		Australian Telecommunications User Group Regional Conference
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Introduction

On 7 April, the Australian government made two announcements that are likely to have a major impact on competition in the telecommunications industry in Australia.

The first, of course, is that the government will build a national fibre-to-the-premise broadband network. The government has committed to extending this network to 90 per cent of premises across Australia, reaching regional centres with around 1000 people.

The remaining 10 per cent of the population living in the more remote parts of Australia will have access to wireless and satellite services capable of delivering broadband speeds of up to 12 megabits per second.

Providing FTTH connections to premises in more remote areas would exponentially raise the overall cost of the proposed NBN

Wireless and satellite technologies are a much more cost effective solution in less densely populated areas. Therefore, adopting these technologies may reduce the current strong arguments in favour of de-averaged pricing.

The new wireless and satellite services will constitute a substantial improvement both in terms of the availability and the speed of broadband services currently on offer in regional Australia.

The government has committed to fast-track the NBN roll out in Tasmania. Potentially, it could begin in a matter of months. Next year, construction will extend to mainland Australia. From July 2010, every greenfield development in the country will, by law, have fibre connections installed in place of copper.

This announcement potentially ushers in the most momentous policy initiative in the Australian telecommunications sector, both in metropolitan and regional Australia, since competition began in the industry more than a decade ago.

Not surprising for an infrastructure project of this scale – reaching right across Australia - it raises a plethora of issues about industry structure, competition and regulation.

The second announcement is that government is considering a number of wide ranging reforms to the structure of Telstra and the existing competition regime, in order to improve the conditions for robust competition in the transition period to a fully operational NBN.

I am going to talk about both announcements today and the ramifications of each for the industry and telecommunications regulation.

The national broadband network

The NBN will spark a new wave of infrastructure investment, technological change and product innovation in the sector.

It will usher in 21st century communications technology, which will take Australians beyond merely sending emails and surfing the web.

For example, as the Government has noted, the NBN will support much richer audio-visual content – such as high quality television and movies. The days when we refer to television being provided by a few free to air television networks or one or two pay television networks will become distant memories of last decade's technology, as we move to audio visual content of almost infinite choice being streamed over fibre optic cables.

Entertainment is obviously high in the public mind as a benefit, but the benefits go so much wider – it's not just about movies.

NBN could offer serious advantages in a range of critical areas

- High-speed broadband could support smart grids to improve energy efficiency and support carbon emission reductions.

- High quality video conferencing could make this means of communication an accessible alternative to travel.

- It has the potential to improve health and aged care with telemedicine and by managing patients in their homes rather than hospital beds offering a better quality of life for the unwell and an aging population.

- In education NBN could support virtual classrooms, video and audio streaming and high definition video conferencing - helping students and teachers to work together.

- And there is also the potential to secure our long-term investments with smart infrastructure that helps owners to manage and maintain their assets.

As the Government has said, the NBN project will be the biggest infrastructure rollout in Australia since the Snowy Mountains scheme.

By proportion of population, the scale of the FTTP rollout is unprecedented internationally.

Covering 90 per cent of households, the Australian FTTP network will easily eclipse what is currently the world's most broadly available FTTP network – the network in South Korea, which has a penetration rate of 45 per cent. The next three largest FTTP networks, in terms of penetration, are in Hong Kong and Japan, both with close to 30 per cent and Taiwan with 16 per cent.

Measured by scale only, the announcement is clearly significant for Australians. However, perhaps of even greater significance is the opportunity provided by the announcement to address long standing structural issues in the industry.

As Minister Conroy has stated, the NBN operator will be structurally separated, will provide wholesale services only and will offer them on an open

access basis. He has also confirmed that no retail company will be able to control the network in its own interests.

This is a far cry from the current market structure, where the incumbent Telstra is vertically and horizontally integrated into telecommunications and the pay TV networks and related content markets.

The dominance granted to the incumbent by these decisions is clearly apparent. For example, in the fixed line voice sector, Telstra controlled 72 per cent of all fixed line retail voice subscriptions in 2007/08. Meanwhile, its nearest rival Optus held an 11 per cent share. In broadband, Telstra had achieved a 58 per cent share in retail subscriptions by 2007/08, up from 47 per cent in 2005-06.

The NBN project raises the opportunity to undo the mistakes made by previous governments that decided to leave Telstra in control of both the copper network and its retail operations. The ACCC considers these decisions to have been fundamental errors that have had very serious implications for the development of competition in the telecommunications industry.

Telstra has been permitted to compete in the same markets in which it provides access services over its fixed line copper network to other companies – granting it both the incentive and the ability to discriminate against access seekers in an anti-competitive way.

