Chapter 4

Convergence, content, competition and the future of broadband services

Introduction

4.1 This chapter examines the implications of communications technology convergence and the relationship and impact of content ownership and distribution on competition in broadband services. The chapter provides a number of recommendations which the Committee, after considering all the evidence to the inquiry, believes will enhance the state of competition in the broadband market. The Committee concurs with the sentiments expressed by Commissioner Ed Willett of the ACCC, who said:

> I should emphasise that in highlighting our concerns over the existing structure of the industry, our aim is not to try to stop Telstra from competing vigorously in emerging markets nor legitimately exploiting the economies of scale and scope it brings to these markets. What we want to see is both Telstra and other providers competing more effectively with each other and in so doing providing their customers with better and more affordable services.[1]

Technology convergence

4.2 In the past, different forms of communications, such as radio, free to air television, pay television, mail, newspapers, data transmission and voice telephony, used separate infrastructure platforms and technologies to transmit information. Over the last decade it has become increasingly possible for several, or all, of these services to be provided over a single telecommunications infrastructure platform. This process is being facilitated by the increasing use of digital rather than analogue transmission systems which can use the same method of transmission regardless of what type of information is being transmitted. This process is referred to as convergence. Mr David Edmonds, Director General of Telecommunications, Oftel has said that:

> The old differences between television, radio and telephony for the conveyance of different services and information are becoming outdated. What we have now are increasingly common electronic communications services. People will still use different networks to seek broadcast type content. But much of that content is transferable between different networks

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1 Australian Competition and Consumer Commission, *Challenges in Telecommunications Competition and Regulation* At 30 June 2004: http://www.accc.gov.au/content/item.phtml?itemId=518743&nodeId=file40dbc06cdfb57&fn=20040625%20SPAN.pdf

> now and will be increasingly transferable in future as the digital revolution drives increasing capacity across the networks.[2]

4.3 The capacity of broadband infrastructure to carry multiple services was highlighted by the Institution of Engineers, Australia who told the Committee:

> Broadband networks can carry any digital content, enabling the convergence of voice, data, photos, music and video and leading to service bundling resulting in lower subscription costs and improved services with new capabilities.
>
> Broadband telecommunications have the potential to compete directly with existing cable TV, free to air television and free to air radio networks. Broadband telecommunications with sufficient capacity enables high quality audio and video to be downloaded in real time.[3]

4.4 Practical examples of convergence include the use of HFC cables, originally designed for pay TV, to carry voice telephony and broadband; the use of copper voice telephony networks to carry broadband via ADSL; and the use of mobile phone networks to carry SMS messages, photographs and data. This trend is likely to continue and new networks are likely to be designed and built with the objective of carrying as wide a variety of services as possible. An example of this is the TransACT network in Canberra which provides voice telephony, broadband Internet access, pay TV, rebroadcast of free to air television, and video on demand. The ACT Government told the Committee:

> TransACT has made significant inroads into convergence. TransACT's network utilises existing electricity poles to give homes and businesses in Canberra a range of communication services, including a permanent 'high speed' data connection, allowing the provision of a wide range of service and content partners. All of these services including video on demand; permanent 'high speed' connections to the Internet; free to air and pay television services; and mobile and fixed line telephone services are delivered through the one medium.[4]

4.5 In recent years the demand for bandwidth has risen dramatically, driven by both the development of the Internet and the emergence of new, high bandwidth, formats such as high definition and interactive television.

4.6 Communications technology convergence has allowed telecommunications providers to offer bundled services. While bundling has cost benefits for customers

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2 Australian Telecommunications Users Group, *Submission 33*, quoting Mr David Edmonds, Director General of Telecommunications, Oftel, in a paper delivered to the Institute for Public Policy Research, 11 October 2001.

3 Institution of Engineers Australia, *Submission 25*, p. 9.

4 ACT Government, *Submission 14*, p 4.

the Committee heard that there were also anti-competitive effects, as discussed in Chapter 3. The Townsville City Council told the Committee:

> Convergence can have anti-competitive impacts particularly when a dominant carrier has ownership control over a number of potentially competitive networks and platforms. This is compounded by legislative restrictions on the ability of content creators to deliver converged telecommunications and data services (e.g. video) over new platforms that compete with traditional broadcast media.
>
> A key limiting factor in Australia is the cross-ownership by the dominant national telecommunications carrier and the nation's major pay-TV broadcaster. Telstra's 50% stake on Foxtel (and the Foxtel HCF cable network) creates an anti-competitive environment vis-à-vis Telstra's xDSL offerings. This has entrenched the market dominance of Telstra in ways that are unique to the western world.[5]

4.7 Additionally, the Committee heard that cross product bundling 'convergence' from large market participants, such as Telstra, has the danger of:

> leading to cross subsidisation from more profitable products (where there is less competition) to less profitable products (where there is more competition). This can lead to undesirable competition outcomes.[6]

4.8 However, Telstra has argued that technology convergence is not a threat to competition in broadband markets.[7] cBallarat told the Committee that communications technology convergence was significant for economic growth in regional centres as it will:

> Increase service competition, lower prices, and simpler service options will only encourage consumers to sign-on for broadband access.
>
> As more types of e-services are available online (consumer and business to business services), all of which require broadband access for ease of use, the demand for better/easier/faster access in provincial and rural communities will increase.[8]

4.9 The importance of the impact on new technologies and delivery platforms on broadband competition was recognised by the ACCC. Commissioner Ed Willett argued in late June 2004 that:

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5 Townsville City Council, *Submission 15*, p.32.

6 Bits on Light Pty Ltd, *Submission 23*, p.8.

7 Telstra, *Submission 21*, p.28.

8 cBallatrat, *Submission 49*, p.3.

> The new investment we are seeing is fortunately being focussed on the provision of services using new IP-based technologies on existing networks as well as the deployment of completely new access networks based on wireless technologies.
>
> These are potentially significant developments in promoting competition of the broader telecommunication, IT and media industries over time. If these new services gain sufficient traction, they can certainly provide a real competitive threat to existing networks and thereby provide the kind of competitive impetus in services such as broadband and voice that I spoke about earlier. For that reason, the Commission will be particularly vigilant in stopping any conduct by powerful incumbents aimed at stymieing the efficient development of such services.[9]

4.10 While many consumers remain satisfied with the services which can be delivered by traditional technologies; the evidence received by the Committee during this inquiry and during its inquiry into the Australian telecommunications network, clearly shows that businesses and consumers want affordable access to high bandwidth services. Whilst the focus of this inquiry is on broadband competition, in a convergent industry it is likely to become increasingly difficult to consider issues affecting broadband in isolation from developments in the whole telecommunications sector.

