

A Submission to the ACCC Inquiry under subsection 152AL of the *Trade Practices Act 1974* into a Possible Variation of its Service Declaration for the Unconditioned Local Loop Service by Kevin L. Morgan

Summary

The ACCC is holding an inquiry under subsection 152AL of the *Trade Practices Act 1974* (the Act) to determine whether it should vary its service declaration for the unconditioned local loop service (ULLS). In doing so at the behest of the so called G9 group of competitive carriers who currently depend on local loop unbundling, line sharing or wholesale line rental, i.e. physical resale of the Telstra local network to access their customers with both voice and data services and most notably xDSL high speed broadband services.

Whilst the request for sub loop unbundling might be viewed as a reasonable request by the G9, to ensure a key regulatory and technical gap is filled in their emerging plans for a fibre to the node network (FTTN), the underlying rationale for the request is to ensure that their current investment in DSLAMS, co located in Telstra exchanges is not stranded by planned network upgrading . G9 have specifically asked that current exchange based interconnection be maintained even in the era of 21st century networks.

The existing G9 investment would be stranded and rendered redundant by changes in the physical architecture of the local network and changed operating procedures that would follow, if Telstra were to proceed with its planned FTTN. It should be noted that these investments would be similarly stranded were the G9 proposal for FTTN to proceed.

Australia is not alone in grappling with the complex technical, operational and regulatory questions posed by the growing trend to push fibre closer to the end user and by the replacement of circuit switching with IP base network protocols.

At its simplest level the complementary deployment of IP based networks and fibre to the node, or optimally to the home, exposes the current regulatory regime to massive challenges and may mean the tools used to sustain market entry based on the physical resale of the local network cannot be sustained at a cost that would be in the long term interest of end users. Maintaining parallel copper and fibre based local networks, which

is at the core of the G9 request, would also fail to encourage economically efficient investment and would result in a significant operational cost burden for both access providers and access seekers.

The significant problems associated with sub loop unbundling have been recognized by regulators in such markets as the United Kingdom and the Netherlands. In the UK, whilst sub loop unbundling has been mandated and offered by BT since 2001, no access seeker has sought to use the service and the UK regulator has tacitly admitted that the complexities of interconnection in the age of 21st century networks is beyond the regulators competence and best left to industry self regulation through a especially convened industry forum. In the Netherlands, following detailed expert technical and financial advice, OPTA conceded that sub loop unbundling is not feasible in all but the most limited of cases and that it does not offer a solution to the challenge posed by KPN's network upgrading.

Other regulators, most notably the FCC and the German regulator have essentially decided that it is an issue that does not warrant detailed consideration. They have granted regulatory forbearance to the dominant telephone companies so that investment in fibre to the node and home can proceed without the delays or the massive market distortions that would flow from regulatory obligations similar to those sought by G9.

Given the changes in technology which are essential if the national telecommunications network is to meet the challenge of the 21st. century, physical interconnection, modeled on past practice is not sustainable and the ACCC should, like its overseas counterparts, consider the terms and conditions of competitive access to the 'bitstream' services that the dominant carrier will provide of IP driven, fibre optic networks. The terms for bitstream access should be considered first by an industry forum and determined by consensus, with the ACCC playing a mediating role. In the event agreement cannot be reached the ACCC should exercise its powers to determine the terms and conditions of 'bitstream' access.

One - A Changing World

“The old order changeth yielding place to new least one good custom should corrupt the world” Tennyson Morte D’Arthur

Technological change within the fixed telecommunications network has been a continuum over the last century . Whilst digitisation of transmission and switching has brought significant change it did not change the fundamental network architecture which allowed the physical interconnection that exploited the margins available under the traditional two part tariff. It was the congruence of gaps in the tariff of the then monopoly operator Telecom Australia and the physical availability of exchange accommodation made available by the ‘compactness’ of digital systems, which created both the economic argument for, and physical capability for competition based on interconnection with the Telecom local network.

This local network, i.e the copper network beyond the Main Distribution Frame , represented some 45 – 50% of the total network infrastructure investment that had been made by Telecom Australia and its predecessor the Post Master Generals Department. Consequently it represents a significant part of the value that was transferred to private investors when Telstra was privatized.

That these transient opportunities for market entry could be exploited as the basis for regulated market entry should not be understood as good reason to falsely extend physical interconnect into the age of IP defined networks that use fibre optic as the dominant local network transmission medium. Whilst the initial deployment of fibre under an FTTN architecture might theoretically offer cross connect at the node or even at street pillars, the technical realities of such interconnection, even if the physical space were available at nodes and related pillars, suggests it would lead to service degradation and far higher costs as problems caused by cross talk etc. were handed off between access seekers and access providers. The extent of these problems still has to be revealed in the basic current copper network because ADSL deployment is at levels below which significant interference within cable sheaths might be experienced.