The vertical integration of Telstra has been one of the most substantial regulatory issues facing the Australian telecommunications industry. It has significantly constrained competition.

Meanwhile, Telstra's ownership of one of the two largest cable networks in the country and interest in a key pay TV content provider has also blocked the emergence of effective inter-modal competition.

Taken together, these arrangements make Telstra one of the most vertically and horizontally integrated telecommunications service providers in the world.

By imposing accounting and operational separation regimes in recent years, the government has attempted to ensure access seekers can purchase essential inputs on equivalent terms and conditions as those enjoyed by Telstra's own retail division. However, these measures have been ineffective in constraining Telstra's incentives and ability to discriminate against access seekers.

The government's commitment to ensure the new NBN company is structurally separated guarantees a definitive break from an industry structure dominated by the vertical integration of the incumbent.

Structural separation will mean the NBN operator has a clear incentive to treat access seekers on an equivalent basis. Therefore, the government's announcement provides an opportunity to deal head-on with the difficulties arising from the vertical integration of the current incumbent.

As the government moves to implement its announcement, now is the time to get the ground rules right on structure to support robust competition in the sector in the coming decades.

Network design and service description

At this juncture, I would like to make a couple of points to in relation to the design of the FTTP network and the type of access services it can support.

Before the government announced the new NBN, there was serious debate about the possibility of rolling out a fibre-to-the-node network (or FTTN) in this country.

FTTN is fundamentally a different type of network architecture to FTTP.

Under Telstra's current copper network, fibre is generally terminated at the local exchange, with copper lines running from the local exchange out to houses and businesses. The broadband speeds available depend heavily on how long the copper line is – in general terms, the longer the line, the slower the broadband connection.

Under a FTTN model, the fibre is extended further into the network - to nodes, or boxes of electronics, located on street corners. Extending fibre into the network increases the maximum available broadband speeds. However, houses and businesses are still connected to the fibre network at the nodes by copper lines, albeit of shorter length. It is this continued use of copper that places limitations on the ultimate broadband speeds available under a FTTN network.

FTTP architecture is quite different. FTTP involves extending fibre right out to individual homes and businesses. This architecture radically increases theoretical broadband speeds. It also involves a substantially different network design and build. The need to install new fibre connections to all premises, replacing the old copper line, means that it costs a lot more to roll out.

Despite what some parties have said, FTTN is not an efficient stepping stone to a FTTP network. Some experts have suggested that only around one third of the cost of upgrading Telstra's network to FTTN would ultimately be used in rolling out a FTTP network. Around two thirds of that upgrade cost would ultimately never be incorporated into rolling out a FTTP network – it would be wasted obsolete expenditure.

Choices regarding the design of the underlying network could also have implications for the degree of competition that can be supported, both at the network level and in downstream markets.

For example, earlier this year France's telecommunications regulator ARCEP identified competition concerns arising from an incompatibility between the two main network designs options being deployed to provide FTTP services in France.

One of these design options (referred to as point-to-point) directly connects each dwelling to a single fibre connection. The other design uses point-to-multipoint technology (also known as PON) to share a single fibre connection between multiple dwellings.

The incompatibility of these network design options means that end users cannot readily choose between providers offering services over the two different network designs, reducing competition between suppliers.

ARCEP has proposed - in the context of densely populated areas - to allow all service providers the opportunity to access every networked dwelling – regardless of their connection technology – at their own expense.

Similar issues may need to be considered in Australia, with the rollout of FTTP network in Tasmania commencing shortly and the mandating of FTTP technology in all greenfields developments from July next year.

Finally, of critical importance to the competition regulator and, of course, to industry, will be the way in which the services that the NBN operator will be required to offer to the market will be defined.

In particular, it is important that the NBN company offers an access service that is sufficiently technologically neutral and flexible to support a wide range of existing and future applications and services.

With the fast track of the roll out of the network in Tasmanian and with FTTP to be mandated in greenfields from July next year, the ACCC recognises that a number of technical decisions will need to be made about this access service in a relatively short time frame.

Many of these issues are being dealt with by companies, governments and regulators in overseas jurisdictions and we in Australia would do well to pay close attention to the lessons learned.

The ACCC has had some opportunity to consider the types of issues that might arise in relation to the optimal description of a low-layer access service on a fibre network.

The ACCC set out what it regarded as the minimum requirements for such a service in its 2007 decision on a proposed fibre-to-the-node network put forward by a group of competitor carriers and ultimately not pursued.

In this decision, the ACCC noted it was important that the access service be defined at as low a layer within the network as feasible, so as to give the access seeker as much control as possible over its own customer traffic.

Defining the access service as close as possible to the basic physical infrastructure should maximise the ability of access seekers to control their own costs and supply chain, differentiate service offerings, innovate and improve service quality.