Meeting the demand for higher capacity

4.11 To meet the demand for higher bandwidth, telecommunications carriers have updated or adapted existing networks to provide greater capacity. Copper voice telephony networks such as Telstra's CAN have been conditioned to provide DSL services such as ADSL. Cable networks, originally designed to provide pay TV, have been enabled for Internet access via cable modems and for voice telephony. Telstra has announced that it will digitise its HFC cable network so as to provide a greater range of pay TV services. Similarly, successive generations of mobile phone technology are capable of supporting a ever wider range of services.

4.12 However, there are limits to the extent to which these existing networks can be adapted to meet the increasing demand for bandwidth. The ability to squeeze more capacity out of the copper network through further developments in ADSL, for example, appears to be limited.

> Can you squeeze ADSL harder? The answer is: yes, you certainly can. We have done some research in the labs on how much further you could take it. There is a complicated set of technical constraints which you have to live within, but there is potential to squeeze a little more out of it with current technology. They are not radical gains, but they are nevertheless potentially

9 Commissioner Ed Willett, Australian Competition and Consumer Commission, *Challenges in Telecommunications Competition and Regulation,* p. 7. *A*t 30 June 2004: http://www.accc.gov.au/content/item.phtml?itemId=518743&nodeId=file40dbc06cdfb57&fn=20040625%20SPAN.pdf

> valuable gains. There is a new generation of technology coming onto the market called ADSL2+, which will give a bit more range and/or speed - there is always a trade-off there - and we have been investigating that. There are ways in which you might optimise the statistics of the infrastructure. This is a somewhat complicated point, but today the spectral sharing rules are done on a sort of common denominator basis and you could envisage that, with some clever modelling, you might be able to do it more efficiently. However, that has regulatory and other implications which would need to be investigated, so it is really a gleam in the eye rather than a fact as we stand. There is potential to squeeze a bit more out of the infrastructure as it stands, but I would hasten to add that we are not talking about orders of magnitude here. We are talking about percentage improvements, which I expect you will see over the next few years.[10]

4.13 In its report on the Australian telecommunications network the Committee discussed the limitations on the ability of the existing Telstra network to provide all Australians with access to ADSL because of its failure to enable all of its exchanges and because of the extensive use of pair gain systems in the network. That report also discussed the possible development of powerline communications systems which might allow broadband to be offered to consumers over the existing electricity distribution system.

4.14 Despite the possibility that the capacity of the existing infrastructure could be used to provide improved broadband access, it is reasonably clear that at some stage in the future existing networks will have to undergo major upgrades or be replaced with new technologies. Mr Malcolm Moore told the Committee:

> The notion that ADSL is a broadband panacea concerns me. It is not; it will not solve the situation. Almost all public submissions that mention ADSL are very critical of it. It must be obvious, even to the most inept people, that ADSL technology can only be seen as a stopgap, short-distance, slow-speed technology. ADSL needs to be phased out - as fast as it was brought in. As, with co-ax, twisted pair starts to age, ADSL is also about to come into the expensive stage, where maintenance costs are very high.[11]

4.15 Some new, high capacity, networks are already being deployed. Examples include the TransACT fibre to the curb network, mentioned above, and both Telstra and Bright Communications have, or are planning to trial, fibre to the home networks.

4.16 It is difficult to predict the future shape of the network in an industry which is characterised by rapid development of both technology and market forces. Evidence

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10 Dr Hugh Bradlow, Chief Technology Officer, Telstra, Environment, Communications, Information Technology and the Arts Reference Committee, Inquiry into the Australian Telecommunications Network, *Committee Hansard*, 6 August 2003, p 844.

11 Mr Malcolm Moore, *Committee Hansard*, Sydney, 13 November, 2004, pp.157 - 158.

received by the Committee suggests that it is likely that a combination of technologies will replace the ubiquitous copper CAN:

> While copper from the exchange was suitable to deliver voice services to all but the most remote parts of Australia, where satellite filled the breach, the demands on the new access network are far greater and will probably require a range of technical solutions. Fortunately, there is a wide and expanding range of technologies available, including wireless, fibre to the premises, and fibre to the curb with short-hop copper tails to fill the so-called last metre.[12]

4.17 Similarly, Personal Broadband told the Committee:

> No single broadband technology will provide all the answers…. In practice, most customers will adopt a complementary set of wireless and wireline broadband services to meet all their broadband and data needs. The market as a whole will benefit from competing technologies. The continued deployment of both fixed and wireless solutions will be needed going forward. However, as the need for mobility increases, wireless services may well start to become the only solution for many customers.[13]

4.18 In the course of the Committee's inquiry into the Australian telecommunications network, Telstra discussed where it thought the future of telecommunications was likely to go. One alternative Telstra outlined was that the existing network could be upgraded to provide very high-speed DSL by replacing parts of the existing CAN with optical fibre. However, it said that that architecture was unlikely to provide a sufficient increase in speed for long enough to justify the cost of its deployment. The more likely alternative is that a passive optical network, which delivered data to the home over an optical fibre, would be deployed.[14]

4.19 Additionally, Telstra outlined its views on the ability of wireless solutions to meet the future demand for bandwidth. While acknowledging the ability of improvements in technology to continue to expand the capability of wireless solutions, Telstra indicated that there are limits to the potential capacity of wireless networks:

> It must be recognised that there are laws of physics that you have to contend with and there are issues around the deployment of radio technology, so achieving wired equivalents is something of a challenge. There are issues like latency, which is the time for the signal to bounce back and forth. If you do not have low latency then you cannot offer services such as voice and IP in that environment. It is a shared medium, so radio technologies work well

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12 Comindico, Submission 31a, pp 3 - 4.

13 Personal Broadband Australia, Submission 11, p.5.

14 Dr Hugh Bradlow, Chief Technology Officer, Telstra, Environment, Communications, Information Technology and the Arts Reference Committee, Inquiry into the Australian Telecommunications Network, Official Committee Hansard, 6 August 2003, pp 836 - 838.

