

The Chairman  
Dr Michael Vertigan AC  
Review of Regulatory Arrangements for the National Broadband Network

## **SUBMISSION BY GENX SOLUTIONS**

Please excuse the late submission. As a key member of GenX Solutions I have been consulting overseas for the last year and have only recently returned. While I have contributed to Australian developments this last year I wanted to sit and talk to people “on the ground” to clarify my impression of developments before further commenting.

I have also not responded to questions posed by the committee as I am increasingly worried that the debate in Australia is still taking place from a dated paradigm and possibly the right questions are not being asked.

### **Background and Conflict of interest**

Wearing different hats I have in the past made many submissions to government, being instrumental in collating Paul Budde’s<sup>1</sup> contribution to shaping the then Labour Broadband policy, having worked on the FttH Council Asia Pacific submissions<sup>2</sup>, represented the FttH Council at the Greenfields reference group in Canberra, and have jointly represented the Greenfields Fibre Operators of Australia group at the Rob Oakeshott MP Joint Committee hearings<sup>3</sup>. I have practised within the FttH space for the last 10 years and completed a BSc engineering theses on developing a fibre link from ground-up, back in the early Fibre days.

I very specifically see some of the ideas presented in this submission as business opportunities and declare that should aspects of the regulatory regime follow the approach suggested these business opportunities will be pursued.

### **Context**

Given my time overseas and extensive discussion with international decision makers I will be providing input from that perspective. Many of these discussions have taken place with regulatory authorities (jurisdictions ranging from Poland through Africa and South America) and with respected academics from globally known Academic Telecommunications Policy departments.

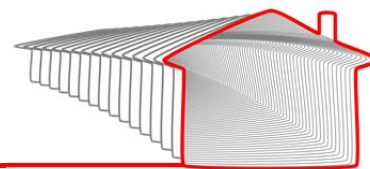
Internationally there is a (morbid) fascination with Australia’s approach. The overwhelming response from my discussions, even from Socialist leaning regulatory regimes, can be paraphrased as “the days of large inefficient government organisations in the telecommunications market were marked by grossly poor service, inefficiencies, corruption, lack of innovation and ultimately very high costs to both the end-user and the taxpayer, why is Australia following this unsustainable model again ?”

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<sup>1</sup> An Industry Vision for the National Broadband Network Plan – March 2008

<sup>2</sup> Numerous and in response to discussion papers

<sup>3</sup> Joint Committee on the National Broadband Network, June 2011 Canberra



## My Three overwhelming first impressions

On returning and completing my discussions with numerous knowledgeable players in the FttH industry three overwhelming impressions stand out. These are:

### Regulatory “stasis”

Australia is locked in a particularly nasty Regulatory “stasis” with realistic and fair appraisal suspended. It can be argued this is leading to a negative outcome for both the country as a whole and for the end users who want to take up broadband services. Specifics are:

1. Infrastructure based government subsidised monopolies have been proven time and again to create gross inefficiencies, no matter how well intended. This is already evident in the very high NBN Co costs to connect a customer, charitably estimated at AU\$3100, against private sector deployments of AU\$1800<sup>4</sup>. From personal experience overseas deployments are around AU\$700 per end-user (where this includes the customer electronics). From a regulation perspective Government should be looking at identifying geographic areas actually requiring assistance, and then release funds competitively.
2. A cross subsidy approach entrenches distortions into the economy. As a high level regulatory issue separate accounting needs to be practised for what are essentially separate NBN Co business units (of which some are very worthwhile). Separate accounting also needs to be practised for the Social Service Aspect and appropriate funding prioritised for all of industry and not just NBN Co;
3. Competitive Adherence to Neutrality issues need to be legislated for NBN Co. Despite the dissenting opinion of the Federal member, Paul Fletcher to the Telecommunications Legislation Amendment (Fibre deployment) Bill 2011<sup>5</sup> and despite the Productivity Commission’s<sup>6</sup> adverse ex-Ante finding dependent on the actual RoI with it now being very clear that the bogus claimed 7.04% RoI of the time is more likely to be negative<sup>7</sup> the new government has not immediately:
  - a. *as shareholder*, instructed NBN Co to adhere to Competitive Neutrality;
  - b. *as Government* stopped utilising taxpayers taxes to fund the breach by NBN Co competing against those self-same taxpayers;
4. Ministers Fiduciary Dilemma: Related to the above, the office for the Minister for Communications should not be put in the position of having difficult fiduciary responsibilities to NBN Co, arguably contrary to Ministerial duties to the citizens and businesses of Australia.

