

When ACCAN invited me to participate in a panel on the USO, I must confess that my first reaction was that there really wasn't a lot to contribute on this subject.

Along with Rosemary and several colleagues, I had the privilege of working on the 2011/12 Regional Telecommunications Review - and last night I scanned our report to refresh my memory on what we said in relation to the USO. There really isn't much, other than noting that access to a standard telephony service remained the most fundamental of telecommunications needs, and there was a continuing need to assure its availability - particularly during the potentially disruptive changes that are now in progress the National Broadband Network rolls out.

Our Committee also received representations related the timeliness and quality of repairs in more remote areas - with temporary fixes (often vulnerable to further damage) sometimes remaining in place for extended periods.

However, it was already quite obvious at the time of the last review that other telecommunications needs were growing to occupy a much higher priority in the minds of regional and rural Australians - with mobile network coverage and better broadband being on top of the list. At the same time, the number of fixed lines was starting to decline, highlighting the fundamental change that is in progress in the market. I suspect that this trend will have gathered momentum in the 3 years since our review.

On the broadband front, the former Government launched the National Broadband Network initiative - and this investment is continuing under the current Government, albeit with some significant changes of approach in an effort to deliver improvements earlier and at a lower cost. Importantly, to regional Australians, the principle of uniform wholesale pricing has survived the change of government - and whilst this doesn't assure equivalence of retail pricing or service levels, it promises to go a long way to closing the gap.

There are ongoing concerns about what people will get and when - but the prospect of the NBN has to some extent poured oil on the discontent over broadband. And the intention that broadband will be available to every Australian home through the NBN could be loosely viewed as providing the framework a form of Universal Service Obligation - though issues such as affordability and training will also need attention in some quarters of the community.

So let me turn to mobile coverage. This was by far the overwhelming concern expressed by regional Australians. Accessibility by phone anywhere, anytime is a part of modern lifestyles that urban Australians take for granted - and for regional Australians, it promises even greater benefits in overcoming the tyranny of distance, improving safety and so on. However, many regional Australians have no access in the areas where they live, work and travel.

There has been spectacular uptake of Mobile data communications with the advent of devices such as smart-phones, and the market has responded with a vast and rich array of apps that can deliver the end-user phenomenal value over the bandwidth typically available on mobile networks. Regional Australians don't want to be disenfranchised from the social and economic possibilities that are opening up.

I believe that we're just seeing the tip of the iceberg in terms of the value that mobile data can offer, with a raft of new possibilities in areas such as machine-to-machine communications (or the Internet of Things as it is known amongst the more techno-trendy). The regional opportunities in sectors such as mining, agriculture, security etc are truly exciting.

So its not surprising that mobile coverage figured so prominently in the last Regional Telecommunications Review! But what does the future hold for mobile coverage in regional Australia?

Very little can be expected of the free market. The reality is that network footprints have largely expanded to areas there is a reasonable prospect of a commercial return. Population densities in the areas *without* current coverage are simply too low to warrant any one mobile operator making the investment in network expansion. It stands to reason that if no one carrier can justify the investment, it's not going to make sense to expect infrastructure-based competition with multiple operators competing for a market that is patently too small for any one of them.

Perhaps the parallel could be drawn with the lack of innovation, investment and competition in broadband supply in regional Australia historically. Its was not so much a case of market failure - rather, a case of the market behaving in economically rational way, albeit at the expense of social equity.

But here's where any parallel with broadband ends. In contrast to an investment of somewhere in the range \$50-\$100 billion on the broadband front, the Government has thus far committed just \$100m to a program aimed at improving mobile coverage in regional Australia. That program is currently in the course of being implemented, and in the coming months hopefully we will start to see some improvements flowing.

Of course, national coverage of Australia's geography is not a realistic goal, and the need for satellite phones in the most remote areas won't go away any time soon. However, a much larger investment will need to be unlocked if there is to be a significant impact on the crying need for better mobile coverage.

To finish (*and at the risk of treading on some sensitivities*), let me float a few directions that I *personally* believe hold promise for improving mobile coverage. Each of the following four suggestions represents a way to improve the economic viability of extending mobile coverage into low population areas:

1. Forget infrastructure-based competition in the red heart of Australia - it's just not an efficient approach. The ideal solution would be based on users of all three mobile networks being able to roam onto a single set of infrastructure operated on an open access, wholesale-only basis. This approach would immediately boost the traffic (hence revenue) over what any single mobile operator could expect from just their own customer base. The threat to existing mobile operators could be moderated by limiting coverage under any Scheme to areas where no operator currently offers service. Fortuitously, we now have a vehicle for doing something like this in the form of NBNCo!
2. Integrate any approach with NBNCo's wireless solution - which is essentially a mobile platform being "nobbled" to support only fixed wireless connections. This would allow the one set of infrastructure to support not just the customers of all three mobile operators, but also fixed broadband customers. More revenue!
3. Have the Government make an "investment in kind" in NBNCo in the form of an allocation from the remaining 700 MHz spectrum. This frequency band has the longest reach and would enable larger coverage cells, again helping to aggregate more activity (and revenue) in each cell.
4. Finally, the 2014 report on NBNCo's satellite solution highlighted significant under-scoping of demand. Expanding the wireless footprint is one of the options for alleviating demand on the satellites, and it also would also give more Australians a low-latency broadband service. Again, the savings on augmenting satellite capacity could help to fund the mobile infrastructure.

My "back of the envelope" calculations suggest that an investment of \$1 billion plus some spectrum could achieve relatively good coverage of some 200,000 kms of highways through remote Australia and a corridor either side within which many communities are located.

Let me emphasise these are personal thoughts as an engineer and philosopher- not those of the Regional Telecommunications Review Committee. However, I am convinced that unless and until there is a plan for making a substantive improvement to mobile coverage in regional Australia, the issue will simply fester and grow as a demand for a new form of universal service.

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