> in an environment where you have low uptake but, as soon as you start to get high levels of uptake, you start to load and stress the system beyond its capability. Spectrum availability is always going to be a limitation because, again, the laws of physics apply. Then there are issues around power limitations. Because of EME considerations, you cannot simply pump radio power into the atmosphere, and that will always limit the amount of capacity that you can put into any given radio system. So let me emphasise that radio systems, while they are very attractive for particular applications, are not a universal panacea as we go forward.[15]

4.20 As discussed in the previous chapter, rolling out a new fixed line network is expensive.[16] For a roll-out to be viable it must be able to capture a large customer base and be able to generate as high a level of revenue per customer as possible. The key to meeting these two objectives is likely to be the ability to offer as wide a range of services, particularly premium pay TV content, as possible to potential customers:

> Generating infrastructure competition in the residential and SME markets is more risky. Telecommunications investment returns in these markets are dependent on generating an effective mass-market strategy and signing up large numbers of users quickly to earn a reasonable return (i.e. reach economies of scale quickly).[17]

4.21 Communications Expert Group argued that:

> The business case and viability of small broadband carriers are dependent on the combined delivery of voice, data and video services to customers. Access to Foxtel (a content provider) services, are essential for the future growth and prosperity of this type of carrier. Current experiences in negotiating access to Foxtel have proved to be lengthy, complex and difficult. Telstra has an advantage in being able to bundle Foxtel with Internet and voice services to the disadvantage of carriers specialising in providing broadband and video access to customer premises.[18]

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15 Dr Hugh Bradlow, Chief Technology Officer, Telstra, Environment, Communications, Information Technology and the Arts Reference Committee, Inquiry into the Australian Telecommunications Network, Official Committee Hansard, 6 August 2003, pp 840.

16 While the Committee did not receive any detailed evidence on the cost of rolling out fixed line networks the cost per home passed can be estimated from the evidence received. In its submission Optus stated that its HFC network had cost over $4 billion to install since 1994 (Optus, Submission 36, p 7) and that the network passes 1.4 million addressable homes (Optus, Submission 36, p 6). On this basis the cost of rolling out the network can be estimated to be over $2800 per home. The cost obviously depends on the type of network being rolled out and the availability of access to existing infrastructure.

17 Optus, Submission 36, p 14.

18 Communications Expert Group Pty Ltd, Submission 30, p 7.

4.22 The ACT Government noted:

> The increasing convergence of broadcasting and telecommunications services requires unfettered access to major content services (eg pay TV and free to air TV) by telecommunications providers. Monopolisation of the content market by one or two major telecommunications providers will limit the opportunity for new and innovative telecommunications providers to acquire, develop and provide attractive new content to their customers.[19]

4.23 Similarly, Mr Paul Budde told the Committee:

> We estimate the margin of Foxtel's resellers to be between 5% and 10%. Resellers in Europe and the USA have margins that are double that, or more. In Australia small operators have no choice other than to go to Foxtel for their key entertainment content – sport and movies.[20]

4.24 The importance of access to premium pay TV content was also recognised by the ACCC:

> Premium pay TV content is critical to the development of pay TV offerings and therefore an inability to access premium pay TV content may act as a barrier to entry to new broadband investment. This may lead to less competition in the supply of broadband and telecommunications services.[21]

4.25 The economic dynamics of rolling out new infrastructure were demonstrated during the roll-out of the Optus and Telstra HFC cable networks. The roll-out of a new network by Optus, which had the potential to challenge Telstra's dominance in the market, was matched by Telstra with the result that two similar networks were rolled out in the same areas of some of Australia's major cities. Both parties competed vigorously to obtain exclusive access to the premium content which would induce customers to sign on to their service. Neither of these networks appears to have been an outstanding commercial success to date.

4.26 Although Optus reports that its HFC network has achieved a penetration rate of nearly 39% of homes,[22] in its submission Optus noted that:

> For Optus, expansion of our consumer broadband offering needs to be considered in the context of the operation of the whole of Optus' Consumer and MultiMedia division (CMM) which provides telephony, Pay TV, dial-up and broadband Internet services, most often acquired on a bundled basis.

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19 ACT Government, Submission 14, p 5.

20 Paul Budde Communications Pty Ltd, Submission 6, p 15.

21 Australian Competition and Consumer Commission, *Emerging Market Structures in the Communications Sector*, June 2003, p xvii.

22 Optus, Submission 36, p 6.

> CMM has struggled financially, and has only just made a profit at the EBITA level, although continues to be loss making in an economic sense.[23]

4.27 Optus went on to observe that it did not appear viable to extend the reach of its HFC network:

> Building-out the HFC cable is not an economically viable option. Other broadband technologies are more economic, particularly DSL. The main options for Optus are to re-sell a Telstra DSL service and/or build our own consumer DSL network.[24]

4.28 One way in which a new entrant can build a customer base which can justify the cost of developing new infrastructure is by reselling wholesale services acquired from another carrier, such as Telstra:

> For Optus, a decision to build a consumer DSL network, relies on it building an effective customer base through customers acquired from other services, such as local, long distance, dial-up Internet and wholesale DSL, that can be migrated to broadband. Optus' efforts in this respect are thwarted by the deliberate dampener that the ACCC seeks to impose on local call resale services (LCS). When Optus' costs are added, the LCS price means that Optus makes a loss on the service. Optus must loss lead the service, for its other services. However LCS pricing acts as an inhibitor to customer growth, which in turn will delay a DSL build decision.[25]

Competition

4.29 As discussed in Chapter 3 the current regulatory regime has failed to deliver strong competition in broadband services outside of the capital city CBDs. The most common technology for accessing broadband in Australia is ADSL which is provided almost exclusively over Telstra's fixed line network. Although resellers of ADSL have a significant share of the market, they are reselling a wholesale service provided by Telstra which still controls over half of the retail market. Telstra is also one of the only two carriers with extensive cable networks able to offer high speed access to the Internet.

4.30 The limited nature of competition in Australia has often been attributed to structural issues. In submissions to the Committee the current structure of the industry was raised as a significant factor influencing the level of competition. For example:

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23 Optus, Submission 36, p 3.

24 ibid.

25 ibid, p 4.