If the intent of the G9 proposal, and its contingent request for sub loop unbundling, is to make higher speed broadband widely then it must be acknowledged that the practical limits of xDSL deployment in a heavily loaded network are not known. The G9 request is therefore founded on the ‘suck it and see’ school of engineering in which the ability to

deliver large numbers of xDSL services over a composite network of fibre to the node and unbundled local loop that parallels the existing exchange to the end user copper network, are simply unknown. The reality is that with the transition to the 21st century network, there will be neither MDF's nor cross connect points in the network which are economically and technically feasible to interconnect copper and fibre. There may not even be redundant space at Telstra exchanges to co locate equipment because Telstra may no longer have large exchanges.

In summary there may no longer be the technical opportunity to 'slice and dice' the Telstra network, an ability which has been at the core of the current regulatory regime.

Two – The FTTN Impasse and the G9 sub loop unbundling Request

"I am more sinned against than sinning" Shakespeare King Lear

As an end user who's interests are prejudiced by the current stand off between the ACCC and Telstra over FTTN, one is entitled to ask are we to take the regulator's seeming acceptance of the G9 request for sub loop unbundling seriously? Is the weight given by the ACCC to the seemingly impressive access undertaking offered by G9 and the fact that this current inquiry is in progress meant to persuade end users their interests are being best served and that this inquiry has real substance?

In summary just how seriously are we to take the G9 proposal for an alternative to the \$4 billion fibre to the node network (FTTN) that Telstra shelved in 2006?

Overseas developments, and even the most cursory consideration of how this dispute has unfolded suggest that whatever the source of the clash of cultures and or style between the national telecommunications company and the ACCC may be, the long term interests of end users stands at risk.

End users are entitled to ask whether the ACCC is merely using the G9 proposal and this contingent request for sub loop unbundling as a stalking horse for Telstra because of the failure to reach agreement on the terms and conditions on which Telstra might embark on the rehabilitation of its ageing and all too clearly deteriorating local network. There is little comfort from the present policy impasse for end users suffering repeated

service outages because of failures in the copper network. Service outages are clear evidence of the need to renew conductors and insulators which are breaking down suffering from age given that the typical inner-urban copper network is 40 – 50 years old.

Despite the pressing need to rebuild this network the deployment of fibre, initially to the node is delayed, because the ACCC appears to be subject to regulatory capture, not by the dominant telephone company which appears to have offended it, but by resale based operators who fear redundancy when the ageing copper network is replaced by fibre.

Australia is not alone in grappling with the issue of whether competition based on reselling the old copper network can be sustained when copper is replaced with fibre optics in the local network.

In the Netherlands and the United Kingdom the former monopolies KPN and British Telecom (BT) are building 21st century networks and the national regulators have effectively conceded that the regulatory model which has allowed competitors a near free ride on cannot be maintained.

The Dutch and British regulators, OPTA and Ofcom respectively, have had to confront the reality that as fibre optic cable is pushed closer to the customer, or as software defines connections rather than hard wired physical links, competition based on arbitrage of the old copper lines cannot be prolonged.

Both European markets have followed a similar regulatory path to Australia. Over the last decade they have allowed competitors to install equipment in the former monopoly's telephone exchanges and then carry voice calls and broadband internet to customers over the copper network at marginal cost.

These regulators have had to consider what happens to the competitors' investment, especially in ADSL broadband equipment, once the dominant telephone company cuts off the copper wire or sells off telephone exchanges which are no longer needed with Internet Protocol based networks.

The Dutch regulator commissioned the respected UK consultancy Analysys to consider these issues and examine whether sub loop unbundling, a critical issue that G9 has asked the ACCC to consider, offered a way to keep competitors in the market. Under sub loop unbundling the competitor would interconnect or link into the dominant phone company's copper network close to the customer, at a street cabinet or the familiar pillar rather than at the telephone exchange.

Analysys found that there was no business case for linking competitors networks in this way, a finding that echoes the UK experience. In its submissions to Ofcom British Telecom, who own and operate the UK's wired network told the regulator that competitors found it four times more costly to interconnect at the end of the street rather than at BT's exchanges and that there was no demand for such interconnection.

The ACCC must know the G9 proposal is fatally flawed. It is dependent upon interconnection which other regulators have dismissed. It is dependent, if it is to be built for \$4 billion, upon G9 having access to the street cabinets and ducts that now make up Telstra's local network, an assumption that raises a host of complex legal and technical issues. And at it's most illogical it depends upon Telstra, which still holds some 70% of the fixed telephone revenues happily transferring its revenue onto the G9 network.

What then do G9 and the ACCC hope to achieve other than a further delay in Australia getting true high speed broadband? The objective is clear. They want Telstra to maintain interconnection at the telephone exchange which is vital to the competitors' current business models even after fibre is rolled out. This request forms a key part of the inquiry into sub loop unbundling.

For Telstra it would be impossible to maintain exchange based interconnection unless it foregoes the operational savings which are at the heart of 21st century networks. In Holland, KPN will fund over 50% of the cost of its fibre roll out from disposing of assets such as telephone exchanges. Maintaining parallel fibre and copper networks would drive costs up massively even if it were technically realistic..

