The National Broadband Network – the prognosis for competition in telecommunications

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When I last spoke to the Telecommunications Society of Australia, in 2011, I had not long retired as Chair of the ACCC, and the NBN was enshrined in the legislative books, with the structural separation of Telstra and the role of the ACCC as regulator of the NBN structure carefully defined, indeed confined by the legislative framework.

Much has happened since, or so it seems, yet I am not so sure that much has changed.

The Coalition has restructured the framework of the NBN- but the restructure has essentially been one of a technological nature - to move from a FTTH/wireless network to a Multi Technology Mix/wireless network at a lower cost and potentially lower capacity. But the regulatory settings have remained much the same, with the structural separation of network ownership from retail operations firmly locked in to the legislative and economic framework.

The reviews

Multiple reviews, at vast cost, have been completed, primarily focused on demonstrating that the Labor government's NBN concept was flawed or at least was less economically viable than that of the Coalition. Unfortunately, much of the review analysis has had a political tarnish which diminishes its value in forward planning for this important infrastructure project.

The Scales Review was probably the least valuable, if only that it is fundamentally flawed in its evidence base. Scales' report is factually wrong on the role of the ACCC, as attested by both myself, the current chair of the ACCC and others in the organisation.

But as a consequence he has been insulting and offensive to the remarkable intellect that constituted the expert advisors engaged by the previous government to advise it on all aspects of the NBN – a group that included Commonwealth Departments of Treasury, Broadband, Communications and Information Technology and Attorney General.

The members on the expert panel included:
John Wylie, Lazard CEO;
Tony Mitchell, Allphones Chairman;
Laureate Professor Rod Tucker, University of Melbourne; Professor Emeritus of Communications, Reg Coutts, University of Adelaide;
Tony Shaw, former Australian Communications Authority Chairman and
Dr Ken Henry, Treasury Secretary.

Ex-panel member, Reg Coutts, has stated publicly that:
"The ACCC made some explicit comments with regard to whether FTTN was considered a transition to FTTP".
"They advised us of their view really at about the same time we were coming to the same conclusion.

"The ACCC didn't provide us with advice that was news to us."

The Vertigan Reports are much more relevant in looking forward. But whether or not you agree with their recommendations, common sense requires an abundance of caution to the extent that those reports rely on prognostications as to the demand for broadband well into the future. Recent history in this area demonstrates one certainty – that prognostications in the area of telecommunications technology can at best only be classified as guesstimates.

But we need to recognise the value as well as the fragility of a cost benefit analysis such as that undertaken in the Vertigan Report. A cost-benefit analysis that has to say 'go' or 'no go' on a project is clearly hard and has lots of assumptions - most obviously willingness to pay assumptions (that will often just be guesses). That is where a business case or investment analysis may be more useful.

But the Vertigan cost benefit analysis is comparing alternative ways of proceeding, so assumptions, providing they are common across the alternative scenarios, are a lot less critical - e.g. changing willingness to pay will tend to move the benefits of both FTTN and FTTP up or down together. So comparing two outcomes is likely to be more robust than using an absolute number for a specific project.

That said, the Vertigan comparisons will depend on the value consumers and business put on higher speeds, and bandwidth capacity under FTTP relative to FTTN, and that is where the guesstimates come into play.

Those in the Commonwealth bureaucracy associated with the formulation of the Labor NBN policy, through to its legislative implementation, advise me that the fragility of a cost benefit analysis associated with the ability to produce desired outcomes by altering difficult to define assumptions, led the former government to focus on a detailed business case or investment analysis.

This was designed to assess the timeframe for the project to produce a return on the investment, although it needs to be acknowledged that any such analysis is equally fragile as it depends on assumptions as to consumer take up. Again, like cost benefit analyses, you can produce any desired result by factoring assumptions into the analysis which by their nature are difficult to challenge.

Which makes the formulation of policy in this area so difficult. Essentially technology roll outs and installations must be devised to allow efficient upgrades as technological developments take place.

