few short years.

By removing the various taxpayer and industry subsidies involved in the USG, RBS, MBSP, and RCP, LEOs could provide near-universal

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[13] https://www.nbnco.com.au/corporate-information/about-nbn-co/corporate-plan/weekly-progress-report

high-speed broadband coverage on a level playing field with other technologies.

This could enable LEO operators to participate in a technology-neutral, market-based competitive tender to provide broadband services in regional Australia, at the least cost and highest quality to taxpayers.

When the former Government announced the development of the Universal Service Guarantee in 2018, it laid out four prerequisites that would need to be met before any changes would be made to the existing USO:

1. broadband services would need to be available to 100% of Australian premises on request – tick
2. voice services would need to be available to 100% of Australian premises on request – tick
3. any proposed new service delivery arrangements would need to be more cost effective than the existing USO contract – tick

4. a new consumer safeguards framework would need to be in place, following a review and associated public consultation process.

Well, the last point only gets half-a-tick – there was a consumer safeguards review and a public consultation process, but no new framework as a result. Don't blame me.

The point is this: All of the prerequisites for reform have been met.

If the policy principle underpinning programs like the USO and RBS is that every Australian must have access to a minimum standard of voice and broadband services – the market has now solved that problem.

If the policy problem then becomes affordability, then subsidising superior LEO services will inevitably be more cost-effective than the current myriad of levies and subsidies supporting overlapping technologies.

So, here's a revolutionary idea – given that commercial services are now available to 100% of Australian premises regardless of their location – why do we need any form of USO at all?

But if we still believe there needs to be a Government-subsidised voice and broadband service in areas which only have Sky Muster and no mobile coverage, what does that look like?

Let's do some back-of-a-beer-mat calculations:

According to NBN, there are 12.3 million premises in Australia.

0.5% of those premises don't have any mobile coverage – that's just over 6,000 premises.

If we take the position that taxpayers should only subsidise a voice service to premises lacking mobile coverage, the upfront cost of a Starlink dish on the rooftop of each of those premises is a mere $6 million.

They're currently on sale for just $199 each, so if we moved quick we could do it for just $1.2 million, or around the same cost as the yearly salary of a senior executive at NBN Co.

Starlink costs $139 a month, so those 6,000-or-so users would cost $834,000 a month to connect.

That's an annual cost of $10 million a year to provide metro-equivalent voice and broadband services to premises that don't have mobile coverage.

Or, let's be extra generous and say that this program should be made available to premises that don't have a choice of at least two mobile operators – 1.5% of premises.

That's around 185,000 premises.

It'd cost $185 million in upfront costs to provide every one of them with a Starlink dish. Or just $37 million at the current discount rate.

And it'd cost just over $300 million a year if the government covered 100% of their access costs.

That’s pretty much on par with the USO.

It’s less than half the cost of the RBS.

It’s less than a third of the cost of the USO and RBS combined.

And it would deliver dramatically better voice and broadband services to people living in regional Australia.

Even if my beer-mat calculations are wildly incorrect and this idea faced a crazy blowout that saw the total costs *triple* – it’d still be cheaper than the USO and RBS, and would still deliver vastly improved services.

It’d be the most successful failure in regional telecoms policy history.

So now that we’ve cut the gordian knot of universal service delivery, let me turn to the Mobile Black Spot Program, and how a new approach is needed to improve both connectivity *and* competition in regional and remote areas.

I should say from the outset that the Mobile Black Spot Program has delivered on its policy objective of improving mobile coverage.

But where it has succeeded in improving coverage, it has failed to improve competition – in fact, it has had the effect of making it even more difficult for competing carriers to expand their mobile footprints in regional Australia.

This reality is reflected in the waning enthusiasm of operators seen each round of the program.

Round 1 put $100 million in Commonwealth funding on the table and resulted in $385m in total funding, with co-contributions from carriers, State and Territory Governments, and even local Governments and community groups.

Round 2 put $60m on the table and created a total funding pool of over $200 million.

Round 3 put $60 million on the table, and while it attracted co-contributions, only $45m of the budgeted amount was spent.

Round 4 was made up of unspent funds from previous rounds.

Round 5 saw just $34m spent out of allocated $80m allocated.

Round 5A was $20m left over from Round 5.

And Round 6 and 7, the first to be undertaken since the change of Government, are currently underway.

Where has this funding gone?

Three quarters of it to Telstra, which has built almost 1,000 sites with a funding contribution from the program.

How many of those sites are being used for co-location? Fewer than one in ten – which has only served to further entrench the lack of mobile competition in the bush.

And how many of those sites, built on taxpayer funding, provide open access services?

Zero.

Public funds should deliver public services – meaning the establishment of open access, multi-carrier infrastructure, not the expansion of a single operator's network.

But the extreme power imbalance in the mobile market has stymied the development of multi-carrier regional mobile infrastructure such as neutral-host networks.

This market power issue has been exacerbated by the MBSP which has historically promoted coverage at the expense of competition.

It has embedded Telstra's market dominance, as each round of the program has increased the coverage gap between Telstra and other Mobile Network Operators (MNOs), reducing the ability of competing MNOs to access subsidies to expand their own networks.

This has resulted in an investment environment which has seen only limited use of multi-carrier infrastructure sharing models – even on sites which are largely funded by taxpayers – primarily due to the coverage dominance of a single carrier which has limited, if any, incentives to share infrastructure with other MNOs.

The factors preventing multi-carrier network deployments are not technical – they are commercial.

The market reality is that the largest operator - backed by the largest public subsidy - with a significant coverage advantage has little, if any, incentive to pursue infrastructure sharing opportunities – despite the clear benefits to the Australian public – as these would reduce its market power and provide a coverage benefit to competitors.

Without reform, this program will inevitably continue to subsidise the dominant network provider.

New mobile sites constructed with public funds should include an obligation to provide open-access services with equivalent pricing.

Additionally, consideration should be given to establishing a requirement on MNOs to utilise publicly funded mobile infrastructure in areas where they do not already provide coverage.

This would circumvent the market power issue where the three MNOs have historically avoided working cooperatively with MNIPs to utilise neutral-host infrastructure, and would ensure that publicly funded sites are used to deliver mobile coverage from all major MNOs.

So, I'll conclude with a brief recap of my three key points today.

First, regional telecoms programs are a gordian knot of tangled subsidies and levies.

Second, LEO Satellites are the blade with which the knot can be cut.

And third, public funds should only be spent on carrier-neutral mobile infrastructure.

Thank you – and we'll now break for morning tea…