



# TelSoc

## Telecommunications & the Digital Economy

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### Reboot the NBN



*Submitted by Graham Shepherd on Wed, 19/11/2014 - 15:05*

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Rod Sims presentation to NBN Rebooted conference: "The ACCC agrees ... with the Vertigan conclusion that ... disaggregation of NBN Co ... would, for the first time in Australian experience, put in place a market structure that has the potential for effective infrastructure-based competition through leveraging existing assets. The present opportunity to shape the future market structure through control and decisions over the major infrastructure assets in this country has not previously existed."

Have a look at Rod Sims' speech to the NBN Rebooted conference in Sydney on 17 November 2014.

<http://acc.gov.au/speech/solving-the-multi-technology-puzzle-the-acc%E2%80%99s-perspective> <sup>[3]</sup>

It reflected some aspects of Graeme Samuel's excellent Charles Todd Oration<sup>[4]</sup> on 5 November. But Graeme Samuel grasped the significance of content lockin as the next phase of the big players seeking dominance.

The suggestion is that NBN Co should be sold off in bits based on technology. The proposition for competition based on infrastructure type might make sense initially but is it appropriate for the long term? HFC, FTTN, WiFi and LTE all effectively converge when (and/or if?) speed and capacity demand requires that the node be at the front fence? Thus the ultimate question is just a lead-in issue. So the access network and the core network merge.

But can the access network itself be duplicated in the street to any economic benefit? As households and businesses become more dependent upon reliable communications, redundancy in the access network will eventually become an essential requirement. But could this be better achieved by architecture rather than by having multiple suppliers? Is NBN Co architecting it's network for eventual FTTP? Is it architecting it for redundancy at some stage in the future?

There are many more questions.

Is a duopoly better than a monopoly? Will there be geographical islands of monopoly? Will the community and the taxpayer suffer similar stuff-ups and rip-offs as the privatisation of energy generation and distribution, ie, competition at the retail level proving to be an expensive and superficial farce?

We have plenty of opinion and ideology but the subject seems to me to require more thorough market, technical, economic and regulatory analysis than we have had. Too many studies seem to have the objective of conforming with current economic and regulatory dogma, not challenging them.

Market issues: projected growth in demand for two-way speed, capacity and responsiveness; emerging applications; impact of big-data on consumer and commercial markets.

Technical: projected evolution of individual technologies; relative capabilities; new technologies like Google's Project Loon.

Economic: alternatives for competition; driving investment; benefits/effects on consumers; risks of monopoly or oligarchy rents.

Regulation: competition blockers or bottle-necks like ducts of content lock-in; determination and capacity to regulate where regulation is necessary.

Feel free to comment here but the editors of TelSoc's journal theAJTDE <sup>[5]</sup> will also be pleased to hear from contributors. Contact the Editor <sup>[6]</sup>.

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## Topics:

NBN Policy

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## Comments

### Lost NBN Opportunity <sup>[8]</sup>

Robert Reid

- 23/12/2014 at 13:35

Let's keep this NBN discussion simple by making a few comparisons. Australia is operating beyond capacity on our roads so decision makers arrange for freeways to enable greater traffic capacity. While Rail transport has even greater efficiency is seen as costly to implement just like the original NBN it had to be developed. While road and rail have a national distribution to keep pace with society needs they at times need new branching infrastructure to reach customers unlike Australia's telecoms customer access network that is outdated in terms of future capacity and performance and is costly to maintain.

While there is diversity in the road and rail networks they are not actually duplicated or indeed exclusive allowing freedom of choice for the end user compared to what is now proposed for the NBN. No one would consider duplicating roads and having different roadway service providers as with the other utilities of power, gas and water! These other utilities relate to the NBN very well as every house or business is accessed by a single street - an address, just like individual telecom services i.e. the humble phone number, and interconnects ultimately to multi user infrastructure of choice - the core road network owned by the community for all to use.

The original and much considered fibre based NBN was conceived to provide a very high capacity single point of entry passive connection, offering a high upside, to unique street addresses just like the old copper network. The NBN offered the promise of very low maintenance compared to the copper network and indeed any of the proposed networks of FTTN, HFC etc. Compared with land owner a street address, the freedom of choice is based on the land owner's choice of where to reside not the actual roadway, water or power infrastructure. Indeed at the extreme the land owner could opt for no services at all with bush track access! Clearly for the future modern society telecommunications and its performance has become a much needed utility and needs to be delivered efficiently at the lowest possible cost over time bearing in mind future needs.