The Coalition's MTM NBN will not satisfy the broadband zealots who longed for an extensive FTTP roll out. But it will provide for higher speed broadband than we currently experience. And it should, indeed must allow for technology upgrades meeting developing consumer needs, whether it be for fixed line or wireless broadband. Whether the ultimate cost to achieve what would have been on offer with the FTTP/wireless NBN, is more or less with the Coalition plan, is something we will never know.

The prognosis for competition

So with all this, what is the prognosis for competition in telecommunications?

Well that depends on the continuing revolution that is occurring in this space and the rigour of the ongoing oversight of the ACCC in ensuring that competitive lockouts are not allowed to develop.

Infrastructure competition

Which is where things start to get interesting. As a start I don't envisage we will see much competitive tension in fixed line broadband infrastructure. The Vertigan Panel has recommended the split of NBNCo into separate divisions, largely in line with the technology alternatives – in other words separate divisions for HFC, wireless/satellite, FTTx.

I see merit in this in the long term. Once these networks have been established in what will clearly be a complementary structure with little if any competitive overlap, there is merit in providing the scope for competitive overlap and tension in the future.

I think we have to acknowledge that it is a brave assumption that we will see alternative infrastructure rollouts in the same geographical areas – for example HFC being duplicated by FTTx. We saw the futility of this with the original HFC roll out - wasn't Optus relieved that NBNCo was willing to purchase its HFC network which it had effectively consigned to the scrap heap.

But there is a prospect for wireless/satellite to spread its footprint over the geographic area covered by HFC or FTTx.
I might add with a note of regret that this was the fundamental thesis underlying the original opposition by the ACCC to the Foxtel acquisition of Austar – the prospect that if Austar had remained in separate hands, it might extend its footprint of coverage, technically able to cover the whole of Australia, to compete with the Telstra owned and Foxtel controlled HFC.

Alas that opposition was not to be maintained – but I now note, with a sense of irony, that the very prospect of such competition underlies the Vertigan Panel recommendation (supported by the ACCC) to split NBNCo into separate infrastructure delineated entities.

The HFC infrastructure formerly built by Telstra and Optus has now been acquired by NBNCo. Should these acquisitions have been allowed – well as it happens with the MTM infrastructure now adopted under the Coalition plan, they needed to be structurally separated from the retail operations of the two major telcos, Telstra and Optus, to avoid a repeat of the complex regulatory regime that has applied to Telstra's copper network in the past. Could they have been moved into private ownership that was not vertically integrated – certainly, but that was not the business case proposition underlying the NBN. And that business case underlies much of the policy relating to competition in this area.

As for the FTTB infrastructure roll outs by the likes of TPG, I doubt that they will cause any more aggravation to NBNCo than the flea on the elephant's back. Of course TPG's actions, now sanctioned by the ACCC, might encourage similar endeavours by other telcos which are able to satisfy the tests applied by the ACCC in its TPG determination.

But the fact that such rollouts can be economically sustained should lead one to the conclusion that in the interests of facilities competition, they should not be opposed, unless again the preservation of the NBNCo business case is the primary driver rather than competition.

Selective rollouts such as being undertaken by TPG are of course exercises in cherry picking which are only enabled by the adoption by policy makers of distortive pricing mechanisms and non transparent cross subsidies to result in uniform pricing across urban, regional and rural Australia.

The issue of cherry picking essentially arises from the pricing distortions caused by governments' insistence on subsidising unprofitable sectors of a national network through uniform national pricing measures designed around excess charges for urban network access to disguise deficit charges for regional and rural network access.

While uniform national pricing is a policy decision reflecting the demographic structure of the Australian population, the hidden cross subsidy inevitably leads to distortive pricing in urban areas which enables, indeed encourages cherry picking.