This depth of access would give access seekers the flexibility they need to have the greatest possible control over their own business and products and would be likely to promote competition, innovation and investment in new services, to the benefit of end-users.

I note that Ofcom, the UK communications regulator, has similarly emphasised the importance of high levels of flexibility and configurability, allowing downstream operators as much control as possible.

In the ACCC's decision, it set out a number of elements that it considered to be essential to defining such a service. Despite some of the differences highlighted above, we consider that several of these elements are likely to be important in the context of a FTTP network.

For example, it will be important that access seekers have access to a service in which speeds are not throttled in any way and upload and download speeds are as symmetric as possible.

The functionality of the service should be such that access seekers can use it to provide as wide a range of services as possible, in both wholesale and retail markets.

For example, access seekers will likely want to provide the services currently offered using Telstra's fixed-line copper network, including voice and VoIP services, web-browsing and streamed audio-visual content.

With the faster speeds possible over a FTTP network, the range and type of services may increase dramatically. To maximise the benefits of rolling out an FTTP network, it is critical that the access service provides the functionality to support a wide range of emerging services.

The location of points of interconnection may also be important to allow access seekers to use alternative backhaul networks in which they may have already undertaken significant investment.

The government is also investing $250 million to improve backhaul competition in 'black spots' in regional centres, as I'm sure will have been noted by this audience.

In the consultation paper on the blackspots initiative, the Government noted that in regional areas without competing backhaul networks, there is likely to be little pressure on the single backhaul supplier to offer low prices and higher quality services. This may hamper attempts by internet providers to make new services available at competitive prices to consumers in regional areas.

By investing in backhaul in regional areas, the Government expects to achieve better service outcomes and reduced costs for regional consumers in the short to medium term. This should be especially the case for those regions within Band 3 areas.

Seamless interconnection between these backhaul networks and other network elements should be the goal. To enable this, interconnection protocols should be based on well-accepted standards for broadband, voice and video. These protocols should be sufficiently well-described so to allow access seekers to design and build their own interconnection facilities.

Protocols regarding access to physical buildings for the purposes of interconnection may also need to be established.

Protocols may also be required on how data packets are to be prioritised and handled and how congestion in shared network elements would be dealt with. It may be desirable for these protocols to specify that access seekers should receive equivalent treatment in relation to quality of service parameters such as jitter, delay and packet loss.

Ensuring transparent and effective operations support systems, including visibility of provisioning, fault reporting, rectification and service assurance may also be important.

Reviewing existing regulation

Having largely focussed on the regulatory challenges and opportunities posed by the announcement of the FTTP NBN, I would just like to say a few words about some of the reform proposals set out in the Australian government's regulatory reform discussion paper.

Before I begin, let me briefly set out some of the principles of effective regulation.

A regulated access regime is likely to be required to promote competition where infrastructure has strong bottleneck characteristics and other businesses require access to that infrastructure in order to compete.

The appropriate form of regulation will depend on the extent to which the access provider has market power and the degree to which it is vertically integrated into downstream markets.

Where an access provider has market power as well as a strong incentive to deny access to competitors, an access regime based on the negotiate/arbitrate model may have difficulties delivering timely access on reasonable terms and conditions for the industry.

A few statistics on the operation of the current regime would appear to demonstrate this. Since 1997, the ACCC has been notified of a total of 157 telecommunications access disputes. This is in stark contrast to the three access disputes that have been notified to the ACCC across all other sectors of the economy.

Over the past 24 months, judicial review has also been sought in respect of almost all final arbitration determinations made by the ACCC. As of 6 May, there were 15 final determinations before the Federal Court – all relating to the unconditioned local loop service and the line sharing service.

The ability of access providers to propose access terms and conditions in undertaking has likewise failed to expedite or provide greater certainty under the regime.

In total, 34 access undertakings have been submitted under Part XIC for 10 different telecommunications services. The ACCC found that only five of these were in the long term interest of end users, and therefore acceptable, after applying the criteria in the TPA.

Four of the ACCC's decisions to reject undertaking have been appealed unsuccessfully to the Australian Competition Tribunal.

Most recently, the ACCC rejected Telstra's undertaking to set a $30 monthly charge for the Unconditioned Local Loop Service in metropolitan areas. The ACCC found that a $30 monthly charge would result in Telstra recovering more than is necessary to promote its legitimate business interest and that this proposed charge was significantly above estimates derived from benchmarking against comparator countries.

Telstra has now appealed the ACCC's decision to the Australian Competition Tribunal.

The government's discussion paper flags a number of options to change the industry structure and reform the regulatory regime in order to improve competition in the transition period before the NBN is operational.