> Structural issues, in particular the internationally unparalleled vertical and horizontal integration of Telstra, is at the root of the problem of inadequate competition.[26]

4.31 Similarly, cBallarat told the Committee:

> By providing the infrastructure, wholesale and retail services, as well as obtaining strategic partners in various types of products and services, Telstra has an overwhelming advantage which inhibits competition and allows the company to set the agenda in available broadband technologies.[27]

4.32 The level of competition in the broadband market reflects Telstra's dominance in telecommunications generally. In its report *Emerging Market Structures in the Communications Sector* the ACCC said that:

> The Commission's analysis indicates that the progress of competition in telecommunications markets is slowing. To date, the type of benefits that have arisen from the introduction of competition in telecommunications markets have largely flowed from competition at the retail level of the market as opposed to competition between telecommunications infrastructure providers (the wholesale level of the market).
>
> The incumbent, Telstra, remains a dominant firm in telecommunications. It is one of the most integrated communications companies in the world, continuing to be the major wholesale and retail supplier of telecommunications services, including:
>
> - local, national, long-distance, international and mobile telephony
> - dial-up and broadband Internet
> - data
> - printed and on-line directories
> - pay TV (through its 50 per cent ownership interest in Foxtel).[28]
>
> The extent of Telstra's dominance of the sector is demonstrated by the fact it receives almost 60 per cent of total industry revenue, which is almost four

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26 Comindico, Submission 31, p 2.

27 cBallarat Ltd, Submission 49,

28 Australian Competition and Consumer Commission, *Emerging Market Structures in the Communications Sector*, June 2003, p xv.

> times the revenue that its closest rival, Optus, receives. It is reported to receive over 90 per cent of total industry profits.[29]

4.33 Overseas markets are generally characterised by higher levels of competition due primarily to infrastructure-based competition between telecommunications companies offering ADSL and well-established cable companies offering access by cable modem. In its submission Optus stated that infrastructure competition was an important driver of broadband take-up:

> Infrastructure competition also generates results for consumers. In areas where Optus competes with Telstra using its own Optus HFC network, household penetration is at 18%. This compares with the 4% penetration where Optus does not have competing infrastructure.[30]

4.34 In Australia Telstra not only has an effective monopoly on the fixed line network over which ADSL is offered, it also owns one of the two major, duplicated, cable networks and dominates the mobile phone market which may develop into an alternative platform for broadband.

4.35 Telstra enjoys further competitive advantages because of the size of its customer base, its ability to sustain short term losses, its ability to bundle multiple services and its access to content. Telstra currently holds a 50% interest in Foxtel which effectively controls access to premium pay TV content in Australia. Despite lengthy negotiations, this content is still not available over either the TransACT or Neighborhood Cable networks. While these networks have been able to remain viable without being able to offer this content to their customers, the absence of this content inevitably makes it more difficult for them to attract customers and to generate revenue from their customers.

4.36 Telstra, because of its size, also has the ability to match any new infrastructure by potential competitors and undermine the viability of their roll-out. Neither TransAct nor Neighborhood Cable networks has had to face direct competition from Telstra rolling out similar new networks in competition with their own. The Optus HFC roll-out, however, was matched by Telstra:

> An example of the ability of an incumbent to limit a new provider's entrance to a market is what happened with Optus' HFC cable rollout. Optus decided to make a very large investment in a combined pay TV and telephony network in the mid 1990s (which was later engineered for broadband use). This was the first challenge to Telstra's telephone network, as it enabled Optus to compete head on with Telstra in the local access telephony market.

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29 Australian Competition and Consumer Commission, *Emerging Market Structures in the Communications Sector*, June 2003, p xv.

30 Optus, Submission 36, p 13.

> In response, Telstra decided to protect its telephony revenues by duplicating Optus' cable build by rolling out a pay TV network as well. Telstra's network is installed in largely the same suburbs and streets in Sydney, Brisbane, and Melbourne as the Optus network.
>
> Telstra has a motivation to limit infrastructure competition, particularly where competing networks are challenging its traditional (monopoly) markets. Infrastructure investment is high cost and high risk. This is particularly the case in the residential and SME market. A bold move, such as that taken by Optus with its HFC network, means large amounts can be spent and take a long time to earn a return. When faced with a strong and powerful incumbent, these risks are even higher.[31]

4.37 The views of Optus were echoed by Comindico which argued:

> The combination of imbedded structural problems and their near term anti-competitive effects has the fundamental impact of deterring investment in new infrastructure investment, while creating no imperative or incentive for Telstra to reinvest in the network. The longer-term implication is that Australia will end up being a DSL island in a truly broadband world.[32]
>
> Investment by new entrants has significance beyond the quantum of money invested. Incumbents are driven to respond to the competitive threat of new entrants deploying new technologies that threaten established revenue streams. Without such a threat, incumbents tend to delay deploying new technologies for as long as possible to extract the maximum rents from their sunk investments. Comindico contends that the slow take-up of broadband in Australia relative to the rest of the world - as evidenced by the fall Australia has experienced on the OECD broadband ranking tables for example - demonstrates that exactly this phenomenon has been occurring in Australia.[33]

4.38 In contrast, Telstra contends that the broadband market is competitive and that there is no need for further regulatory intervention:

> Telstra submits that technology convergence is not a threat to competition in broadband markets, and:
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> a) there is no evidence to suggest that divestiture of either Telstra's HFC cable network or its share in FOXTEL would lead to an increase in broadband penetration in Australia;
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> b) the level of competition in Australian broadband markets suggests a market that is functioning effectively, and certainly does not indicate a level

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31 Optus, Submission 36, p 14.

32 Comindico, Submission 31, p 3.

33 ibid, p 5.

> of market failure that would justify such heavy-handed regulatory intervention;
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> c) regulatory solutions such as those suggested by the ACCC in its Emerging markets in the communications sector report (ACCC Report) would not achieve the effects anticipated by the ACCC, nor lead to increased broadband subscriptions in Australia; and
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> d) there has been extremely strong investment by Telstra in copper-based broadband technology (ADSL), of more than $1 billion to date. This infrastructure is available to all ADSL providers.[34]

4.39 Telstra's advantages in the broadband market are important for the future of competition because they will impact on the ability of other carriers to build infrastructure platforms and remain viable in the face of competition from Telstra. In Australia it may not be viable for multiple high capacity networks to be built and operated in competition with each other. Given Telstra's existing competitive advantages, it is likely to be Telstra which will own the single network and continue to dominate Australia's telecommunications industry in the foreseeable future.