Independent policy advice over many years has urged governments to remove these distortions - to impose efficient pricing for urban access, and achieve uniform pricing in regional and rural areas by transparent subsidies financed from general revenue. If efficient pricing practices were adopted, cherry picking would be a sparse, if not fruitless exercise.

Needless to say, this policy advice has been generally ignored by governments, resulting in layers of extra regulation to offset the effects of distortive pricing mechanisms.

We must never forget that the greatest driver of technological development and innovation is competition – and the greatest impediment is anticompetitive regulation designed to preserve or enhance monopoly interests whether private or publicly owned.

Of greater interest are the repeated calls by Telstra's competitors for its wings to be clipped – or indeed removed altogether if one were to take the pleadings of Optus' Paul O'Sullivan seriously. Paul laments the fact that Telstra has and will derive substantial financial strength flowing from its commercial agreements with NBNCo both existing and currently being negotiated.

Forgive me if I begin to sound like my former nemesis, Phil Burgess, but Telstra has already had its wings heavily clipped with its legislated structural separation – it must soon compete with other retailers on an equal basis, renting access to the fixed line network now being developed by NBNCo on the same terms and conditions as its competitors.

Its competitive advantage will flow essentially from its ability to structure bundles that provide compelling offers to its customers. And with one exception that same bundling process is available to Telstra's competitors, whether by offering their own telecommunications services in fixed and wireless or reaching collaborative arrangements with other carriers.

Control over content

But there is an exception, which will bring me to the fundamental area of competitive advantage and potential competition lockout if not dealt with at its incipiency rather than after the horse has bolted.
I refer to a matter that has been a constant refrain of mine for nearly a decade – control over content.

Because with the structure of NBNCo owning virtually all the fixed line infrastructure and providing access to it on equal terms to all retail competitors, differentiation between retail competitors is limited to price (associated with quality of service) – and then the products that can be bundled together to provide a compelling broadband and wider telecommunications offering. In part that will involve wireless and mobile packages, which offer a more diverse competitive landscape with individual competitors able to compete in the technology offerings.

But that aside, the only other primary source of differentiation will be the content that can be provided by individual retailers of broadband services to their customers. And Telstra's significant advantage in this area lies in its increasingly developed content offerings, including movie libraries, apps, Bigpond and perhaps the most significant, its interest in Foxtel and the wide content offering it controls.

While there is no clear line, sport and movies are generally regarded as premium pay TV content. Such content is widely considered to drive demand for pay TV services and strengthen an pay TV offering. The Productivity Commission has stated that the key drivers of a high volume pay TV business are recent release movies and premium sport. This is consistent with the views of competition regulators in Europe and the UK.

But competition regulators world-wide are now keeping a close eye on exclusive agreements for the supply of content, to ensure that traditional incumbents cannot inhibit the emergence of new players or products by using their market power to tie up access to compelling content. For there is the constant risk that the exclusive tie up of rights to such content for new and emerging markets will allow the rights holders to shut out competition across a wide range services delivered over the new networks. Ultimately, this could deprive consumers and advertisers of choice and quality not only for broadcasting, but also for voice, Internet, IPTV and innovative communication services and determine the success or failure of a new competitor. I like to put it this way: if you can't control the arteries, what you do is get hold of the blood.

And that is where the ACCC becomes very relevant. For if the compelling content - in this country being primarily focused on the major sports, AFL, NRL, cricket and tennis (with apologies to those others who aspire to this status but have not reached it yet), is controlled by or exclusively linked by commercial agreements to one retail provider, the bundled offer thus able to be provided makes competition a very elusive beast.

And it is not altogether certain that the ACCC has a legislative remit to prevent incremental accumulations of valuable and compelling content, even if it ultimately leads to an anti competitive market structure. For incremental accumulations are a symptom of the so called ‘creeping acquisition’ process, where each single transaction taken on its own does not give rise to a likely substantial lessening of competition, the pre-condition for intervention by the ACCC. It is only the final result of incremental transactions that results in a substantial lessening of competition, but at that stage it is too late for any intervention by the ACCC to be effective.

