A Further Submission to the Senate Standing Committee on the National Broadband Network

Kevin Morgan

Introduction

My initial submission to the committee was largely addressed to the issue of structural separation and its lack of relevance to the debate about Fibre to the Node (FTTN) and the deployment of Next Generation Networks (NGN). Notwithstanding the fact that the international debate about regulatory change with NGN has discounted structural separation as an option, much of the evidence presented to this committee has been obsessed with separation. This obsession has proven to be far from the only irrelevant or misleading argument presented to the committee. Evidence and argument, principally from Telstra's competitors but also from independent experts, has also sought to distort the debate about open access and misrepresented the economics of network deployment amongst other matters. This submission seeks to address and offer a somewhat different point of view on critical issues such as open access, Telstra's alleged conduct and the issues of whether NBN deployment should be on a 'roll in' or 'rollout' basis.

Summary

The tender which the Minister for Broadband Senator Conroy believed would deliver high speed broadband is now in tatters. Following the close of the tender five bids remain. Telstra lodged a proposal that fell far short of being a formal bid and has now been disqualified. None of the remaining bids can satisfy the government's policy objective because they are all, other than the Axia proposal, seemingly predicated on the quite unsustainable assumption that someone other than Telstra could upgrade the Telstra owned network utilizing Fibre to the Node (FTTN) to deliver high speed broadband.

No party can really emerge with any credit from the debacle that has prevented much needed investment in the national network. Between August 2005 and November 2007 the former government allowed an increasingly acrimonious exchange between the ACCC and Telstra to distort the debate and failed to recognize the need for regulatory reform that would have encouraged investment. The current government has utterly ignored any lessons that might have been taken from the impasse that confronted the former government. Indeed far from resolving that impasse the Labor Party policy has created new layers of complexity and policy distraction with the tender becoming little more than a platform for calls for the structural separation of Telstra. The government has denied that it has any responsibility for the policy settings needed to secure investment and has retreated to the fiction that the 'competitive tension' of the tender would deliver workable regulatory outcomes.

Telstra having initially adopted, at least at a public level, a crash through or crash approach to winning approval for its planned FTTN investment were subsequently somewhat ambivalent about the tender. Perhaps Telstra recognized the underlying nonsense in being 'invited' to tender for the right to invest in its own network and found itself unable to respond coherently to an irrational policy environment. In contrast Telstra's competitors have seized upon the irrationality to game the process claiming that they could upgrade Telstra's network whilst in reality bolstering their standing as resellers of the copper network. Consequently much of the argument put by Telstra's competitors over the last two years and especially in regulatory submissions to the expert group and to this inquiry are been backward looking and little more than an unproven litany of complaints about Telstra's perceived anti competitive behavior and the failure of regulation to deliver sustainable competition.

The product of Telstra's ambivalence, posturing by competitors and the government's hands off approach to policy has been inevitable - a flawed tender that leaves Australia further away from

securing network investment and high speed broadband than when this government came into office. With the continued deterioration in both the national and international economic environment it would seem inevitable that the promise of high speed broadband will be consigned to the 'too hard' basket leaving the fixed network to deteriorate further. In summary the tender and the policy that underpins it cannot and will not deliver the investment that was promised.

Part One - An Overview of the NBN Debate

Since the Select Committee conducted its initial hearings and tabled its interim report on the National Broadband Network it has become apparent that the current tender process cannot deliver the planned network, neither within a reasonable timeframe nor at a cost the community could readily bear. The inherent flaws in the policy underpinning the tender process are now obvious and have resulted in Telstra, the only company able to undertake the fibre to the node network upgrade, being disqualified from the tender.

This has apparently left the government with five bids, three national bids from Optus, Acacia and Axia and two regional bids from Transact and the Tasmanian government. Even a brief consideration of what is publicly known about these bids suggests that none can readily satisfy the terms of the tender even at a regional level without either prolonged litigation or a massive compensation payment to Telstra.

This of course presupposes that the bidders have the technical, financial and other resources needed to build the network and could get to the stage where they would need to secure access to Telsra's assets. But as evidence given by Telstra's competitors both to this inquiry and in the earlier regulatory submissions indicates, other than Optus, none have the earnings to engage in a multi billion dollar project and would fall at the first hurdle beyond the 'expert group' stage i.e when they try to secure finance.

The failure of the Terria group to lodge a bid, despite the bluff and bluster of its chairman Michael Egan that it would deliver a 'cracker of a bid' confirms that the second tier ISP's and telco's simply didn't have the resources to mount a bid. And even the Optus bid must come with a significant caveat in that it would need the full support of its parent Singtel who would have to defer investment in more attractive regional mobile markets to focus on the Australian NBN.

The failure, other than Optus, of the Terria partners to bid suggests that despite the significant earnings available to competitors under regulated market entry the margins are consumed by operational costs leaving little for investment. Indeed the weight of evidence given to the inquiry suggests that the business case for market entry remains marginal and that even highly favourable pro-competitive regulatory settings have failed to lift market entrants along the 'ladder of investment' to become self sustaining, infrastructure based competitors.

The Competitive Carriers Coalition (CCC) has made much of what they see as Telstra's enduring market power and the consequent failure of competition. They have noted that over the last decade Australia's performance has fallen further behind peer OECD markets and they ascribe the failure of competition to Telstra's continued dominance of the 'bottleneck' copper loop. The CCC have argued regulation has been unable to break that stranglehold and only market reform through structural separation of Telstra can create a sustainable competitive market.

This complaint about the inadequacy of regulation has been echoed by Mr. Bhatia of Primus who noted only Primus and AAPT have survived from the initial group of competitors who entered the market in the 1990's and by Optus who believe the regulatory settings are inappropriate All believe that competition has failed despite the extraordinary regulatory interventions over the last eighteen years, which have become more intrusive and complex since 1997, especially with unbundling. Their answer is not to question whether the construct of forcing market entry in a natural monopoly industry was flawed, but to argue that regulation simply didn't go far enough and that crossing the Rubicon of structural separation will yield a truly competitive market in which competition can flourish.

As noted in my initial submission the understanding that structural separation is essential to competition and will encourage investment has eluded policy makers and regulators worldwide. It is policy perspective quite unique to Australia. In reality, following recent debates in the UK and Europe, structural separation stands as a discredited policy option that has no part in the debate about enabling Next Generation Networks, whether or not they are fibre based. Nor, despite the repeated assertions by Telstra's competitors, is structural separation considered to be a prerequisite to creating open access in any other major market. Nevertheless Telstra's competitors have made separation their rallying cry supported solely by ill informed understandings of its utility and of its application internationally.

Other than the bid from Axia, calls for structural separation are at the core of the bids that passed the first consideration by the expert group. Despite suggestions that separation is merely a further step along the regulatory spectrum it would represent a massive ex ante intervention that would further distort investment incentives and create inefficiencies. But it's not the only extreme measure that Telstra's competitors are calling for. Again with the exception of Axia other bidders are apparently calling for a statutory monopoly that would not merely protect the bidders' networks from overbuild but effectively from any fixed line competition. These bids also require the full cutover of the existing copper sub loop owned by Telstra and would also seem to assume that the bidders would have unfettered access to the existing Telstra infrastructure.

Demands for a statutory monopoly deny the policy intent of the last eighteen years, flawed though it has been, which has been designed to stimulate infrastructure based competition. Calls for a statutory monopoly could also contravene multi-lateral and bi- lateral trade agreements signed by Australia including the Singapore free trade agreement. Such calls for monopoly are neither warranted nor sustainable and they represent a call for regulatory favour that far outweighs any conditions sought by Telstra in its plans for an FTTN rollout. As noted the conditions sought by these bidders extend further to the co-option, if not confiscation, of large elements the Telstra local access network.