Developing a competitive industry

4.40 The current regulatory regime, while encouraging the development of competition has, as discussed in Chapter 3, had limited success. There is strong competition for the provision of broadband services in the CBD's of Australian capital cities but, beyond this, strong competition has not developed. It is not surprising therefore, that the evidence presented to the Committee frequently expressed concern about this situation with, for example, Primus arguing:

> The regulatory regime introduced in 1997 to facilitate and promote full and open competition in telecommunications has clearly failed.[35]

4.41 In its submission Comindico said that Telstra's market dominance is a function of three factors:

> (i) Telstra is the largest service provider in each of the markets of fixed voice services, mobile communications, data services, the Internet, directories, and pay television and is the de facto monopoly supplier in most regional markets.
>
> (ii) Telstra controls the basic network infrastructure on which other service providers rely.

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34 Telstra, Submission 21, pp 28 – 29.

35 Primus Telecom, Submission 32, p 2.

> (iii) Telstra's vertical integration as a "full services" operator that enables it to bundle service offerings and to leverage market strengths from one product market to another.[36]

4.42 The Committee was told that the current regulatory regime had failed because it seeks to promote competition through mechanisms which are inherently weak and which cannot address the underlying problem. Primus argued that:

> The current regulatory regime has been ineffective in promoting a rigorous competitive telecommunications market primarily because it does not, and cannot deal with Telstra's considerable market power deriving largely from its strong level of vertical and horizontal integration.
>
> The Government's legislative amendments passed in December last year whilst a step in the right direction, do not however address these underlying structural issues.[37]

4.43 In the Committee's view the current regulatory regime is not vigorous enough to ensure that strong, sustainable competition develops in the broadband industry. While it could be argued that other carriers giving evidence to the Committee have a vested interest in weakening Telstra's market position, the same concerns have been raised by the regulator and by broadband users. The validity of those comments is supported by Telstra's ongoing dominance of both the broadband market and the wider telecommunications industry. In the Committee's view, the Government must take immediate action to create a more competitive broadband industry.

The access regime

4.44 The existing access regime has not led to the development of a competitive broadband market. Resellers of ADSL have made significant inroads into Telstra's customer base but to date this has not led to the development of infrastructure-based competition. However, the ability of its competitors to obtain access to wholesale services from Telstra places some competitive pressure on Telstra and enables competitors to build a customer base which may facilitate the later development of infrastructure-based competition. For these reasons the Committee supports the retention and strengthening of the existing access regime.

Divestiture of Telstra's HFC network and Foxtel stake

4.45 The Committee heard that the level of competition in the broadband industry would be enhanced if the Government required Telstra to divest its ownership of its HFC network and its stake in Foxtel. Mr Paul Budde argued:

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36 Comindico, Submission 31, p 10.

37 Primus Telecom, Submission 32, p. 5.

> Telstra's ownership of both the telephone and the HFC network is the single most important reason that we have such low broadband uptake in Australia.[38]
>
> For the common good it would make sense to divest Telstra's share in Foxtel and, ideally, to combine the two cable TV networks (this would mean a significant reduction in the total networks as most of it is duplication) and use the combined network as a platform to develop facilities-based competition.[39]

4.46 In its report on Emerging Market Structures the ACCC explored the option of requiring divestiture and outlined the expected benefits:

> For so long as Telstra owns or has an interest in a copper network and an HFC network, Telstra will be concerned about maximising the combined revenues of both networks, and will therefore be hesitant to introduce new services or pricing on one network which cannibalises its revenues on the other.
>
> Divestiture of the HFC network by Telstra would address this problem by introducing a new infrastructure competitor into the market against Optus and Telstra, establishing conditions for increased rivalry and innovation in the supply of a full range of telecommunications services. This competitor would have the potential to supply voice, broadband Internet and pay TV services directly to 2.5 million households passed by the HFC.
>
> Increased competition would also provide better incentives for Telstra to invest actively in its copper network to provide for the delivery of a range of advanced broadband services. Overseas experience and independent analysis (including by the OECD) strongly suggest that the enhanced competition between independent networks should improve broadband price and service offerings and thereby increase the take-up of broadband services.[40]

4.47 The ACCC went on to observe that the divestiture of the HFC network by Telstra required further analysis particularly in relation to the costs of divestiture.[41] The ACCC also examined the case for requiring Telstra to divest its interest in Foxtel and its influence over the behaviour of Foxtel:

> An example of the effect of Telstra's commercial interest in Foxtel is that Telstra was only prepared to allow supply of pay TV content to one of its

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38 Paul Budde Communications Pty Ltd, Submission 6, p 1.

39 ibid, p 3.

40 Australian Competition and Consumer Commission, *Emerging Market Structures in the Communications Sector,* June 2003, p xvi - xvii.

41 ibid.

> telecommunications competitors (Optus) if Telstra was also able to bundle Foxtel's pay TV service. This is even though Foxtel had identified the content supply arrangements with Optus to be in Foxtel's commercial interests.[42]

4.48 Having examined the issues relating to Telstra's ownership of its HFC network and its interest in Foxtel the ACCC said that:

> Whilst increasing transparency, the Commission has grave reservations that access arrangements and enhanced accounting separation and related provisions are sufficient of themselves to address ongoing competition concerns in the Australian telecommunications market. Therefore it believes that the government should consider introducing ownership restrictions.[43]

4.49 The ACCC went on to recommend the divestiture of Telstra's interest in these two businesses:

> The Commission recommends that the government introduce legislation requiring Telstra to:
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> - divest the HFC network in full, and
> - divest its 50 per cent shareholding in Foxtel.
>
> Unless it can be shown that the costs of such divestiture outweigh the benefits flowing from the increased competition that divestiture would promote.[44]

4.50 The ACCC's recommendation was supported by the Queensland Government which argued:

> The Commonwealth needs to do more to encourage competition in the market for broadband services. In particular, the advice of the Australian Competition and Consumer Commission (ACCC) that Telstra should be required to divest itself of its cable network and its shareholding in Foxtel should be accepted.[45]

Access to premium content

4.51 The existing access regime requires controllers of key infrastructure and services to give competitors access to that infrastructure. However, successfully competing in a

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42 Australian Competition and Consumer Commission, *Emerging Market Structures in the Communications Sector*, June 2003, p xvi - xviii.

43 ibid, p 57.

44 ibid, p xx.