Reading between the lines it's clear the ACCC's issue with Telstra is not about the commercial returns Telstra is seeking from fibre investment but how the regulator can keep the competitors in the arbitrage game.

Section Three – Is the Candle Worth the Regulatory Game ?

"What is Telstra seeking to hide? A monopoly designed to beggar the competition?"

(Graham Samuels Chairman of the ACCC 15th May 2007)

In a rational society it would seem logical that a cash rich, technologically competent company such as Telstra should be encouraged to invest but with competition standing centre stage in infrastructure planning, rational policy has slipped from the agenda.

The National telecommunications network operator is either unable or disinclined to proceed with investment in the national network which it is custodian of. There now appears to be a convenient fiction that neither a national operator nor national network exists, and that policy can be framed around the myth that all elements of the telecommunications network are contestable if not replicable at an economic cost.

The ALP has vowed it will contribute \$3.7 billion of taxpayers money into a Public Private Partnership (PPP) that will tender for a national high speed broadband network and in a game of catch up the Government has announced a competitive tender for a fibre optic based network with a recommendation to be made by a panel of experts.

Neither party is interested in directly considering Telstra's \$4 billion plan for a fibre optic based network that would bring high speed broadband to a majority of Australian homes. Guided by attitudes heavily influenced by Telstra's competitors both major parties, like the ACCC, view the Telstra plan as a grab for monopoly that would return the Australian telecommunications industry back to the bad old pre competition days.

Telstra's competitors have had access to the copper network at below cost for over a decade based on the theory that by subsidizing their entry to the market, and permitting resale of the Telstra network, competitors they could create the revenues and customer

base that would make it viable for them to build their own networks – the ladder of investment.

It was a policy that was totally flawed. Why would a competitor invest hundreds of millions of dollars to build their own network when they could enjoy a near free ride on Telstra's network? Also the game of resale competitors have engaged in has finite limits as the margins, especially on long distance and international calls, have been driven down by regulation, not competition. Effectively the highly attractive margins that existed when the resale game began in earnest a decade ago have been regulated away.

But rather than acknowledge resale based competition cannot continue, competition is placed before policies that would encourage investment. Given the uncritical belief that competition has driven down prices, broadened choice for consumers and stimulated innovation and investment it can be understood, at the simplest level, that the regulator would not decry policies which the Minister for Communications recently described in the following glowing terms:

“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 beneficiary 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.”

(Helen Coonan speech to CEDA 6 June 2007)

Despite the Minister's unwavering faith, even the most cursory examination suggests that what limited gains there have been cannot be ascribed to competition. The host of companies battling competitively for the consumer dollar is a myth. A quick glance in the yellow pages typically reveals that only four or only five companies, including Telstra, offering fixed line phone services directly to consumers. Untangle their complex and

seemingly competitive offers and there is little difference between them. End users pay the same for telephone service no matter which company they choose.

And it might be asked has this really been a David versus Goliath battle, with small competitive telephone companies driving down Telstra's monopolistic prices? Scarcely - prices have fallen consistently because of price cap regulation rather than competition and Telstra's competitors have been price takers rather than market leaders who have been content to sit as any oligopoly under the umbrella of Telstra's regulated prices.

Under price cap regulation Telstra has been obliged to reduce the price of phone calls in real terms over the last fifteen years. These price reductions are governed by a formula which requires Telstra to adjust its prices by the annual movement in the Consumer Price Index (CPI), minus an 'x' factor that measures changes in productivity. In an era of low inflation the 'x' factor has consistently outweighed the CPI increase and Telstra's prices have fallen in real terms.

Indeed over the last decade the 'x' factor, or productivity gain has exceeded 40%, which is hardly surprisingly in an industry dominated by rapidly changing technologies that continue to yield ever increasing economies of scale and scope.

Had all those productivity gains been passed directly to consumers, rather than laundered through resale based competition, Australia would have maintained its early 1990's place amongst developed economies as a country with low telecommunications prices. But such has been the belief in competition that ideology has triumphed over economics despite the natural monopoly characteristics of the industry and the current inquiry suggests ideology rather than engineering economics continues to drive policy.

The diseconomies induced by competition have been masked by continued technological gain and the real cost have been hidden by price cap regulation which has offered some relief to end users.

It is now time to objectively assess whether resale based competition dependent upon exchange base interconnection has yielded real benefits. A growing academic literature suggests its has not and that policies such as local loop unbundling have acted as a

disincentive to investment by both access seekers and access providers. Giving this growing criticism of the effectiveness of local loop unbundling it would be unwise to proceed with further 'refinement' of the unbundling rules merely in an attempt to prop up a competitive regime that has reached to end of its technological life cycle.

Whilst it may be difficult to accept, the engineering economies of local network fibre deployment put the natural monopoly characteristics of the network beyond doubt and it would be better to frame policy within this reality rather than attempt to sustain regulated access through physical interconnect whether at the exchange, node or street pillar. Similarly it would be more constructive to acknowledge that Telstra is the national network operator and is best placed, under appropriate regulation, to build 21st century networks without the distraction of sustaining resale based competition which has not been in the interests of end users.