If Optus or Acacia were to win the tender Telstra would no longer be an end to end network operator in its own right. It would be required to lease a significant part of the local access network from another company, from the backhaul interconnect point to the node i.e. the fibre that will replace the large copper cables that currently connect the exchange to street pillars. This is also implicit in state based FTTN proposals. Telstra would also have to cede its copper sub loop to that company and whilst evidence has been given to this inquiry by rival bidders that this is little different from the current Unbundled Local Loop (ULL) regime it is radically different in its implications. The copper sub loop would become a de-facto part of a network which Telstra no longer owns or controls and could not, as under the current ULL regime, be transferred back to Telstra to permit Telstra to again offer end to end service to its customers.

If such proposals were accepted Australia would be in the unique position that it no longer had a national telecommunications company offering end to end service on its own network. This enforced dismemberment of the national network, under an allegedly pro competitive

structurally separated model, would result in operational and technical complexity and generate significant inefficiencies that would translate into higher costs for end users. Therefore the bids that were considered by the expert group, such as those from Optus and Acacia and the regional bids, threaten to create a legal quagmire from which escape would be costly and time consuming as Telstra was compensated for the loss of billions of dollars in assets and the revenue streams foregone.

Even the Axia bid, whilst not based on a call for overbuild protection or monopoly status despite the conduct of Axia in the Canadian market where it appears to be opposing competitive rollout in Alberta, also falls far short of meeting the government's objectives. At best the Axia proposal is for a regional backhaul network which would only be directly connected to major customers i.e. state and the commonwealth governments who would provide the network with its major revenue streams. Other users would have to be connected either through the existing copper loop, wireless or perhaps even highly costly fibre to the premises. The Axia proposal does not offer users direct connectivity to an NGN network capable of delivering high speed broadband. Also the Axia proposal, even it is just merely for backhaul would appear to be a somewhat ambitious proposal given the resources, experience and financial capacity of Axia A$120 million company with annual revenue of approximately A$72 million (see http://www.axia.com/documents/investors/IR_presentation.pdf).

In summary the bids that have emerged are based on utterly unrealistic conditions and expectations. This was inevitable given the nature of the tender which devolved responsibility for formulating policy settings to bidders and which was based on the widely accepted fiction that someone other than Telstra could build an FTTN network as a wholly new network rather than as an upgrade to the network owned and operated by Telstra.

Quite how it became commonly accepted wisdom that the tender was for a new, 'stand alone' network is not wholly obvious but it would seem to flow from the reticence of Telstra to explain what their 2005 FTTN proposal actually was, the opportunism of its competitors who fully understood the implications of an FTTN upgrade and sought to game the process and above all a lack of understanding and detailed policy work by the current minister. Telstra's reticence was perhaps understandable given their fears that services on FTTN could be declared under the Trade Practices Act leading to below commercial returns on the investment. Similarly given the threat that FTTN posed to the existing copper based resale regime it is understandable, if not constructive, that Telstra's competitors have attempted to stall the process. What can't be

readily understood is Senator Conroy's decision to meld two incompatible elements into one policy.

It would seem that whilst in opposition the Minister readily accepted Telstra's cost estimates set out in the August 2005 'Digital Compact' document but failed to understand these estimates were Telstra's incremental cost to upgrade its network to a 12 Mbit FTTN standard. The minister also appears to have become captive of the arguments of the then G9 who through their 2006 ACCC access application had carefully constructed the fiction that they could build an FTTN network. Merging Telstra's costs, chosen technology and estimated coverage of an FTTN network with the concept that there could be competitive bids for the network was hopelessly flawed and can only be understood in the context that Senator Conroy misunderstood the nature of FTTN. It would seem that the Senator Conroy failed to understand that FTTN was a network upgrade.

But notwithstanding the fact that Telstra may have failed to explain that the FTTN upgrade was unique to its network, or that competitors may have created confusion by claiming they could build the network, the real responsibility for the current debacle rests largely with the Minister who framed the policy whilst in opposition. This is especially so given the extraordinary decision not to outline the regulatory settings before the tender started. The tender was based on the belief that bidders would outline the regulatory settings they needed and that the 'competitive tension' between bidders would generate innovative and workable regulatory proposals. It was a significant error that merely repeated the mistake of the former government which had also asked proponents to outline the regulatory conditions for FTTN to an earlier expert panel appointed by the then Minister Senator Coonan.

Again instead of learning from that earlier experience Senator Conroy naively accepted that bidders could outline a workable regulatory framework without government guidance. This denied the obvious conflict of interest held by potential bidders many of whom supply xDSL broadband over unbundled local loops. Telstra's competitors having made large investments, relative to their size in DSLAMS backhaul etc., had no incentive or interest in developing a regulatory regime for FTTN which would strand their investments, end physical unbundling of the local loop and destroy their business model which was based on de-averaged local loop prices.

Consequently as the earlier regulatory submissions and evidence to this inquiry demonstrate the majority of proposals on regulation were self serving in that they focused on preserving and

reinforcing the current arbitrage regime rather than offering innovative regulatory change that would encourage investment by the incumbent. But the proposals were not merely self serving, they were destructive in that they resurrected the debate about structural separation leading Telstra into a quite unnecessary stand off with the minister. Senator Conroy seemed unable to read the international evidence on separation and refused to rule out structural separation as a precondition for Telstra deploying FTTN creating significant misgivings amongst the Telstra management and board about the government's intentions. Whilst it might be argued that Telstra over reacted to the danger of separation it is understandable that they would become increasingly ambivalent about a policy which was now being informed by regulatory constructs that had no foundation in international precedent or best practice.

In effect by asking bidders to outline the regulatory regime the minister merely created a forum in which competitors could deliver a litany of complaints about current regulatory shortcomings and the failure of competition, and offer an ill informed if not distorted reading of international regulatory reform. These complaints by competitors were bundled with a catalogue of complaints about alleged anti competitive conduct by Telstra to produce a debate that has had little if anything to do with NBN rollout.

As noted little in the regulatory submissions or indeed in the evidence given to this inquiry addressed the reforms needed to enable the deployment of an IP enabled next generation access network, which was at the heart of Telstra's FTTN proposal. All that has emerged is a simplistic argument that the yet to be defined goal of open access could only be achieved through structural separation, an argument that defies the complexity of implementing open access in an IP environment and which ignores the international debate about NGN access which makes no mention of structural separation as a prerequisite to open access.

Unfortunately the tender has served little purpose other than to delay a much needed upgrade of the national network as competitors game the process and argue the network should be built on terms which make its actual rollout impossible. After twelve months the goal of upgrading the national network to 21st century standards is perhaps even more distant than it was when the government came into power and until the government grasps the policy initiative and enacts regulatory reform which encourages rather than discourages investment, then the network cannot be built.

Part Two - The NBN Issues

Competition and the NBN There is little question that the present tender for the National Broadband Network has added further complexity and delay to a process which had already stalled by time the Australian Labor Party came into office in late 2007. Negotiations on the regulatory settings and incentives needed for the incumbent to embark on a massive upgrade of the local copper access to a next generation FTTN network were already fraught and had led to an impasse between the former government and Telstra, marked by Telstra's decision in August 2006 not to proceed with the planned investment in a fibre-to-the-node network (FTTN) to replace much of its ageing urban copper network.

The causes of that impasse are largely obvious as the need to generate a commercial return on what was initially conceived as a $5 billion investment in urban areas collided with competition policy. Indeed counter to the received wisdom about the impacts of market liberalisation, pro-competitive regulation in the Australian telecommunications sector would seem to stand as a disincentive, rather than an incentive to investment in fixed telecommunication network infrastructure.

Despite the policy orthodoxy that encouraging market entry and competition would lead to investment, Telstra claimed that a failure to agree with the regulator, the Australian Competition and Consumer Commission (ACCC) over terms for competitors' access to the planned network led it to postpone the project. After a year of negotiations in 2005/2006 Telstra stated that the threat of the new network being subject to existing ex-ante regulation, and a failure to agree on a rate of return on its investment, led it to shelve its plans.