45 Queensland Government, Submission 39, p 11.

convergent telecommunications market also requires access to the content that consumers are seeking to access through the network. To date the importance of access to premium content to the development of competing networks has been largely overlooked by the regulatory regime.

4.52 The Committee considered above the possibility of requiring Telstra to divest its interest in Foxtel as a means of opening up access to the premium content controlled by that company. While this may help to address the immediate problem relating to access to content, the new owner of Telstra's current stake may be no more amenable to allowing widespread access to the content Foxtel controls. Nor would this step address problems which might arise in the future as a result of the emergence of monopolies over other types of key content. The Committee considers that the only way to address this issue in the long term is to develop an access regime for content.

4.53 This is consistent with the findings of the ACCC in its *Emerging Market Structures in the Telecommunications Sector Report*. The ACCC said that:

> The Commission recommends that the government introduce legislation to increase access to pay TV content for broadband networks.[46]

4.54 The issue of access to premium content was raised in evidence with the Committee. Mr Bruce Barclay from Silver Communities Pty Ltd argued:

> I would like to add my voice to those of others that are concerned about the state of play in the PayTV content area. Content is critically important to the user experience of broadband and therefore it is an important element that must be considered in reviewing the issues surrounding deployment and take-up….
>
> Foxtel has unquestionably a monopoly in this market and it is greatly concerning that they are doing deals that favour some service providers and not others. Governments must take action to ensure equitable access to this content, if the smaller niche players (who are so critical to deployment) are to survive.
>
> If niche players are unable to access this content on a commercially competitive basis, then the potential for the major players to squeeze them out of the market on the basis of content is very high. This will substantially slow the deployment of the high-quality, high-speed platforms that Australia requires to be competitive and thereby slow meaningful economic and social outcomes.[47]

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46 Australian Competition and Consumer Commission, *Emerging Market Structures in the Communications Sector*, June 2003, p xx.

47 Silver Communities Pty Ltd, Submission 45, p. 8.

Infrastructure competition and structural separation

4.55 Despite the fact that the Australian telecommunications industry was opened to full competition in 1997 Telstra has continued to dominate the industry and appears likely to do so for the foreseeable future. Telstra's dominance of telecommunications infrastructure and the other competitive advantages which it enjoys must bring into question the likelihood of Australia ever developing effective and sustainable competition based on competing infrastructure platforms owned by different carriers. The ACCC raised this possibility in its Emerging Markets Report:

> A particular concern is that the relationships between the markets will mean that the major firms in the existing markets will be able to leverage market power into emerging markets and for the delivery of new services. That is, the Commission is concerned that Telstra and Foxtel, in particular, will be able to protect or even reinforce existing market power, by utilising the advantage currently gained from their market power. The prospect of greater competition through new entry or between incumbents as a result of innovation will be lost – the status quo will remain.[48]

4.56 It is possible that development in telecommunications technology and changes in the marketplace will result in the development of a strongly competitive market for broadband in Australia as a whole. However, if that does not occur in the near future then serious consideration needs to be given to the structural separation of Telstra. Dividing Telstra into separate retail and wholesale businesses would remove the existing conflict of interest in which Telstra acts as both a supplier of a wholesale product to other retailers, and as a retailer competing for market share in a market in which it has a virtual monopoly.

4.57 Structural separation was supported in some of the submissions received by the Committee.[49] However, in its report on Emerging Market Structures the ACCC suggested that:

> Divestiture of the HFC network by Telstra may reduce the need for more interventionist approaches aimed at improving the competitive environment, such as the separation of Telstra's wholesale and retail businesses or separations of the local loop from the rest of Telstra's business.[50]

4.58 A number of arguments against structural separation have been put forward. Most of these relate to the potential legal and technical difficulties of splitting Telstra into two separate companies. Telstra is now a public company listed on the ASX.

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48 Australian Competition and Consumer Commission, *Emerging Market Structures in the Communications Sector*, June 2003, p 18.

49 See, for example: Comindico, Submission 31, p 18;

50 Australian Competition and Consumer Commission, *Emerging Market Structures in the Communications Sector*, June 2003, p xvi – xvii.

Almost half of its shares are in the hands of 1.7 million private shareholders based both in Australia and overseas.[51] If shareholders believed that the value of their investment would be reduced by separating the company they may seek to block any separation on legal grounds.

4.59 Some submissions to the Committee have argued that the impact of structural separation would not, or not necessarily, be negative.[52] ACIL Tasman provided the Committee with a detailed study which looked at the effects on shareholder value of vertical separation. The study examined the restructuring of British Telecom, British Gas and AGL and found that in each case shareholder value did not suffer and that the sharemarket supported those restructurings. The ACIL Tasman study concluded that:

> The examples examined all show that structural separation can enhance shareholder value. Although there is an element of 'noise' in each case as a result of a wide range of other events, it is clear that in each case the benefits of separation outweighed the disadvantages, and shareholder value was higher than it would otherwise have been. Thus the study shows that vertical separation does not necessarily detract from shareholder value, and indeed can increase value.[53]

Divestiture powers for the ACCC

4.60 It has been suggested that the structural issues in the telecommunications industry could be addressed if the ACCC were given the power to apply to the Federal Court for an order that a telecommunications company divest itself of certain assets or businesses:

> Comindico has for some time argued for the addition to the Trade Practice Act in relation to telecommunications of a compulsory divestiture power as a compromise course of action. This would provide a structural remedy that would not require immediate debate and resolution of the form of structural action.
>
> This remedy would involve providing the ACCC with an additional power to apply to the Federal Court for an order that a telecommunications company divest itself of certain assets or businesses because the continued ownership of those assets or businesses was harmful to competition. Such a power would arguably have a further advantage over pre-emptive structural separation in that it would tend to concentrate structural reform on those areas where there was demonstrable anti-competitive activity.[54]

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51 Telstra, *Half-year Report 2004*, p 16.