But that is not an invitation to the ACCC to intervene prematurely. Nor should the ACCC be considering some form of access regime over content to assist competitors in the retail market. For the available options to gain access to content are widening even as we speak. And the more recent entrants into the content production, ownership and aggregation space – the likes of Apple, Google, Amazon – dwarf the capacity of Telstra. Let me list some of the content offerings of these companies alone, to give you a flavour of how far these behemoths have already progressed in the content aggregation space.

Their specialist connection devices – Chromecast, Apple TV, Roku, are but the start. The content arrangements they have already signed up include major USA sporting codes, NFL, NBA, MBL, Bloomberg, Wall Street Journal, CNet, Amazon Video, Netflix, Spotify, Google Play and Music, Watch ABC, YouTube – I couldn't detail them all as at last count they numbered close to over a hundred and the content is increasing in quantity and quality every day.

The potential for telcos operating in the Australian space to enter into commercial arrangements with these and other corporations or to embark on a content aggregation program of their own, is almost boundless, and provides much scope for competition amongst our telcos and RSPs. But it may turn out to be the quick and the dead, if our competition watchdog is not constantly alert to the risk of one or more telcos creeping to dominance by extensive and exclusive content aggregation.

Telstra has already demonstrated its capacity in this context – with its arrangements with part owned Foxtel and the vast content controlled by that enterprise. And then it has proceeded to tie up compelling sport content with the likes of AFL and NRL being offered on an unmetered basis to its own subscribers.

IiNet has demonstrated its own dexterity in its initial ground breaking tie up with FetchTV and its willingness to embrace naked DSL offerings. But FetchTV is languishing from its lack of compelling content, such that its more recent advertising has focussed on its advantages as a more advanced Personal Video Recorder.

For those in the content supply business, whether as providers of content – the major sporting codes and movie houses, news, being the most compelling – the prospects for competitive tension abound. For those seeking to acquire content to enhance their telecommunications offering, they had better move fast, keep a sharp watch on exclusive tie ups by earlier movers, and ensure that our competition watchdog is on the ball.

But with what is a fast moving environment, I'm not sure if I was a content provider if I would be tying myself prematurely into long term media rights contracts. The scene is changing so rapidly and the competitive tensions increasing exponentially.

The capacity for content owners to become production houses, either alone or in conjunction with professional producers, opens up many opportunities. For the sporting codes this requires multi tiered arrangements to proved ever richer content to supporters – it goes well beyond the simple streaming of the audio visual of the action on the sports field, or the bland interview with coaches and players. Subscribers want real compelling content to warrant paying a more than nominal subscription price, for that sort of content is available anywhere.

I expect that it will be a brave, or perhaps foolish telco that gets involved in the content production space – the expertise and creative culture required has not been known to proliferate telco office spaces. But telcos have the financial strength and distribution channels to create business advantages in content acquisition and aggregation. And that extends to the acquisition of white label content – for example AFR content, Blue Notes from ANZ created by Amanda Gome (of BRW) and Andrew Cornell, (ex AFR).

And aggregation of content, that may not necessarily be professional, has not gone unnoticed with demand for YouTube videos exceeding even the wildest expectations, notwithstanding the attachment of advertising.

The so called second screen is becoming an increasingly primary point of contact with consumers – so that advertising dollars are beginning to have an increased focus on the mobile phone and tablet, in addition to the main TV screen. And they are learning that if content is to be sold/paid for, it can't be otherwise available for free – free downloads, piracy are becoming the competitive tension for those offering legal access to content, bringing prices down to a level that reduces the incentive to travel the illegal route.

There are many who will forecast that the proliferation of smart phones and tablets suggests that wireless is going to dominate rendering fixed line less relevant. But in large part the wireless connection is via very short distance wireless (WiFi) which then requires fixed line connection.

But whatever the take up – wireless or fixed line - telcos will need to have access to both to take advantage of the bundled offers they can offer to customers, maintaining flexibility in their offerings to cater for different and changing consumer preferences.