Although Telstra blamed the failure to reach agreement with the ACCC as being the prime reason for its decision to shelve the investment , a number of other factors may have influenced the decision because conflict between the regulator and Telstra alone should not have led to the postponement of the project. Investment in deep fibre deployment is proceeding in other markets which have regulatory settings not dissimilar to Australia i.e. the USA and Germany. But in those markets regulatory forbearance has been forthcoming suggesting a greater degree of flexibility in the policy and regulatory regime which allowed a trade off between the promotion of competition and the promotion of investment.

The absence of that flexibility points to the rigidities in the Australian regime where the ACCC is bound by highly proscriptive legislation to effectively rank the pursuit of completion over all

other policy goals. This may not have been the intent when Part XI of the Trade Practices Act was framed but it has been the inevitable outcome of ranking the promotion of competition and the efficient use of existing infrastructure as being the dominant means to meet the long term interests of end users.

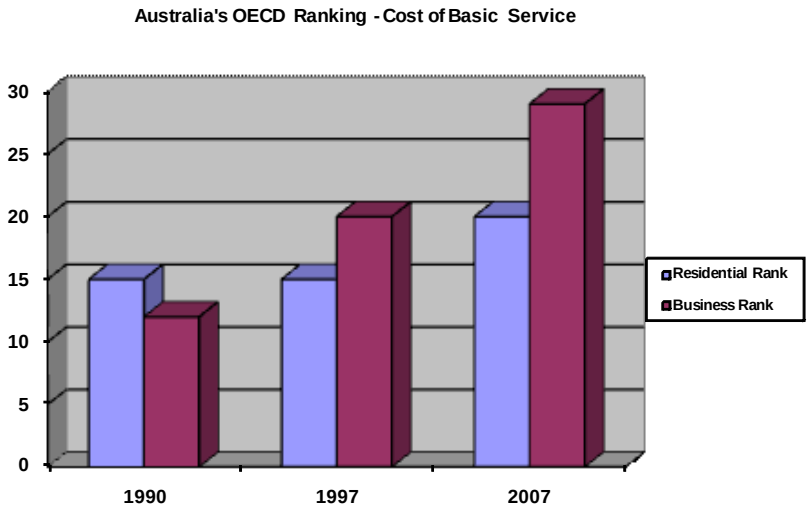
Telstra with a new management team steeped in a somewhat different corporate culture to the previous management and with different perceptions about the conduct of regulatory negotiations failed to fully appreciate the lack of discretion held by the regulator. The willingness to 'play' the institution and focus on the ACCC's attitudes and conduct possibly led Telstra to neglect the underlying deficiency in policy which contains no real incentives or mechanisms to encourage significant new network investment. Consequently Telstra's seemingly somewhat abrasive manner and more litigious conduct may have heightened the tensions with the ACCC and made resolution of the dispute somewhat more difficult. Similarly Telstra's use of ambit for the return it was seeking on the investment was less than helpful.

But in reality neither Telstra's conduct nor its claims on regulation and rate of return were the source of the disagreement, and unhelpful though they may have been they were not the major obstacle to resolution of the dispute with the ACCC. Despite the weight some parties have put upon Telstra's conduct which competitors have described as an attempt to re-monopolize the industry and which Terria's Michael Egan described in extraordinary terms as 'blackmail', it was at worst unhelpful. In summary Telstra's conduct did not cause the problem which lies in the current structure of the telecommunications specific sections of the Trade Practices Act and in the almost religious belief in competition as the only goal to be pursued in telecommunications policy.

What is being Protected? Given the near religious zeal with which competition is being pursued and its dominance in the debate about FTTN it must be asked quite what is being defended and is it really worth defending competition if it locks the Australian network into copper technologies which had their origins in the 19th century. Telstra's competitors claim it is the public and the consumers' interest that is being defended and that without competition the market would be left at the mercy of a 'tyrannical' monopolist. Clearly both Telstra's competitors and the ACCC recognized the threat FTTN posed to current market structures and agreed that if the price of FTTN was the loss of competition then the investment might not be worthwhile given the benefits that competition has supposedly delivered.

Yet despite the claims about the innovation and pricing that competitors have brought to the market it is somewhat difficult to determine quite what competitors are intent on defending other than their presence in the marketplace. As outlined the Competitive Carriers Coalition and other parties to this inquiry have all complained that competition has been a failure. It is perhaps the only point that the CCC has made in this debate that can be substantiated for whilst it is difficult to untangle the truth about pricing and the impact of competition in the broadband market it is obvious that in the plain old telephone market Australia's position has deteriorated markedly under competition.

In the broadband market the reality and impact of competition is hidden by the bewildering array of pricing plans that offer differing speeds, download allowances, excess pricing and peak/off peak usage. Such confusion is typical in a supposedly competitive market and is designed to obscure the reality that with the exception of a few 'cheap and cheerful' packages from budget ISP's there is little difference in the service offerings of the major service providers. This is also true in the provision of standard telephone service where various packages, bundling and capped offers create an impression of competition that benefits the consumer. But this perception is not supported by the facts. The unexpected impact of competition is obvious in the following chart which shows the deterioration in Australia's relative performance in the delivery of a standard basket of residential and business telecommunication services.



As the chart shows In 1991 Australia ranked 14th in the OECD in terms of the cost of standard basket of residential telephone service and 12th for business services. In 2007, Australia ranked 20th for residential service and 28th for small and medium business service i.e. as the CCC has stressed Australia now has the third most expensive business telephone service in the OECD. Despite this reality the myth endures that competition has generated cost savings and benefits for consumers. Typical of such claims were those made by the then Minister for Communications Helen Coonan in June 2007 who told Committee for the Economic Development of Australia that:

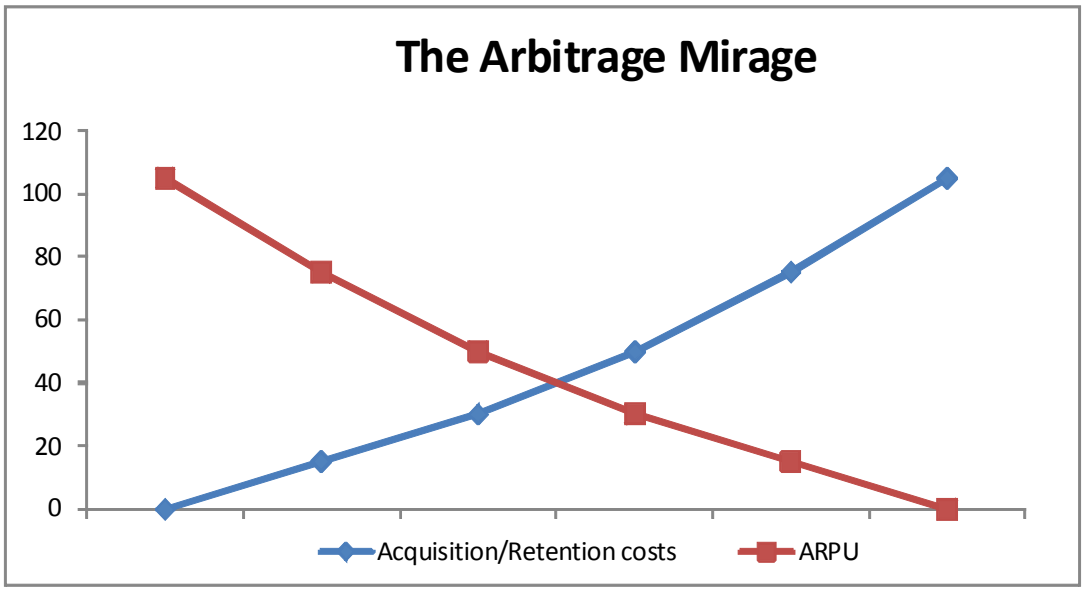
> *"Since the Government's telecommunication reforms of 1997, there are now 167 providers vigorously competing on the telecommunications field. And there can be no argument that consumers have been the major beneficiaries of competition reforms. Fixed line prices have fallen by 18.9 per cent and mobile service prices have fallen by a whopping 36 per cent. In fact, since 1997, the overall average price of telecommunications services has fallen by 26.2 per cent."*

Closer examination would reveal that the price falls that have occurred have been due to regulation through the price cap, with the x factor or proxy for productivity gains in Telstra, exceeding 40% in the last decade i.e productivity has increased 40%. Consequently falling prices can be ascribed almost solely to the CPI -X formula, not the competitive pressure brought to bear by Telstra's rivals who have been little more than price takers under the price cap umbrella. Of course in a high technology industry with massive gains from the deployment of new digital systems over recent years it was to be expected that prices would fall.