52 See, for example: Comindico, Submission 31, p 18; ACIL Tasman, Submission 7a

53 ACIL Tasman, Submission 7a, p 29.

54 Comindico, Submission 31, p 19.

4.61 The Senate Economics References Committee, which investigated the effectiveness of the *Trade Practices Act 1974* in protecting small business, found that greater divestiture powers were widely available to regulatory authorities in Europe and the USA and although these powers are rarely used, the threat of divestiture forms the heart of US antitrust law. This provides a legal remedy which is considered highly undesirable by large companies. Additionally, international experience suggests that, where the threat of divestiture fails, the implementation of divestiture provisions can be effective. The United States Federal Trade Commission's 1999 study of the divestiture process found that about three quarters of divestitures appear to have created viable competitors in the relevant market.[55]

4.62 The Economics Committee wrote:

> Australian trade practices law currently lacks the access to divestiture powers enjoyed by overseas jurisdictions; as a result, our competition authorities are limited in their ability to use divestiture either as a threat or as a remedy. Section 81 of the Trade Practices Act 1974 does allow the court to order divestiture, but only in the case of an offence against Section 50 (Prohibition of acquisitions that would result in a substantial lessening of competition). The Committee considers that the application of s.81 should be expanded, so that divestiture becomes a remedy for other breaches of the Act, including section 46 (Misuse of market power) and any new section introduced in line with the majority report's recommendation 12 (relating to the regulation of creeping acquisitions).[56]

4.63 The Economics Committee went on to argue that the extension of divestiture powers to section 46 was an entirely reasonable response to a corporation with substantial market power and who was found to be abusing that power. Such an approach, it was argued, could increase competition within the market by creating additional competitors. But, more likely, the existence of divestiture powers would act as a deterrent and cause companies to be more careful in their compliance with the section. The Committee noted a submission from the National Association of Retail Grocers of Australia who supported enhanced divestiture powers to section 46:

> The Courts should also have the power to order divestiture for repeated and intentional breaches of s46. Divestiture as a remedy should be available in instances where a large and powerful corporation is repeatedly engaging in abuses of market power as the corporation's obvious contempt for existing penalties means that a more potent remedy is needed.[57]

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55 The Senate Economic References Committee, *Report into the effectiveness of the Trade Practices Act 1974 in protecting small business,* 2004.

56 ibid, p. 65.

57 ibid, p. 66.

4.64 The Economics Committee noted that the ACCC, in both its submission to the Review of the Competition Provisions of the Trade Practices Act ('the Dawson Report') into the 'misuse of market power' provisions in section 46 of the Act and in its submission to a 2002 Senate Legal and Constitutional Committee inquiry into the Trade Practices Act, also favoured extension of divestiture powers to section 46:

> The ACCC does not support an open-ended divestiture remedy, but reiterates its previous position of support for a limited extension of the existing power by providing the Court with the option to order divestiture where there is a contravention of section 46 of the Trade Practices Act, noting it is unlikely that the power would often be invoked.[58]

4.65 This Committee endorses the recommendation of the Senate Economics References Committee that section 81(1) of the Act be amended so that section 81 can be applied where a corporation is found to have contravened sections 46 or 46A, or any new section introduced to regulate creeping acquisitions.[59]

4.66 Clearly, the current dominance of Telstra in the telecommunication markets is an impediment to broadband competition. The Committee has heard evidence on a number of strategies, outlined above, which aim to address this market dominance. The Committee acknowledges the issues involved are complex but believe that the Government must act to change the status quo and concurs with Mr Ian Slattery from Primus who argued:

> To dismiss these structural and legislative remedies out of hand without proper investigation, debate and analysis could have long-term irreversible consequences for the telecommunications industry.
>
> Primus contends that telecommunications competition is at a cross road and that this Committee has the opportunity to initiate a much needed overhaul of the regulatory regime by instigating a full review of structural arrangements in the Australian telecommunications industry.[60]

Recommendations

4.67 The Committee's recent report on the Australian telecommunications network examined the ability of the network to give all Australians affordable access to high speed data services. That report made a range of recommendations about improving access to broadband, which the Committee commends to the Government. The recommendations that follow are complementary to those made in that report, aimed as they are at enhancing broadband competition.

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58 The Senate Economic References Committee, Report into the effectiveness of the Trade Practices Act 1974 in protecting small business, 2004, p. 66.

59 ibid.

60 Primus, *Submission 32,* p. 7.

A national target

4.68 The Committee believes that Telstra's continued investment in ADSL technology is an interim solution. Optic fibre to the home in combination with wireless technology should be the long-term vision for telecommunications in Australia. To promote this vision the Commonwealth Government should show leadership and encourage the strategic deployment of optic fibre technology.

Recommendation 1

4.69 The Government should set, in consultation with industry, a ten-year national target for an optic fibre consumer access network roll-out and should invest the necessary regulatory and compliance powers with the Australian Communications Authority to ensure that this target is met.

Recommendation 2

4.70 The Committee recommends that the Government's accepted definitions of ADSL and broadband speeds reflect international best practice standards and should not be determined or overly influenced by product definitions of speed offered by Telstra and other carriers. The Government should review these definitions every twelve months to ensure that speeds remain contemporary.

Structural separation

4.71 Australia has not developed a strongly competitive broadband industry under the current regulatory regime. Some sectors of the market, such as the capital city CBD's and some geographic areas such as Canberra and parts of regional Victoria, are characterised by strong competition based on competing infrastructure. The Optus HFC cable provides competition in those parts of Sydney, Melbourne and Brisbane served by that network but the Optus cable has never been profitable in an economic sense and Optus has indicated that it is unlikely to extend the network to other areas.

4.72 Competition is also provided by the resellers of Telstra's wholesale ADSL services. These resellers have been able to establish a strong presence in the market. However, Telstra remains the largest retailer of ADSL services and the ability of its competitors to remain competitive will largely depend on their ability to access Telstra's wholesale offerings at reasonable prices. The recent events surrounding Telstra's announcement of significant price reductions for its retail ADSL offering emphasise the reliance of the resellers on strong, prompt action by the regulator for their continued competitiveness.

4.73 Prospective levels of competition in broadband services do not appear likely to be any stronger than at present. In its *Emerging Markets Structure in the Communications Sector* report the ACCC observed that the progress of competition in telecommunications markets is slowing. The evidence received by the Committee pointed to a number of competitive advantages enjoyed by Telstra. These included:

- Telstra's existing dominance of the telecommunications industry;
- Telstra's ownership of the copper CAN;
- Telstra's ownership of the largest network which could provide a potential source of competition with its copper CAN, its HFC network;
- Telstra's control of premium pay TV content through its 50% interest in Foxtel;
- Telstra's unrivalled ability to offer bundled services; and
- Telstra's control of the backbone network which many competing broadband networks would have to use for backhaul.