The options include proposals to alter Telstra's structure by requiring functional separation to improve its incentive to treat access seekers and its own downstream business units on equivalent terms.

Functional separation is a broad term used to define various models which segregate particular assets and other inputs into a separate division but without requiring separate legal ownership of that division.

The key feature of functional separation models is that the network provider operates at arms length from the downstream service providers. This usually requires operations and management separation and carries the potential for decisions to be made independently by the separated division and the rest of the company.

When successfully implemented, functional separation may go some way to addressing concerns regarding the promotion of equivalence in the treatment of access seekers. However, vertical integration of any form into downstream markets, even when subject to functional separation, will not necessarily ensure equivalence.

The discussion paper also sets out possible reforms of the telecommunications competition regime, including revising the way access terms and conditions are determined.

In particular, options include replacing the current negotiate-arbitrate model with powers for the ACCC to set access terms and conditions upfront without waiting for an arbitration or the submission of an access undertaking.

I note that a similar power to determine access terms and conditions up front has already been granted to telecommunications regulators in Singapore and the UK.

These and other potential reforms could address some of the gaming that has occurred in recent years. It could also create greater regulatory certainty and reduce some of the burden on industry, particularly in relation to individual arbitration processes. The ACCC is giving further consideration to these options as part of the review.

The government's discussion paper raises a number of concerns regarding Telstra's ownership of the ubiquitous fixed line copper network and the largest HFC network in Australia, along with a 50 per cent stake in Australia's principle pay TV provider, Foxtel.

The ACCC notes that access to content is becoming increasingly important to telecommunications providers.

This trend is being driven by advances in technology to allow telecommunications networks to deliver content formally provided only by the traditional media companies in print, radio and television.

The increasingly blurred distinction between the telecommunications and media industries is one example of the 'convergence' phenomenon.

The process of convergence has been buoyed by ongoing improvements in broadband speeds and the take-up of services by consumers. By allowing even greater broadband speeds, the new NBN is likely to promote further convergence.

Mobile network operators and fixed internet service providers have become increasingly active in purchasing content, such as the rights to popular sporting competitions and new release movies. In many instances, content rights are purchased on an exclusive basis for their mobile and broadband platforms.

I should note, of course, that exclusive agreements for the supply of content are not necessarily anti-competitive. Free-to-air broadcasters, for example, have traditionally competed for exclusive content rights as a means of differentiation, without raising competition concerns.

However, concerns could arise if a telecommunications network operator is able to acquire sufficient compelling content on an exclusive basis, such that it limits alternative network owners' ability to offer attractive packages to consumers.

Therefore, control of both the telecommunications pipes and a large volume of compelling content that is distributed over those pipes, could give one company significant market power in both the telecommunications and content sectors.

The ACCC monitors the content sector closely to identify emerging competition concerns. There are a number of provisions in the Trade Practices Act that would prohibit attempts to use the control of content and the communications pipes to substantially lessen competition in downstream markets.

For example, section 45 of the TPA prohibits companies from entering any arrangements that result in a substantial lessening of competition. Section 47 is even more explicit: exclusive dealing that causes a substantial lessening of competition is illegal. The ACCC could also consider the use of section 46 which relates to the misuse of market power.

Given the increasing synergies between the telecommunications and media sectors, it is also possible that companies within the sector will look to merge to gain a strategic advantage over their competitors. Section 50 of the TPA prohibits any such deals that would have the effect of substantially lessening competition in a market.

In its discussion paper, the government also raises the option of forcing Telstra to divest the HFC network. Indeed, doing this would introduce a new infrastructure-based competitor into the telecommunications sector. It could also address some of the concerns arising from Telstra's stake in Foxtel as well as its control of the principal pay TV network.

Concluding words

The regulatory arrangements that are put in place while we transition to the new NBN will be fundamental to enhancing competition in the Australian telecommunications industry in the short to medium term.

Of course, in the longer term, the structure and design of the NBN and the regulatory regime that accompanies it will likely determine the prospects of competition in the industry in both regional and metropolitan Australia, at least over fixed-line networks.

As the government moves forward to implement its NBN announcement, it will be important for all future users of the network to contribute to the discussion.

Minister Conroy's commitment to a keep the ownership of the NBN network separate from retail companies should allow us to deal head-on with the difficulties arising from the vertical integration of the current incumbent, Telstra

In addition, any future telecommunications access regime will need to be able to accommodate changing circumstances, in particular, changes in the market power or structure of access providers.

In many ways, we are only at the start of the process. However, the ACCC already has some experience with these issues, having advised the government's former NBN panel of experts.

We have a unique opportunity to redefine the telecommunications industry but hard work will be required to get the settings right.