That regulation that has captured these technological gains and led to falls in price rather than competitive pressure has been noted by the ACCC and as the CCC has pointed out price cap regulation is still significant and has been sought for terminating mobile calls. The CCC has suggested that resorting to price caps in this way is an admission of defeat by the ACCC and marks the failure of competition but it is an admission of reality in that in a natural monopoly industry regulation rather than competition is the only effective tool to reduce prices in a sustainable way.

Despite the problems in unraveling what has happened in the broadband market it would seem competitive tension has done little for broadband service and price in recent years with Australia being marked by low speeds for relatively high prices compared to market leaders such as Korea, Japan and the USA. Clearly in Australia competitors have not sought to lead the pack and force Telstra into truly competitive pricing. Typically they have been increasingly content to sit on the margins offered by Band 2 Unbundled Local Loop and have not ventured out into more challenging parts of the market unless supported by government subsidy. Only 1% of competitive broadband services offered over ULL or by line sharing lie outside bands 1 and 2.

Consequently rather than follow the international lead and drive fibre out to customers, the emphasis in Australia remains on defending the arbitrage regime in urban areas even though US academics Hazlett and Havenner have identified arbitrage as a mirage under which the margins needed for investment are consumed as average revenue per use declines and acquisition and retention costs rise with each new customer.



Under the arbitrage model, entrants to the market were supposed to climb the ladder of investment from broadband resale, through bitstream and line sharing to unbundled local loop where they could aggregate sufficient demand to justify significant investments in alternative access technologies. Unfortunately below-cost pricing of access, and the recent de-averaging of the price for unbundled local loop (ULL), have sent the wrong price signals to entrants who now have absolutely no incentive to invest in access infrastructure. With low access prices offered

by regulation especially through de-averaged ULL no entrant could build a network that would offer as low cost access as the regulated access price available to them. This is even true of upgrading existing infrastructure where Optus find it is less costly to provide broadband through ULL than through upgrading their existing hybrid fibre coaxial cable network. And at a more practical level the limits of the competitive resale model are also being experienced as the continued loading of cable sheaths with ADSL and ADSL2 services threatens the speed and quality of existing broadband.

As consolidation within the Telstra's competitors indicates, many market entrants do not have a sustainable business case and have been thrown a lifeline through measures such as de-averaging of the price of unbundled local loop which further subsidizes their costs. Such measures though threaten the central tenets of telecommunications policy as they undermine the cross-subsidies on which nationwide service at uniform price has been delivered, and they deny the subsidies which could have delivered broadband in rural areas. The Australian market is now marked by deaveraged wholesale access prices whilst the incumbent is obliged to maintain average (national) retail access prices creating an unparalleled opportunity for 'cherry picking' by market entrants.

In effect competition has become an end in its own right leading Graham Samuel, the ACCC chair, to ask in relation to Telstra's planned FTTN investment::

> *'What is Telstra seeking to hide? A monopoly designed to beggar the competition?*'
>
> **(May 2007)**

That sentiment from the regulator echoes the conspiracy theory promoted by Optus that FTTN was merely about destroying competition. More seriously its suggests that the division between economic/competition and technical regulation may have isolated the ACCC from the technological imperatives that are driving change in other markets.

In a number of public forum Optus has suggested that Telstra has seized upon FTTN in a conspiracy designed to bypass exchanges where competitors DSLAMS are located. If so it's a conspiracy that a number of incumbents such as KPN in Holland and Verizon in the USA are also engaged in. In a more rational environment than the one which marks the regulatory debate in Australia, the deployment of fibre would be described as technological change not as a 'conspiracy'. And despite assertions that FTN is somehow against the consumer's interest it's a technology designed to extend the reach of DSL technologies and so meet users growing

demand for bandwidth and speed - FTTN was not designed with the intent of putting competitors out of business.

The reality is DSL on copper networks is a transient technology designed to yield additional capacity and earnings from the existing network. It is not a long term answer to fixed network evolution. Unfortunately DSL coupled with unbundling in Australia has led to opportunistic market entry for the 'competitive' delivery of broadband and has created an industry that has captured the regulator despite the fact that it is not a sustainable way in which to develop and enhance fixed network capabilities.

FTTN offers a path toward a sustainable high bandwidth future where market characteristics i.e. population densities may not support the ideal network upgrade, i.e fibre to the premises. Whilst FTTN is less costly than fibre to the premises it can still deliver substantial operational savings and it is fanciful to suggest that Telstra planned its FTTN deployment merely to forestall competition. In Holland KPN believe half the cost of their FTTN rollout can be covered by disposing of exchange sites. Saving on buildings is not the only operational benefit of an IP network delivered over FTTN as there would be significant maintenance savings on what is now an ageing and increasingly costly copper network and substantial savings in power as traditional switches are replaced with soft switches.

The change to FTTN does not though mean an end to competition. It means new forms of service based competition at the applications layer rather than at the physical network level. That is the challenge that should have been addressed in the regulatory submissions and before this inquiry rather than arguments for the status quo.

Telstra's Alleged anti Competitive Behaviour

It would appear that sustaining current levels and forms of competition, especially those that have emerged with sub loop unbundling, rather than securing investment has become the major theme surrounding the tender. Indeed the mass of evidence put before this inquiry confirms that the focus is not on the changed environment needed to facilitate deeper deployment of fibre in the access network but on the perceived regulatory failings and the alleged conduct of Telstra in forestalling competition over recent years.

Consequently much of the argument and evidence put before this inquiry on current regulatory shortcomings is largely if not utterly irrelevant to the question of how a deep fibre NGN access network can be facilitated. This is especially so in relation to evidence on the impact of current

network architecture and engineering practices i.e. the deployment of pair gain and remote switching (RIMS) has had upon broadband deployment. These are the very problems that FTTN deployment is designed to overcome and these technologies would be replaced by xDSL technology at the node. Pair gains and RIMS predate the deployment of ADSL i.e. RIMS were widely deployed in the early 1990's and as Mr. Malone of IINet has noted deployment of RIMS and pair gains at that time represented best practice as a rational and cost effective way in which to increase network capacity. To now dwell upon these technologies as somehow being proof of Telstra's reluctance to facilitate unbundling and DSL deployment is at best irrelevant if not somewhat disingenuous.