4.74 These competitive advantages are augmented when Government programs introduced for social reasons, such as HiBIS, simply act to entrench Telstra's economic dominant position.

4.75 The future shape of the telecommunications network is unclear but, as a result of convergence and the high cost of new infrastructure, it seems likely to be dominated by a limited number of fixed line and wireless infrastructure platforms which are capable of supporting multiple services. For the reasons outlined above Telstra is highly likely to be the owner of one or more of those infrastructure platforms. Telstra's competitors who are contemplating building rival infrastructure will have to consider the competitive advantages enjoyed by Telstra, and the possibility that any rival infrastructure roll-out will face strong competition from existing or new infrastructure owned by Telstra. Further, the demise of private platform providers in competition with Telstra, such as IP1, increases the caution in potential competitors' business cases.

4.76 The Committee notes that the current Federal Government has undertaken a number of inquiries to examine the current and future telecommunication markets and competition regulation in the industry. It is curious that the issue of the structural separation of Telstra was left out of the terms of reference and not examined by any of these inquiries. The Government requested the House of Representatives Standing Committee on Communications, Information Technology and the Arts to conduct an inquiry into the structural separation of Telstra, and then effectively terminated it. In view of the evidence received by this inquiry regarding Telstra's market dominance and vertical integration, this refusal to examine all possible options relating to industry structure, including structural separation, is inexplicable.

Recommendation 3

4.77 The Committee recommends that the Productivity Commission be tasked to undertake a full examination of all the options for structural reform in Australian telecommunications, including but not restricted to, the structural separation of Telstra.

Divestiture of Telstra's interest in Foxtel

4.78 Notwithstanding the above recommendations, the Committee considers that only a significant change in the structure of the industry will ensure the development of a strongly competitive broadband industry. The Committee supports the recommendation of the ACCC that Telstra be required to divest itself of its interest in Foxtel.

Recommendation 4

4.79 The Committee recommends that Telstra be required to divest its shareholding in Foxtel.

Recommendation 5

4.80 The Government should direct the Australian Competition and Consumer Commission to provide further advice on its recommendations in its report *Emerging Market Structures in the Communications Sector* on the feasibility of introducing a content access regime.

Recommendation 6

4.81 The Government should direct the Australian Competition and Consumer Commission to provide further advice on its recommendations in its report *Emerging Market Structures in the Communication Sector* that Telstra be required to divest itself of its HFC network.

Regulatory regime

4.82 It is clear to the Committee that the current regulatory regime is not of itself capable of producing a more competitive broadband industry in the face of Telstra's existing dominance. Faster and better targeted application of, or further refinement of, the existing access regime and competition legislation may improve the position of Telstra's rivals. In particular the ACCC should examine both the effectiveness of Part A and Part B competition notices against Telstra who appear undeterred by this regulatory mechanism. Additionally, the ACCC should investigate how the issue of a consultation notice delays the regulatory process and gives Telstra a significant 'first mover advantage'.

4.83 The ACCC should give consideration to access to backhaul for new entrants who are considering investing in broadband infrastructure and the ability of Telstra to use its control over the infrastructure over which ADSL is delivered to steal a march on its rivals when new services or price reductions are introduced.

Recommendation 7

4.84 The Government should review section 151AKA(10) of the *Trade Practices Act 1974* to determine whether, under some circumstances, it may prevent the Australian Competition and Consumer Commission from acting swiftly to address anti-competitive conduct. Consideration should be given to the necessity and the effectiveness of issuing consultation and competition notices in addressing anti-competitive conduct.

Recommendation 8

4.85 The Australian Competition and Consumer Commission should examine and report on the anti-competitive effects of the current peering arrangements which allow the exchange of traffic between Tier 1 providers on a settlement-free basis and which creates cost disadvantages for smaller ISPs.

Recommendation 9

4.86 The Australian Competition and Consumer Commission should examine the availability of access to, and cost of, backhaul services for carriers building or proposing to build new broadband infrastructure. Consideration should also be given to the high costs of backhaul services in regional and remote areas in light of the fact that distance based charging is not a characteristic of the Internet.

Information

4.87 The Committee heard evidence that Telstra was charging other carriers and ISPs a fee of between four and five digits for geospatial dataset information. The Committee understands that Telstra has the following datasets:

- Exchange boundary dataset
- Exchange coordinates list
- RIM polygon mapping photo tab file
- Distribution areas mapping photo tab file

Information asymmetry is a barrier to broadband competition as without appropriate geospatial information, the telecommunications industry is unable to plan, analysis and invest in broadband infrastructure.

Recommendation 10

4.88 The Committee recommends that the Australian Communications Authority be provided with all of Telstra's current geospatial datasets, and that the Australian Communications Authority make available these datasets on request, in a useable format, to other carriers and ISPs.

Conclusion

4.89 The Committee believes that Australia's broadband market is at a critical point in its development. Investment in infrastructure deployment has slowed and in the current regulatory - and Telstra dominated – environment, has lost momentum. The Committee acknowledges that the issues are complex and that there is no single solution to the impediments to broadband competition identified in this report. However, the evidence to this inquiry has confirmed the need for the Government to address the regulatory and competitive environment as a matter of priority. In summary, the Committee wishes to concur with the sentiments expressed in a submission to this inquiry:

> The central problem to be resolved is not a technological problem, such as how do we extend ADSL so that it is available to more people on the existing infrastructure. It is an investment problem: how do we find a way to pay for a replacement for the copper network.
>
> The existing network is obsolete because it has ceased to meet the requirements to deliver the basic level of services required to meet the social and economic needs of the Australian community. This is an ubiquitous need, not one that is relative to the distance from the nearest triple 0 postcode….
>
> At the very heart of this failure of competition is the unresolved problem of the structural integration of Telstra. While it owns access to customers, and the services that are delivered over that infrastructure, and the alternative cable delivery mode, and a large slice of the content, and a portion of the dominant Pay TV company, and is even sitting on spectrum that could be used for wireless CAN deployment in much of regional Australia, there is insufficient competitive tension to support new CAN investment….
>
> The length of time it takes for policy makers to realise that the CAN crisis must be confronted, and that the vertical integration of Telstra is the central problem preventing this from happening, will determine whether a reinvigorated approach to driving competition into the communications markets commences next year, the year after or three or more years from now.[61]

61 Comindico, *Submission 31a*, pp.2-5.