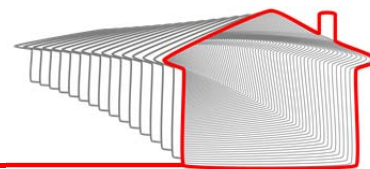
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<sup>4</sup> The Australian, Push to cut NBN Co role, 21 March 2014

<sup>5</sup> An Advisory Report on the Telecommunications Legislation Amendment (Fibre Deployment) Bill 2011. JCNBN, June 2011 Canberra

<sup>6</sup> Australian Government Productivity Commission, NBN Co, Australian Government Competitive Neutrality Complaints Office Investigation No. 14, refer to ex-ante findings of breach re RoI issues;

<sup>7</sup> Numerous sources including latter half of the Coalition’s Plan for Fast Broadband and an Affordable NBN, April 2013



5. Superseded technology: I have noted raging petty regulatory argument over entrenched technical issues, such as pit & pipe, layer 2 bit-stream etc. Technology has now substantially moved on. From a regulatory perspective we should not be trying to fit an NBN into superseded limiting issues. At a fundamental level there are now alternative ways of doing things.

## **Square peg in round hole**

Other than being conceived around and trying to adhere to superseded technology with associated dated regulatory paradigm, one cannot escape the ongoing impression that NBN Co is not providing what the country needs. It appears as if we are currently involved in a “rounding of the peg”. This stems from the original well-intentioned but very poorly thought out and even more poorly executed Statement of Expectations<sup>8</sup> provided to NBN Co. (An indication of the shambles is that this document was released undated!).

## **Wrong people**

Without wanting to be specific as I do know and respect many of the people in NBN Co, the general consensus is that for the type of work and for the task of NBN Co they are just the wrong people for the job. This has impacted every aspect of NBN Co. For example it was very obvious looking at early tenders, and knowing that the people involved had very little understanding or experience in FttH (underlined by Quigley’s statement that he had not employed FttH people as he was building a telco)<sup>9</sup> that NBN Co appointees had been forced to seek assistance from vendors, who had possibly innocently biased tenders to their paradigm.

The relevance of this reported impression on the Regulatory environment will be apparent later.

## **Specific Regulatory Comments**

Other than the general standout impressions as outlined above, specific regulatory comments are offered below.

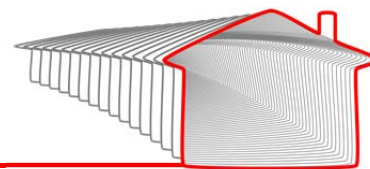
### **Lack of Open Network**

While the advisability of the “Open Network” model is arguable (Google has built networks beneficial to end users that have not followed this model) we are generally in favour of open networks. Even Internationally *the Australian definition however is more limiting than open,*

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<sup>8</sup> Undated Statement of Expectations addressed to Mr. Harrison Young by Penny Wong and Stephen Conroy.

<sup>9</sup> Twisted Wire, Phil Dobbie interview of Quigley



limiting everything but bit stream layer 2 services<sup>10</sup>, and even then limiting this to NBN Co provisioned customer premises equipment. Ideally an open network should make allowance for:

- Layer 1 (sharing of and access to fibre) as opposed to forcing industry to utilise the carriage services being provided by and on equipment selected by NBN Co. The layer 2 restriction forces industry to fit within NBN Co's questionable Layer 1 passive architecture. From a regulatory perspective operators not happy with the NBN Co dictated solution should be provided with direct access to the publically funded passive infrastructure for their own innovative solutions;
- Customer premises Component: Even if NBN Co is allowed to maintain a monopoly on use of the publically funded layer 1 fibre they should not be allowed to dictate the equipment required in the premises or the home connection architecture, and certainly not be responsible for the setting up or any other arrangements for Layer 3 (essentially the services over the top). This is reminiscent of the "hey day's" of telco's supplying an expensive unsuitable modem. The home connection area was recognised by Simon Hacket, as being particularly inefficient<sup>11</sup>. Ideally this cost-driving component should be flexible allowing "for best of breed". Interoperable GPON equipment is already available on the market and NBN Co need to be compelled to enable the connection of other certified GPON equipment. As a footnote: Unfortunately PBN (an iconic global Australian manufacturer Quigley was not aware of)<sup>12</sup> has now moved most of its operations due to NBN Co just not offering Australian companies support<sup>13</sup>. These were much needed jobs, and more tellingly Intellectual capital that have now moved overseas.
- Local Fibre loop: For deployment speed and cost effectiveness reasons the Honourable Malcolm Turnbull MP has indicated a preference for FttN<sup>14</sup>. Of possible more importance from a regulatory perspective is that the solution provides a clear demarcation point. It is strongly suggested that this possible demarcation point is legislatively entrenched as the limit of NBN Co's responsibility with both local community groups or PPPs allowed to build out the local fibre. Interconnection would be at the "FttN" demarcation point. Practically the funds earmarked to remediate Telstra copper/build cabinets can rather be taken as a contribution to the costs. Other advantages are:
  - a substantial reduction in size of the cabinets needed to house a fibre patching field (of which there are also many remote controlled such devices)
  - Residents of an area have the option of opting for FttH;
  - Lower operating costs (saved power, copper maintenance costs estimated at around \$30/ end-user annually)<sup>15</sup>

<sup>10</sup> Numerous NBN Co technical documents originating from undated Statement of Expectations addressed to Mr. Harrison Young by Penny Wong and Stephen Conroy, pg. 2 & 4.

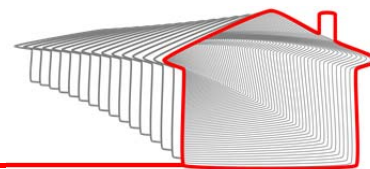
<sup>11</sup> Communications Day Wholesale and Datacentre conference in Sydney, July 17, 2013.

<sup>12</sup> E-mail circulated by Mr Quigley

<sup>13</sup> Network & equipment Services tender, circa December 2009.

<sup>14</sup> Press conferences and Coalition's Plan for Fast Broadband and an Affordable NBN, April 2013

<sup>15</sup> Coalition's Plan for Fast Broadband and an Affordable NBN, April 2013, pg. 14



- Possibly the most desirable side effect of this approach is that once overseen properly there is the quick creation of many small business jobs to build and maintain the local fibre loop.

## Standards Setting

The FttH Council repeatedly warned DBCDE that the following were unnecessarily monopolistic:

- allowing NBN Co to set standards, as envisaged in the various drafts of Bills and the Wong/ Conroy Statement of Expectation<sup>16</sup> and
- technically narrow legislation<sup>17</sup> eliminating many other equally viable FttH technologies .

The concerns are now even more relevant given what appear to be non-FttH experienced staff in NBN Co and industries reported frustration<sup>18</sup> at their inability to get NBN Co to consider other far more cost effective build methods. *From a regulation perspective it is strongly contended that NBN Co be required to follow industry standards and such standards be technology neutral* – i.e. high level outcome based, for example “allow for quick later deployment in Greenfields” as opposed to stating how this should be done.

## Telstra

The elephant in the room is Telstra. Telstra have been so advantaged from the NBN rollout that the big concern is that in winding back NBN Co Telstra will be even more capable of again (inadvertently) abusing its position. Safeguards need to be implemented. Key would be to ensure Telstra is obliged to treat all players in the industry equally.

It is hoped in our own small way we have contributed to resolving the current chaotic situation the country finds itself in. In the interests of brevity further explanation has been cut from this submission. Should the Panel require elaboration or other background material it would be our pleasure to further assist.

Yours Faithfully

DMR Yelland

Director

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24 March 2014

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<sup>16</sup> Undated Statement of Expectations addressed to Mr. Harrison Young by Penny Wong and Stephen Conroy

<sup>17</sup> Numerous submissions, culminating in e-mail by D Yelland of FTTH Technology and Architecture Group 19 March 2010.

<sup>18</sup> Private conversations.