Similarly in what was perhaps one of the most telling of the many appearances before this committee Mr. Malone also put in context the complaints about Telstra's supposed obstruction and anti competitive behavior. Other witnesses have complained of obstruction if not sabotage in seeking to gain access to Telstra's exchanges and facilities for DSL deployment accusing Telstra of claiming exchanges were capped i.e. full and weren't available to competitors and that Telstra generally engaged in delays in giving access. In response to questions about the problems of access i.e. at RIMS and at exchanges which were allegedly full Mr. Malone stated:

> *" We have certain exchanges in Australia—there are about 20 now; oddly enough nearly half of them are in Perth—that are capped exchanges. There is simply no space to be able to put any more equipment in there…. Our experience has been that the Telstra network people are very good. Half our networks team used to work in Telstra, so we do have those relationships. They are not lying. It is not a game. The reality is, the exchange is full."*

Mr. Malone went further in relation to allegations about Telstra's conduct to stress:

> *I will go back to what I said before. I do not see any malicious intent by Telstra here. Our experience there has been that for the network guys, like everyone else, the principal requirement is to protect the integrity of their copper. If you walk into an exchange—and it is really worth a visit in there—there is nothing like seeing 20,000 copper lines lying in trays, then remembering that every one of them has to be patched to the right line, the right carrier, everything like that. These guys are fanatical about it*.

This real world view of the relationship between Telstra and access seekers stands in sharp contrast to the views put to this inquiry by lobbyists and non operational staff from competitors. As Mr. Malone rightly pointed out a telephone exchange is a complex environment and exchanges are also assets of national importance and no operator would give unfettered access to an exchange. Also co-location of competitors equipment is a far more complex issue than merely handing over the keys and depends not just on physical floor space but on power supply, air conditioning and MDF capacity and design. Often exchanges may be capped because incrementing any one element in the small quantity demanded by a competitors would be hopelessly uneconomic. It should also be recognized that as the owner of exchanges Telstra should have the right to reserve capacity for its own future needs.

But even if the complaints leveled by competitors had substance, which they clearly don't in light of Mr. Malone's evidence, it has to be asked what possible relevance can such complaints have to NGN access when questions of physical access are no longer dominant and if there is scope for discriminatory conduct in lies in price not in direct sabotage. The emphasis that submissions have put upon 'failings' in the current regulatory regime, not only to this inquiry but also the regulatory submissions to the expert group confirm that Telstra's competitors are more interested and intent on prolonging the current market structure and deployment of existing technologies than in advancing the debate about FTTN rollout. This is notwithstanding the submissions by Terria and its predecessor the G9 who claimed they could build a 'club' owned network nor is the reality that competitors have no interest in FTTN lessened by the fact that Optus have lodged a bid.

Telstra's Conduct As suggested no party emerges from the debate about FTTN with real credit and Telstra may also have been at fault in recent years by being over zealous in protecting their network from access seekers compared to earlier years. But as a fully privatized company Telstra has a responsibility to protect its shareholders' investment and the relationship that existed under public ownership when large chunks of value were given away could not be tolerated once the company was fully privatized. This is especially so when Telstra feels that many elements of the regulatory regime are irrational and leech value from the company. Nevertheless despite the many allegations about its conduct there is no proof that Telstra has acted outside the law, and given the massive value that could be lost to the company if it meekly agreed to every regulatory imposition, it is understandable that decisions are challenged and given the scrutiny that the law properly allows.

If there has been fault in Telstra's conduct it lies more in its failure to be more forthright in explaining the significance of its planned FTTN deployment and the upgrade to NGN. Perhaps Telstra sought wrongly to sell the investment almost solely on the strength of high speed broadband which it thought would gain ready political support especially if high speed broadband could also be delivered to rural areas.

Consequently Telstra's emphasis in the debate may been misguided and had Telstra been more forthright about FTTN it might have precluded the backlash by competitors who have been able to give life to the fiction that that FTTN is a new network. It would also have forestalled much of the misleading argument advanced by its competitors about its past conduct and allowed a more rational starting point for its discussions with the ACCC. Instead by focusing almost solely on the deployment of high speed broadband Telstra may have distorted the debate and created an environment where the issues of new network investment could not be considered on their merit.

Nor as noted was Telstra's increasing animosity toward the regulator helpful as it failed to address the flawed nature of the regulatory regime and placed emphasis on the deteriorating personal relationship between Telstra and the ACCC. But compared to the unsubstantiated accusations of anti competitive and other behaviour by Telstra, the failure to perhaps be more forthright about the nature of FTTN was a minor error.

Access to the Sub Loop and The Economics of Wholesale In 2006 Terria's predecessor the G9 lodged an access undertaking with the ACCC which purported to show that nine of Telstra's competitor's could build an FTTN. The proposal was misleading and not merely because of the financial standing of the companies who claimed they could build a $10 billion plus network but because of the access to Telstra's facilities that the consortium needed. The proposal was predicated on sub loop unbundling with the G9 supporting the fiction that sub loop unbundling could be viable by lodging a further application to the ACCC for a variation to the ULL declaration. Lodging that application created the impression that FTTN and Telstra's existing copper could coexist and it meant the question of the threatened 'confiscation' of Telstra's assets did not need to be addressed.

Despite the G9's belief in sub loop unbundling the issue had already been considered and dismissed in Holland where the respected consultancy Analysys had advised OPTA the Dutch regulator that sub loop unbundling would only be viable in a limited number of central business district BD locations and consequently was not an option for widespread use. But even if the

economics of sub loop unbundling could be made to work there are attendant technical issues as well as the simple question physical space in cabinets at the node. Typically node cabinets cannot house multiple DSLAMs and local councils would be unlikely to accept several cabinets grouped around street pillars to hold competitors DSLAMS. Also repeatedly visiting a node/pillar to cut over a small number of services would be highly inefficient and costly and threaten the security and quality of service.

Nevertheless it has been argued that the existing copper and FTTN could co exist to carry both node and exchange based xDSL services. Whilst this is theoretically possible it does present operational and technical challenges i.e. the problem of mid point injection of 'signals' that could only be offset by lowering the transmission power of both the exchange and node based services effectively limiting if not negating the rationale for pushing DSLAMs closer to the customers. Also with many of the existing ducts in urban areas at or near full capacity there may not be the physical duct space to place fibre alongside existing copper cables. And certainly Telstra would not wish to give other operators or their contractors the right to pull cable through its ducts given the danger of damage to existing cables.

Telstra competitors have now acknowledged the problems of sub loop unbundling and the lack of physical capacity in existing ducts by calling for full node cutover which would displace the existing copper. As noted this would have a profound impact on Telstra now that it has been excluded from the tender. With another operator winning the tender and building FTTN Telstra would be left as a truncated operator dependent on another network to deliver services. Consequently it is misleading to suggest as Mr. Simmons of Terria did that Telstra would still be a vertically integrated carrier.

Nor would transferring Telstra's sub loops to an FTTN network owned by another operator be reasonable or practical as Dr. Kelso implied in evidence to this inquiry, merely because the existing copper has been 'written off'. Telstra's shareholders did not buy the network on the basis of its accounting standing i.e. whether or not it was fully depreciated. They bought Telstra shares because of the revenue streams generated by the network and would be entitled to compensation for the revenue foregone given that the margins on the sub lop would fall substantially under regulated access following full node cutover. Similarly if Telstra was obliged to purchase capacity from a backhaul interconnect point to the node from a competitors network, its margins would again be reduced notwithstanding the assertions by its competitors

that a 'club' owned wholesale only FTTN network would offer lower access charges than that owned by a vertically integrated operator.

A wholesale only network would have to increase charges and the question of increased wholesale charges was major stumbling block to Babcock and Brown's plans to structurally separate *eircom*. The Irish regulator Comreg feared that wholesale rates would rise with separation given that the network, whilst accounting for 70% of eircom's asset value only earned 40% of profits. This network asset value/earning ratio is typical of many incumbent operators where the yield on the network is low, with the margins being generated at the retail level. This split of earnings becomes even more pronounced with NGN as Mr. Price of Axia pointed out. Mr. Price indicated that with fibre based NGN's only 30% of revenues might lie at the network level, with the bulk of earnings being generated at the applications or services layer.