Statistical prognoses

Some of the statistical prognoses provide interesting signals of the challenges for telco business strategists in formulating forward strategies.

The rollout of the National Broadband Network is likely to accelerate the take up of broadband services, with broadband penetration expected to reach 93 per cent by 2019.

Telstra reported in June 2014 that its 4G network now covers 87 per cent of the Australian population and expects to exceed 90 per cent in 2015. In addition to the capital cities, the Telstra 4G network covers more than 300 regional towns.

If the current pattern continues, per-capita mobile data consumption will increase from 0.9 GB today to 4.2 GB per month in 2018.

The average Australian has 33 apps on their smart phone – higher than almost any other market

The speed of transition for video content has been supported by an expanding range of video distribution options including OTT and IPTV

Digital enabling infrastructure is rapidly improving in the Australian market with the forecast that 1 million more households will have IPTV in 2018. Is it any wonder Foxtel is racing now to revise its pricing and package offerings?

Non entertainment content

And entertainment offerings – movies, news clips, games and the like are but the beginning of the competitive bundles that are beginning to catch our attention. The smarter telcos are recognising that they can't rely on their mobile and fixed-line revenues to prop up their business forever.

This should not come as a surprise to those who have been widening their vision of the potential for high speed broadband to provide vast changes to our lifestyles and economic productivity.

Once the NBN debate gathered full pace we started to see a little more vision emerge as to the future opportunities offered by widely available high sped broadband, beyond movies and sport – to areas spanning health, education, business, just for a start.

It seems I need to refer to Telstra's efforts again.
It was reported just a few days ago that Telstra is making an aggressive push into the $120 billion a year health care sector and has announced new global and local partnerships with healthcare providers as well as a new service to connect rural and regional patients with GPs.

The health sector in Australia is showing the strains of an ageing population and increases in chronic illnesses.
Telstra is seeking to partner with healthcare authorities and providers to deliver services direct into patients' homes.

Telstra Health will seek to connect patients, healthcare workers, hospitals, pharmacies, government and health funds and build a more convenient way of managing health.

It is about having access to care and information beyond the traditional attendance at the local GP's surgery.

Telstra which has partnered with Swiss-based telemedicine company Medgate, will see patients talk directly to GPs over video or phone to receive advice, diagnosis, prescriptions, and referrals.

The service will operate on a 24/7 basis, and address the estimated 2.2 million of emergency department presentations occurring annually that could have been treated by a GP. The capacity of these services to vastly change the paradigm for health care and particularly aged care in the home, is almost beyond our present imagination.

Should Telstra or any other telco be constrained from engaging in these activities, entering into partnerships to add to its artillery of offerings to its customers. Of course not – it is open to its competitors to do exactly the same, or even better! And the special pleadings from Telstra's competitors to slow down its competitive drive, should be largely ignored for what they are – special pleadings seeking to serve private interests, not the public interest that is so well served by effective competition.

The role of the ACCC – a utilities regulator

Finally what should be the role of the ACCC in the future regulation of the telecommunications sector. I have to say that I, together with my colleagues at the Monash Business Policy Forum, strongly support the views of both the Vertigan and Harper Panels which in essence recommend that the purely regulatory role of the ACCC should be moved to a specialist regulatory body, with the ACCC retaining the enforcement of the competition laws.

My colleagues and I in the Monash Business Policy Forum recommended the establishment of an Australian Essential Services Commission. The aim is to bring all utility regulators into the one agency, working on analytical issues mainly focussed around the pricing of and conditions of access to monopoly and quasi- monopoly services. The AESC would bring together the current regulatory functions of the ACCC, ACMA, the regulatory functions of the MDBA, and groups such as the Australian Energy Regulator (AER). Industry specific regulators would not be established.