While the original fibre based NBN appeared to be a higher cost with a slower rollout, and an issue not well understood by the community at large, this was due to it being an entirely a new network that took account of likely the future needs of all Australian's, as was considered in the mid 1950's with the now outdated copper network that in relative terms cost much more to a considerably smaller community of Australian's. Imagine where Australia would be now if it wasn't for this level of forethought and investment. With this in mind, quality NBN fibre based infrastructure, while initially more costly, ultimately offers a lower cost centrally managed operational technology with an almost indefinite data capacity upside compared to any other medium. The NBN as originally proposed was competitive as it provided freedom of service and service provider as by way of comparison is provided by our road, water, power, gas infrastructure. Any alternate approach significantly increases the long term operational costs [OPX] that is as yet un-costed and CAPX due to short infrastructure life due to the need to service nodes and copper tails with almost no upside capacity as it is finite compared to the original NBN FTTH.

The outcome of what is now set to become the mixed technology and service provider delivered NBN will incorporate unnecessary complications to the community under the guise of competition due to the mix of network operators who under the present deregulated framework while the user pays all the hidden costs that that appear not accounted for by the decision makers. Of question in respect to the proposed new NBN - do Australians really want or need competition like they have with the power industry that few if any in the community understand? Indeed any comparison with the power retail network providers appears to indicate higher cost while supposed competition is keeping prices low!

As the power and water distribution networks are not duplicated as is intended in the NBN. This begs the question for all Australians ? why is:

- the national communications network being nobbled to limit it to short term technology that will

become obsolete with inbuilt un-costed OPX?

- a network requiring higher maintenance and power usage than that originally intended being proposed?
- is competition being argued for the telecom customer access and distribution network when just like cars on roads [water, power etc.] the end user only requires choice in respect to their end product not how it is delivered?

Australia appears to have been hijacked by a lack of political vision clouded by supposed open market forces suggestive of open competition benefits without an appreciation of the economics of scale such as all other utilities of necessity use. To draw a comparison, it would be seen as ridiculous to build separate roadway infrastructure layered above or below each present road to allow freedom of choice of roadway service provider in order to drive to a destination. Imagine the complications of a service provider to manage this costly competition model and yet this is what the proposed new NBN. This approach, like telecoms, unnecessarily implements a system of toll operators to deliver their services on their network as well as those of their competitors. How will USO manage this and if so how and who is to arbitrate on the issues the TIO? Why make a simple network requirement so complex? surely Australian citizens don't want or need this in the name of competition. This begs the question - how is the service level to be managed on these new NBN network islands and indeed between these network islands - by the end customer??? This is farcical as it provides services that are ultimately higher in cost and have a shorter technological shelf life while competition is actually compromised not enhanced? can Australia afford this?

To summarise, just like our national road and rail networks and the water, power and gas delivery infrastructure, the lowest cost ultimately can only be delivered by a well thought out and implemented service delivery network - not several separately managed networks as is proposed for the new NBN. Why is it that the NBN is seen as so different to other centrally managed infrastructure? Everyone knows that Australia will ultimately require FTTH as is delivered now to big business and even the telecom service providers for their core networks, so why are the Australia's decision makers deliberately taking the more costly route? What is proposed appears short term, ultimately more costly and will delay high capacity broad band to domestic, small business Australians and all forms of end needs such as medical and road management and is seen as having nothing to do with real service driven competition. Let's see some real analysis and justification rather than political idealism under the guise of competition.

Good observations, Bob. <sup>[9]</sup>

Graham Shepherd

- 25/03/2017 at 22:17

Good observations, Bob.

In the latest Journal <http://telsoc.org/ajtde/2014-12-v2-n4> <sup>[10]</sup>, I try and take an overall view of the latest policy and Gary McLaren compares the utility model you describe with the competitive model proposed by Vertigan. The government seems to be hovering between a utility approach and a competitive approach. In the Business Spectator last week (<http://www.businessspectator.com.au/article/2014/12/12/technology/year-nbn-stood-still> <sup>[11]</sup>) Mark Gregory noted that if the government delays selling off the HFC until NBN Co upgrades it then a well-cashed-up player like Telstra could walk right back in to a dominant position in broadband access.

I wish that rational argument would prevail but despite the mantra of rational economics I doubt that it raises even a lazy eyebrow. Daniel Kahneman in "Thinking fast and slow<sup>[12]</sup>" demonstrated that markets and consumers are not rational (unless they really concentrate). I suspect that governments and politicians are the least rational of all and wide open to powerful forces, including half-cocked ideologies, political expediences and modern, more sophisticated versions of the good old brown paper bag (Askins, I think they were called).

I remember Richard Alston laughing his head off at naive young me when I suggested that he simply had to explain to the Australian people the "good reasons" for privatising Telecom Australia and he would get his legislation through. Of course, it was the mountainous tax-payerfunded political pay-offs to Senator Harradine that actually ensured the result he wanted.

There will be a wide readership of the Journal articles. You might like to add your comments there.

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