If a stand alone structurally operated FTTN is to be attractive to investors it would have to generate returns on the network above the network returns generated in a vertically integrated operator. And despite assertions that a structurally separated network would in essence be a utility the *eircom* experience again shows that investors and financiers would not be satisfied with utility returns because of the significant risks of investing in Next Generation Networks. While the returns sought might not need to be Telstra's ambit of "in excess of 18%" they certainly could not be utility network returns of 8-9% and might ultimately lie in range between 12 – 14% based on analysis undertaken by financial advisers Rothchild of the proposed *eircom* split.

In summary sub loop unbundling is not economically rational and a full node cutover would lead to a massive compensation claim from Telstra. As outlined transferring the full sub loop to an FTTN network owned by a competitor would be fundamentally different from the current ULL regime and it is misleading, as Terria's Mr Simmons suggested argued that the precedent exists for a such a transfer because of ULL. This is one of the many misleading claims and distortions that Telstra's rivals have engaged in during the debate about FTTN deployment.

Roll In – Roll Out and the Stranding of Assets Whilst many of the arguments put by Telstra's competitors in this debate have been misleading none is perhaps more distorted and self serving than their new found interest in serving rural and remote areas with broadband. Telstra's competitors have all argued that rolling out an FTTN and or broadband delivered by another technology in underserved and non served rural areas first would not only create equity in access to services it would also, somewhat surprisingly, be good business.

In a somewhat curious misunderstanding of the nature of FTTN Terria's Michael Egan said 'rolling-in' rather than 'rolling-out' would capture new customers and build the market for broadband. He told this inquiry:

> *"It does happen to also coincide with our commercial interests to start the rollout from underserviced areas. We make no secret that it is in our commercial interest to roll in rather than roll out. The reason for that is that every person who gets these services for the first time as a new customer is providing new revenue."*

Mr Egan's concept of a sound business case requires that the network build start in the highest cost areas first with the lowest population densities, rather than in the urban areas with high population densities and far lower costs. Obviously by starting the rollout of FTTN in urban areas an operator would immediately capture all of the existing broadband customers at relatively low cost and capture unsatisfied urban demand for broadband which could not be met because of existing network technologies i.e. because of pair gains and RIMS. This would generate immediate cash flow for the operator from which the network could be funded into less economic regions. Capturing this immediate cash flow would also lower the debt needed to fund the network and so lead to lower costs as interest payments would be lower allowing the project to become cash positive far more quickly than a roll in deployment.

It would seem that the 'Egan' business model is based on spending extremely large sums of money initially to capture only a minor portion of the market. The true costs of an FTTN build aren't known but a guide to the comparative economics of 'roll-in' versus 'roll-out' can be found in Telstra initial estimates which were set out in the 2005 Digital Compact. Whilst Telstra's 2005 estimates may lack precision they do serve as guide to the economics of providing rural broadband. Telstra's initial costing suggested that just under 1 million rural households/premises would require a $4.7 billion capital subsidy from the government to deliver 12 Mbit FTTN, whilst the cost to Telstra of providing FTTN to the other 7.5 million households/premises, on a commercial basis, would have been approximately $5 billion.

In effect the economics of 'rolling- in' are that with a $10 billion build half the capital would be spent on covering approximately 15% of the market, a market that was largely unaware of the benefits of broadband and a market that because of its depressed nature following years of drought might not have the income levels needed to pay for high speed broadband. In contrast

a ‘roll-out’ from the cities would mean that roughly the same amount of capital would cover 85% of the market and as suggested capture significant cash flows because all existing broadband users and of course traditional phone users would be transferred to the network. Despite these compelling economics for a rollout from urban areas Mr Forman of the CCC has also argued for ‘roll-in’, basically on the same grounds as Mr Egan. Mr Forman told this inquiry:

> *“As I said, if an independent networker starts building in outer metropolitan or regional areas what they would be doing is breaking virgin ground. At that point there would be an enormous incentive. My view is that there would be a bit of a land rush by retailers, if they felt they could get in on a level playing field, to get in and grab those customers who would be available for the first time…..Perhaps because I am a simple person, my view is that the incentives have not been right in the past and the incentives can be got right this time. For me, again, if I were looking at this as a person building up a business case for an entirely new network the place I would start is the market where there is the lowest percentage of people who are buying the service today who are going to clamour to get it. If I were a network builder who had no interest in protecting any existing retail activity that is where I would want to go.”*

The bizarre assertion that ‘rolling-in’, whilst laudable in terms of equity, could be the basis for a sustainable national FTTN rollout denies the basic rule of any business case which is to generate cash flow so that the business will turn cash positive in the minimum time so that debt and interest payments can be minimized. It also denies the basis on which rural networks have been developed since the late 19Th century which is that loss making /high cost rural areas are cross subsidized from low cost/high revenue areas.

Nevertheless the basic rules of telecommunications economics seem to have eluded Telstra’s competitors. Their enthusiasm for ‘roll in’ rather than ‘roll out’ is grounded in the belief that a rollout from the cities would somehow be anti competitive implying that such is the commitment of Terria and the CCC to competition that it outweighs rational business practice and the need to build the network at minimum cost. Mr. Forman of the CCC has suggested that:

> *“We have always advocated a roll in. We think it also makes business sense. If you are building a network for anything other than anticompetitive reasons, that would be where you would want to start. You would want to expand the addressable market by going into*

areas where people cannot get broadband, and work your way in. You should have an alignment of good public policy with a business incentive as well."

This suggests some confusion if not tension in the views held by Telstra competitors. They stressed i.e. initially the G9 and Terria which have members in common with the Competitive Carriers Coalition that their proposal for a 'club' owned FTTN was pro competitive and would stimulate competition under their open access wholesale model for FTTN. Quite how rolling out this supposedly competitive model in the low cost, high return metro areas first could be anti competitive has not been explained. Indeed if this model replaced competitors exchange based DSL services with node based VDSL then the competitive balance would remain unchanged.

Quite what then do Mr. Forman and others mean when they refer to rolling out from urban areas being anti-competitive? It would seem this could only be anti competitive in the minds of Telstra's competitors if a roll out from urban areas was undertaken by Telstra. If Telstra were to start the FTTN rollout in urban areas then it would strand the existing stock of competitive DSLAMS installed in Telstra's exchanges and as noted it was this concern that led competitors to suggest that they, rather than Telstra, could build the network. Competitors would then be dependent upon reselling services from Telstra DSLAMS and their margins would be lower.

But assets would be stranded even if Telstra's competitors built the network because the physical location i.e. the exchanges where DSLAM's are installed would be bypassed by the new network architecture. Despite this reality this inquiry has been told that the issue of stranded assets can be addressed by an open access regime. Dr Kelso told the inquiry that:

"if we have a true open access regime through fibre-to-the-node or preferably fibre-to-the-home, the matter of stranded assets should not be an issue. They probably have been written off already in tax terms. But, if you have true open access, there really are no stranded assets, because those competitors can then simply move into the new regime….if the new regime is not a truly open one, yes, there are stranded assets. But,really, having true open access is the answer to that."

Despite Dr Kelso's confidence it isn't clear quite how a so called open access regime would solve the problem of stranded assets other possibly a belief that access costs would be so low with open access that the loss of their own infrastructure would not be an issue for access

seekers. But it seems reasonable to assume that any deep fibre deployment will strand assets especially DSLAMS which cannot be relocated to the node because the intent is to deliver VDSL rather than existing ADSL or ADSL2. Also investment in backhaul which has been configured to interconnect at existing exchange sites may be stranded as the architecture and physical layout of the network changes. Consequently it is difficult to understand quite how any access regime can address the issue of stranded assets. In the simplest of terms DSLAMS installed to take advantage of copper network arbitrage will be made redundant by any deep fibre deployment.

