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**Broadband policy is on track – or why we need infrastructure for competition, not competition for infrastructure.**

Communications policy in Australia has done better than your editorial suggested (22<sup>nd</sup> “Chance to fix a bad policy”). Australia has enjoyed about as much competition as the technology of the day allowed – a lot in the case of wireless, and some in the case of wired networks. Both wired and wireless competition had a lot of government help in the 1990s and Labor’s National Broadband Network (NBN) broadband policy looks set to deliver as much competition as this generation of technology allows – a lot in the case of higher level services and not much at the infrastructure layer.

Infrastructure competition has worked in some parts of the world – particularly where pay TV and telephony grew up independently. But we missed that boat decades ago. Telstra might have been assembled differently when first created, but that is just interesting speculation for historians.

Today we have new models that increasingly separate the services that are delivered over networks from the underlying “bitstream” services. IP and other protocols allow a network operated by one party (e.g. Telstra) to deliver an ISP service provided by a second (e.g. Netspace) which in turn allows an end user to call on Skype, download music from iTunes in the USA or watch an episode of *Doctor Who* from the UK. Neither the ISP nor Telstra benefits from these. The same network will also allow some companies to exploit capabilities built into the network at a higher cost – for example pay TV.

Competition is unstoppable at the highest layers, effective at intermediate layers with open access regimes and mostly nonexistent at the infrastructure layer. Call it a natural monopoly for there is only a business case for one fixed network and even that depends on:

- 1) leveraging the existing copper infrastructure of Telstra;
- 2) capturing (Telstra’s) operational savings and
- 3) very careful orchestration of changes to millions of customers’ existing services.

There is no show without Punch, and a high probability of much pantomime.

In seeking tenders for the NBN, the government has provided an opportunity for the proponents of network based competition to put their case, or knock themselves out without a single blow from Punch. But the offers, if any, are likely to look like patchwork. Indeed, there is a real possibility of only one serious offer. It seems nearly everyone is waking up to the realities.

Encouraging competition is one of the highest priorities of government; as is providing the facilities that the community needs but which are not provided by normal competitive activity. The NBN is a case of both.

Do we need an NBN? About half of Australia's broadband customers enjoyed download speeds in excess of 1.5Mbps in the December quarter compared with only a third in the March quarter 2005. A quarter of customers now enjoy download speeds over 8Mbps and this proportion will continue to grow subject to the current technical limit of 24Mbps.

There is certainly some capacity of existing metropolitan networks to deliver faster broadband. But, expectations will change and other countries are moving now to push fibre into the customer access network to increase speeds. The NBN will push fibre close enough to customers to enjoy more than double current technological limits unconstrained by distance from the exchange and provide much higher upload speeds too.

The public business case for the NBN is that everybody benefits as broadband changes the way we do business. But, without government support, the private business case for the NBN does not stack-up for three reasons.

First, a national network is not viable for private operators. Both the Telstra and G9 (FANOC) proposals were for metro areas only. Country areas are uneconomic. This market failure should be corrected by inducing private operators to serve country areas with capital grants; as the previous government did. The government should not be seeking a return on its \$4.7 billion promised to support the NBN. The public dividend comes from the economic growth and productivity flowing from the use of the NBN.

Second, there is an externalities market failure because many of the national benefits are not recognised in the private business case. Only the revenues and costs of the prospective builder appear in the private business case. Government can help align public and private benefits through subsidies as mentioned earlier or through regulation.

Third, there is regulatory failure because the current access pricing regime allows too much of the private benefits available to an NBN builder to be taken by other service providers using the NBN. In addition, the government expects uniform retail pricing across the NBN which implies that cross-subsidies from metro areas to country areas are expected to help pay for the NBN. If so, regulation needs to discourage cream-skimming of metro areas that would undermine this intention.

Which private business case should the government support? The obvious candidate is Telstra. Many in the industry wonder if there will be a second serious bid. But, this should be no surprise. When the opportunity to compete with Telstra was issued in 1991, many bids were expected. But, despite the most favourable access regime ever created and access prices mandated to provide bid certainty, only Optus made an offer. That may have been surprising but to get a credible alternative offer to build the NBN would be a miracle. Too many practical aspects of the construction and migration are with Telstra as

are key elements of the business case, for example operational savings driven by the changed organisations and processes implemented around the new network.

Does it matter if Telstra operates the NBN? Not any more. Early networks were indistinguishable from the application they supported – the early telephone networks could do nothing else and you couldn't conceive of making a telephone call without a telephone network. But broadband and the IP protocol have changed all that. Anything that uses the network infrastructure ("applications" like telephony, email etc) is no longer as tied to the network infrastructure as was the case - network operators don't share in Google's, Apple's iTunes or Skype's profits. Also, the kinds of broadband network being contemplated can support many concurrent services – you simply don't want a second network as a user and investors can't make a business case for duplicated infrastructure. We will all be better off if we can quickly learn to live with the inevitable long term model for fixed networks.

The NBN together with the progressive migration of all communications traffic to IP will change the nature of competition. Currently, service providers are interested only in the few hundred exchanges that serve metro areas and not the 5,000 exchanges that serve all Australians. With the NBN, there will be over 20,000 street cabinets (nodes) providing copper access to customers. The current unbundled copper based access services will not be able to serve these customers because they will not be able to deliver services across the fibre link between the node and the exchange. It is clear that unbundled sub-loop (node to the customer) access is not going to be economic for service providers. So, bitstream access will be the access service of the future.

Currently, service competition is based around control of customer access and carriage service. But that is changing. Competition will shift to developing solutions for customers that are carried over networks rather than supplying carriage.

Applying government money to shoring up uneconomic infrastructure competition would be a waste of money. The government's broadband policy is right - Australia gets a broadband network and there is real competition for the services delivered over a modern broadband network. As Punch would say "That's the way to do it!"

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