There are compelling reasons for this. The pricing and access analyses and determinations require a specific regulatory economic expertise and culture. That culture is directed to solving market distortions through the complex process of regulation as directed by a legislative remit. It is a culture with secondary focus on competition and its application to market structures and behaviour.

Let me quote you the views of the **Harper Panel** as set out in its draft report on reform of competition policy and law.

"The Panel sees benefit in focusing the ACCC on its competition and consumer functions and separating out its access and pricing functions into a separate, dedicated regulator. Amalgamating all price regulatory functions into a single body will sharpen focus and strengthen analytical capacity in this important area of regulation.

The ACCC argues that there are benefits in having access and pricing regulation undertaken by the competition and consumer regulator. The Panel's view, however, it that, while there are synergies between the competition and consumer functions, there are fewer synergies between the functions of competition enforcement and access and pricing regulation.

The culture and analytical approach required to regulate an industry differs from those typically characteristic of a competition law enforcement agency. For example, the former is required to have an ongoing and collaborative relationship with the industry it regulates; the latter is more likely to involve adversarial interactions.

There is also a risk that the views of an industry regulator about the structure of a particular market could influence a merger decision. The latter is required to be based on the likelihood of a particular transaction resulting in a substantial lessening of competition, not on a view of what a particular market structure should be.

The Monash Business Policy Forum proposes the creation of an 'Australian Essential Services Commission' to bring all pricing and access regulation into one agency. The body would 'bring together the current regulatory functions of the ACCC, ACMA, the regulatory functions of the Murray-Darling Basin Authority, and groups such as the Australian Energy Regulator (AER)'. (page 36)

The Monash Business Policy Forum stresses the importance of co-locating functions by similarity of analytical approach rather than by industry:

Colocation by industry increases the likelihood of capture. It creates regulatory inflexibility as 'industry specialists' rather than 'analytical generalists' dominate regulators. It risks the creation of a regulatory culture that views the particular industry that is the focus of regulation as 'special' and 'separate' from broader economic and social considerations. (page 17)

The Panel considers that access and pricing regulatory functions would be best performed by a single national independent agency. The benefits of a single national independent agency include:

• a single agency will have the scale of activities that enables it to acquire broad expertise and experience across a range of industries, and acquire and retain staff who have that expertise;

• a single agency regulating a range of infrastructure industries reduces the risk of capture (the agency losing necessary independence from the regulated industry); and

• a single agency will reduce the costs associated with multiple regulators and regulatory frameworks and promote consistency in regulatory approaches.

The Panel's proposal would see regulatory functions currently undertaken by the ACCC in energy (through the AER), water and telecommunications, and functions currently undertaken by the NCC in relation to the National Access Regime and the National Gas Law, transferred to the national access and pricing regulator. Consumer protection and competition functions associated with regulatory functions would remain with the ACCC, however.

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Australia's telecommunications industry is subject to specific access and pricing regulation administered by the ACCC. The Panel proposes that these functions would transfer to the new access and pricing regulator."

Is the consumer being served?

How do we go about ensuring the public is the winner from all this upheaval?

On first blush it would appear that convergence is already working in the consumer's interest by providing a range of new content. New forms of distribution, be it over the net, portable devices, time shifting, IPTV or other formats promise more flexibility and new services. Extra competition is also good news, as it means potentially more innovation, wider choices for advertisers and users and as a result, telcos more focussed on meeting consumer preferences.

With the immense resources of the Internet at their fingertips, consumers no longer have to rely on a limited number of information sources provided by the traditional media gatekeepers such as newspapers, radio, free to air or monopoly subscription television networks.

But just because there are more outlets providing content doesn't mean a broader range of content is being presented.

Regulators world wide are on constant watch to ensure that content does not become locked in the hands of the few, to the detriment of consumers or advertisers.

What remains important is access to eyeballs, and the content those eyeballs are seeking is becoming increasingly important.

Despite the apparent increase in diversity that the digital age promises, there are real risks that we will end up the poorer if we do not keep an eye on where just where control lies over the material we want to receive.