The Loss Of The ULL Subsidy The stranding of assets, whilst of obvious concern to Telstra's competitors is though perhaps not the major issue given that many competitive DSLAMS have already paid for themselves. What is of real concern is the loss of the ongoing subsidies competitors now enjoy from the unbundled local loop. Despite the promise of low wholesale prices on their structurally separated 'club owned' network, the margins offered to Telstra's competitors on a 'competitive' FTTN network would be lower than those currently available on copper. This fall in margins for competitors would flow from two factors.

First on transferring to FTTN all access seekers would be paying for the use of new assets that have to be funded rather than offering service through exchange based DSLAMS that have paid for themselves and are now fully depreciated. This would apply irrespective of who builds FTTN because unlike the current network which is a sunk cost, the new network must be paid for and it cannot be paid for by prices based on long run incremental cost which is the basis of current access pricing. Margins would also fall because competitors would no longer have the subsidy offered by unbundling especially in Band 2 where the de-averaged ULL price compared to the retail line rental price typically charged by competitors offers a 100% margin.

The importance of the Band 2 unbundled local loop price to Telstra's competitors is obvious. As the following table shows unbundling is effectively confined to Band 2 and with at least 600,000 unbundled lines in Band 2 now the ULL subsidy adds some $300,000 a day to the competitors bottom line or about $110 million p. a . merely for adding a line to an invoice.

Snapshot of Telstra's customer access network as at 30 September 2008

	Telstra Voice Only SIO's	Telstra wholesale and Retail ADSL	Other Telstra DSL products SIO's	ULL SIO's	LSS SIO's	Total SIO's
Band 1	208,903	35,000	4,843	27,766	21,227	276,512
Band 2	4,308,609	1,976,916	36,425	539,518	435,918	6,861,468
Band 3	1,138,763.	870,452	10,443	6,810	11,823	2,026,468
Band 4	740,193	265,410	5,206	111`	757	1,010,920
Total	6,396,468	3,147,778	56,917	574,205	469,725	10,175,368

Source ACCC

Irrespective of who builds FTTN this 100% ULL margin would disappear as the copper which has been unbundled is replaced by fibre which can't be unbundled.

What then are the merits or rationale for the 'roll-in' argument? In simple terms a 'roll-in' deployment would preserve Band 2 ULL margins and as a number of parties to this inquiry have readily admitted it would allow them to 'sweat' their investments in Band 2 DSLAMS for a longer period. Also by seeking to make it a condition for the rollout it makes the business case far less attractive to Telstra and adds a further disincentive to an already risky investment. Quite simply if the regulatory requirement was to start the build in rural areas it would destroy the business case or significantly increase cost that could only be met by an even larger government subsidy which would not be forthcoming.

Of course if the tender had been confined like the Opel tender to rural areas and the $4.7 billion was being offered solely as a subsidy for rural rollout then the government would rightly demand that the $4.7 billion to be spent immediately in rural areas. But the government has said that it expects a return on the $4.7 billion and that it could be offered as equity, meaning it is a commercial investment that should not be bound by demands about where the rollout should start. If the government genuinely wants a commercial return on its $4.7 billion then it is relegating rural coverage to the last phases of the project and it is not interested in giving priority to underserved areas.

As the table on unbundling readily demonstrates, despite having had the right to enter the market in rural areas for a number of years Telstra's competitors have shown absolutely no interest in offering broadband outside metro areas unless there have been large subsidies. Consequently their argument for a roll in of the network is at best cynical and highlights the fact that they are not serious about building a sustainable national high speed broadband network.

Open Access Despite the fact that fibre is being deployed in local access networks under current industry structures by vertically integrated operators in Europe and North America, Telstra's competitors claim a fibre rollout demands structural separation. They argue structural separation will preclude the NBN operator from exercising market power. Telstra's competitors also argue separation will provide incentives to maximize traffic and use of the network instead of restricting competitors' access under a vertically integrated model. In a gross simplification of the concept of open access, they also argue that only separation can deliver true open access. This ignores the fact that internationally no regulator or government has mandated or is even considering structural separation as a condition for open access. The concept of open access is being developed in other markets where the NGN access network is owned and operated by a vertically integrated operator without calls for separation.

Unfortunately the simplistic assertion that separation guarantees equal access demonstrates the low level of debate about open access and NGN in Australia. In reality there has been no debate about access under Next Generation Networks and unlike other markets, such as the UK, there are no industry bodies considering the issue in a co-operative and constructive manner nor are Australian regulators providing guidance unlike the UK's Ofcom.

Open access cannot be equated with separation nor can it be deemed merely to be common carriage, an obligation placed upon monopoly, copper based analogue networks. Open access, like that other somewhat nebulous concept 'reasonable overtime' is very much a matter of perception. To Telstra's competitor's it means that there should be no discrimination in terms of price or technical quality or network access between any user of the network with the network owner being precluded from offering retail services. To Telstra it would appear to mean the right to offer wholesale services that yielded a commercial return on a non discriminatory basis whilst allowing it to benefit from the economies offered by vertical integration i.e. not being obliged to offer access to competitors at cost or at its own internal transfer prices nor offer its full suite of services other than at commercial wholesale rates.

In its common understanding the concept of an Open Access Network is more concerned with the network architecture rather than the commercial terms of use of the network. It refers to a horizontally layered network architecture and business model that separates physical access to the network from service provision. With NGN access the significance of wholesale carriage declines relatively as value is added at the applications layer rather than through physical transport, which in effect becomes 'commoditized'. And if we are to accept estimates of the revenue split between the network and applications layer with NGN's, with most revenue concentrated at the applications level it is difficult to understand the obsession of Telstra's competitors with maintaining the current network margins given the relative decline in the significance of wholesale carriage costs to the total cost of service and the likely returns that can be generated at the applications layer .

The question of access becomes more complex and more significant in the move from the current 'best effort' internet environment to the new services enabled by an NGN fibre access network. Carrier grade VoIP and video services such as video conferencing which would be offered over FTTN are real time applications demanding priority over other services. And the need to dimension the network in a cost effective manner means that ultimately there must be some rationing of use and access. The concept of a "carriers' carrier" operating the network, which is at the heart of rival proposals to Telstra, does raise questions about how a cost effective network capable of supporting speeds of up to 50Mbits would be dimensioned if all users expected open access on the simplistic terms that have been outlined by parties such as Terria.

It has also been argued that the PSTN is in effect an 'open access' network which could serve as a model for NGN access but this would be prohibitively costly. The current PSTN is in effect self regulating in terms of access in that it is dimensioned to carry a 56kbit channel through a dedicated copper pair which is solely available to one user. With the development of internet access through dial up the user could choose what use they wished to make of this channel i.e. for voice or for internet access.

The development of DSL technologies has put pressure on this network and ISP's now ration use through speed and data caps. The increasing demands made by applications such as video downloads are placing enormous pressure on the current network and have led to the need for increased speed and capacity that can only be delivered by the deployment of fibre. The problem is though this new investment cannot be paid for under the current regulatory

regime. It cannot be paid for by an access regime which denies the network owner the economies that flow from vertical integration nor can it be paid for by a model of so called open access that denies the network owner a commercial return on the investment and which does recognizes the risks involved.

The question of accommodating risk in NGN investment in new access regimes has been central to the debate about open access in other markets with the UK regulator Ofcom noting:

> *"We are proposing to achieve the conditions for this investment by adapting the existing principles of contestability, innovation and equivalence that we have used for the regulation of current generation broadband. In addition we think that two further principles will be necessary as we move to next generation access, to reflect the commercial risks and different characteristics of these investments compared to existing access networks, which are largely sunk cost investments."*

In effect Ofcom is acknowledging that use of NGN's cannot be on the same terms as access to existing networks which have effectively been paid for and that if NGN investment is to take place there must be regulatory change and:

> *"This will involve removing any unnecessary regulatory barriers which might delay this investment."*

Ofcom has identified five principles underlying its approach to NGN :

- Contestability
- Maximising potential for innovation
- Equivalence
- Reflecting risks in returns
- Regulatory Certainty

Few of these principles are reflected in the calls by Telstra's competitors for a so called open access model based on structural separation and it is worth testing the so called open access model of Telstra's competitors against Ofcom's carefully thought out principles. First the statutory monopoly and protection from overbuild sought by Telstra's competitors would preclude contestability i.e. it would preclude any form of fixed infrastructure based competition. Secondly monopoly rights for the FTTN operator would stop innovation by limiting the number of

network operators in the market. Thirdly under the Oftel proposals the principal of equivalence i.e. the 'fair' treatment of access seekers, is predicated on the definition of key anchor products and access processes but does not extend to across the board access to the network operator's full range of services and it most certainly does not include structural separation which Telstra's competitors are demanding. Fourthly whilst Ofcom has stressed that the risk of building NGN's must be recognized in the rates of return that are allowed, Telstra's competitors discount the risk involved and claim that FTTN is a simple utility investment. Tying the investment to utility rates of return would prevent the network operator from raising the necessary capital.

And finally in stark contrast to the process which the government has engaged in, which lacks any direction on regulation, Ofcom have stressed the need for regulatory certainty to ensure that investments can be undertaken with confidence over the prolonged timeframe that NGN investment demands. Telstra's competitors have filled that policy void with calls for structural separation and created such regulatory uncertainty that the investment may never be undertaken.

It should be noted that although the debate in the UK about open access has only begun it is clearly more advanced than in Australia. Similarly the debates in other markets such as the USA indicate that the concept of open access is a 'work in progress' and still has to be fully defined. Consequently it cannot be reduced to some simple proposition that open access equals structural separation. In summary the question of access with IP enabled deep fibre networks is far more complex and demands far more debate and thought than that indicated in the mass of regulatory submissions to the expert group or evidence given to this inquiry.

Conclusion It would seem reasonable to assume that a cash rich, technologically competent company such as Telstra would have been encouraged by government to invest in its own network. As the national network operator Telstra expected it had the right, if not an obligation to renew the local network, much of which in urban areas is over 40 years old and subject to repeated service failures as insulation fails and copper conductors erode. But with competition standing centre stage rational policy has slipped from the agenda and because of pro competitive regulatory settings the national telecommunications network operator has either been unable or disinclined to proceed with investment in the national network. Fearing that it would be denied a commercial return on FTTN Telstra shelved its plans in 2006 and subsequently has been unable to gain the understandings or undertakings needed to proceed with the investment.

Now Telstra has been disqualified from the tender to invest in its own network leaving the government with little more than the promises of competitors all of whom appear to be content with the current arbitrage regime and have no real interests in seeing fibre being deployed in the access network. Logically the national network should be renewed with fibre, ideally to the home but at least to the node, so that VDSL services can be pushed out to within reach of consumers. Telstra's competitors, who have enjoyed below cost use of the existing copper wires since the 1997 Telecommunications Act opened the market to full competition, know that if Telstra replaces copper with fibre arbitrage will end and they will be obliged to pay a commercial wholesale rate to provide broadband and voice services over the new network.

The threat fibre based access posed to the existing arbitrage regime encouraged Telstra's rivals the Optus led G9 group (now Terria) to develop their own plans for a national broadband network . Their initial proposal, developed by the Allen Consulting Group noted that if the price of a Telstra fibre network was the loss of competition then upgrading the network wasn't worth it. That echoed the sentiments of the ACCC who had also warned of the threat to existing competition posed by fibre deployment . Curiously Telstra's competitors all seem committed to preserving competition despite the fact that they nearly all concede that as a policy construct competition has been a failure and has not delivered the expected outcomes.

In its June 2008 submission to the expert group Optus complained that competition had been a failure, headlining that the industry had suffered "eighteen years of fear, uncertainty and delay" and that only structural separation could end" Telstra's tyranny". It was a theme repeated in the majority of the 84 submissions on regulation of the proposed network to the expert group with Telstra's competitors chorusing that the only way forward was to break up Telstra and allow real competition on a wholesale only national broadband network.

This wave of anti Telstra sentiment has completely subverted the tender process which is now more concerned with maintaining the status quo rather than developing the framework for FTTN deployment. As outlined Telstra's ambivalence about the process led it to lodge a brief expression of interest that was dismissed leaving only companies that have neither the financial depth nor real interest to roll out FTTN still in the tender. The situation is now farcical with the company that owns the national network being barred from investing in it leaving the government with a series of bids none of which can satisfy its policy objectives.

The farce of course began before Telstra was disqualified. It began with the curious concept that companies other than Telstra could upgrade an asset which neither they nor the government owned and it was compounded by the standing given to 'bidders' such as Terria who had neither the capacity nor real ambition to build an FTTN.

The tender gave Terria a national platform and the role of front runner against Telstra with its chair Michael Egan boasting that the group would be:

> *"submitting a bid that would win because it was technologically first-rate and opened up the Australian communications industry to fair and robust competition."*

It was a confident boast that didn't reflect Terria's financial capacity or its ability to mount a bid. In late August 2008 when the bidding opened Australian Security and Investment Commission records showed that Terria was no more than a shelf company whilst Terria's website indicated it still had to choose a technology supplier and partners who could build a network. Nevertheless large elements of the media gave the Terria bid credence and inflated its credentials allowing it to further distort the debate about regulatory change and the NBN.

In summary Terria was no more than a shell designed to game the process by lobbying for structural separation. That it was able to dominate the debate and was taken as a serious contender reflects poorly on the level of understanding of and interest in telecommunications policy in Australia. Terria 's failure to bid confirms that despite all the bluff and bluster from Telstra's competitors about their ability and willingness to build a national broadband network they are only interested in maintaining the status quo. One member of Terria was at least forthright about the nature of the Terria bid. Mr. Malone of IInet put it rather bluntly:

> "*Why is iiNet supporting the TERRiA bid even though we clearly think the whole process is a farce? Because if we do not, Telstra gets a single run at this and gets to charge whatever they want."*

Mr Malone went further in admitting that his company, one of the most successful and innovative ISP's in Australia, didn't have the financial means to mount a bid commenting that:

> "*In terms of cash, we are a small business. Our market cap is less than $200 million. Our capacity to build a $5 billion network or contribute meaningfully is pretty slim.*

Unlike other parties to this inquiry Mr Malone was at least straightforward in explaining that maintaining arbitrage rather than engaging in access network investment is at the core of Telstra's competitors' business plans. To a large extent it now appears that this business model will continue and the self interest of Telstra's competitors will prevail and that investment in FTTN will not proceed. This was inevitable because the minister put his faith in an ill designed tender that created an environment for policy failure.

Despite Senator Conroy's faith in 'competitive tension', complex questions of market structure and regulation cannot be left to the market. Regulatory reform is the responsibility of government and demands leadership. Admittedly Telstra may not have done enough to educate the minister about the need for reform and about the obstacles that regulation presents to investment. They preferred, publicly at least, to blame the stand off over fibre investment on a 'rogue regulator' without acknowledging that the ACCC enjoys less discretion than any regulator in peer markets but whatever failures there were on Telstra's behalf ultimately the responsibility for this policy debacle rests with the minister.

The minister has failed to engage in the debate that is now occurring internationally where it is readily recognized that NGN investment demands a new regulatory 'paradigm'. He has failed to consider the appropriateness of the Trade Practices Act to the challenges that lie ahead. Until the minister confronts the need to amend the act and give equal weight to the promotion of investment alongside other objectives, investment in FTTN will not occur. Even if Telstra somehow manages to re-enter the tender and even if the threat of structural separation is removed investment cannot occur readily until the TPA is amended.

In reality the tender has delayed investment in FTTN further and may well have created an environment in which it will never proceed.