And what of the ever present questions on media regulation generally? Is the new technology making many of existing concerns about media regulation irrelevant? Is regulation being supplanted by the inexorable impact of new technology on consumer demands and preferences?

My own view is that as far as possible, it should be left to consumers to decide what form this revolution takes and what services and content they wish to access. Policy makers and regulators should stand on the sideline as referees ensuring the players stick to the rules which should be designed to encourage the most flexible and competitive framework conceivable.

A vision of the future

So cast your minds forward 5 – 10 years, and imagine the developments we have been discussing, but taken to the next level again. Every home has super-fast internet access linking us to everyone else. We don't have 'a' connection, we have a dozen. For most homes and businesses, these are provided over super-fast fibre or cable going all the way into our living rooms, our studies, bedrooms, kitchens or offices. Others are getting it beamed through wireless networks. These high-capacity arteries have been built into our homes and businesses. But what are the companies with access, sending down the next generation networks? Phone calls, video calls, information, IPTV, music, movies, games, TV on demand, health and education services – the possibilities are limited only by our capacity to innovate.

And the devices we are receiving all this content on are becoming smarter. I won't even venture to contemplate the possibilities here – who in 2005 forecast the advent of the iPad in 2010?

This revolution seems inevitable. Consumer demands for speed, convenience and quality will continue to rise as each new development raises their level of expectation. And suppliers of content will have find ways to embrace the challenges and opportunities these new demands pose.

What technology will mean for consumers

New technology can be a powerful and positive force for change. It allows new entrants into markets that have previously been closed due to the limitations of old technology. It means more choice for consumers. And it means suppliers of telecommunications services won't be able to differentiate themselves simply on the basis of price. Service offerings – content and quality – will become essential drivers of customer marketing and loyalty. Traditional service offerings to consumers will no longer be so critical.

Rather what will be become more important is having content that people want to access, and having a variety of ways to deliver it to the customer across a communications network.

What does it all mean for advertisers?

There are indications that audiences for traditional media are declining. The fastest growing component of the global advertising market is online.

The tendency to avoid unwanted advertisements through the readily accessible fast forward button, poses new challenges for advertisers – and broadcasters seeking and reliant on their advertising dollar.

Most growth opportunities for astute advertisers will be associated with niche media, where content is targeted at specific interest groups, or 'lifestyle media', me here content is on-demand, interactive and involves a sophisticated combination of video, audio and text. Reaching these audiences will require different approaches to those used in mass marketing advertising.

Of course this makes the rights to live broadcast of premium content such as sport, an invaluable asset to control. As we have seen with the current AFL and NRL rights arrangements, there are different imperatives with FTA and Pay TV broadcasters – the former relying on advertising revenue, many the latter focusing on subscription revenue, with the promise of advertising free broadcasts.

Conclusion

Many changes have taken place since Bruce Gyngell first uttered those words "Good evening and welcome to television" nearly 60 years ago.

Now we are on the cusp of yet another revolution as big as the one that ushered in the television age, with technological change again set to alter the way businesses provide

and consumers access sport, news, information, entertainment, lifestyle choices, education, health – indeed every aspect of our daily lives.
Remember the world scoffed when Bill Gates predicted the world would one day have a computer in every home.
Will our ability to deliver medical, education, even the basis communication needs of our communities change? I doubt there is anyone who would challenge the view that a series of revolutions is now imminent with the roll out of a high speed communications network.

That change will only continue to accelerate. Coping with that change, meeting the challenges and opportunities flowing from it, will require dexterity, flexibility and adaptability from both service providers and regulators. But the legacy of that change is that technology and the growing swell of community input is placing the future in the hands of the consuming public. It is now up to government to empower that public and those that can best serve its needs and demands, to do so by not impeding technological developments and innovation inspired by vigorous competition, through misplaced regulation.
How the game unfolds, none of us can confidently predict. But it's certainly likely to be a fascinating journey.