FUTURE-PROOFING TELECOMMUNICATIONS IN NON-METROPOLITAN AUSTRALIA

A position paper
from
The Page Research Centre Limited

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The Page Research Centre takes the position that competition is the most efficient way to ensure service delivery to non-metropolitan Australia at parity to metropolitan areas. However, it recognises that government has a social obligation to ensure services to non-metropolitan areas where competition fails.

The central element to the Page Research Centre's research was the development of a future proofing option, which would ensure telecommunications service delivery in non-metropolitan areas. A sound telecommunications service delivery and infrastructure can assist in the economic development of non-metropolitan communities. Service delivery and infrastructure in non-metropolitan areas is reliant to varying degrees upon government intervention.

The Page Research Centre emphasises the importance of parity between metropolitan and non-metropolitan communities. In this position paper, the word "parity" carries the sense of an equivalent ability to complete telecommunications tasks, at equivalent cost. It recognises that different technologies used to deliver services have different characteristics, and that there are always likely to be practical and technological limitations on the services that can be supplied to the most remote locations in Australia. In its deliberations the Page Research Centre was seeking options which would provide businesses and families in regional Australia with the same telecommunications capabilities as their counterparts in the suburbs of our major cities.

1.1 Introduction

Australia is a vast continent and therefore it is not surprising that Australians should be concerned about adequate telecommunications. Australians living in non-metropolitan areas understand the tyranny of distance and recognise reliable telecommunications as central to their day to day life. A sound telecommunications infrastructure can also assist in the economic development of non-metropolitan communities. With telecommunications playing a critical role in the social and economic lives of non-metropolitan Australians it is paramount that serious consideration be given to the future. The decision made by the Page Research Centre to undertake research into telecommunications in non-metropolitan areas stems from a recognition that many Australians in those areas are extremely concerned about the future of services in their communities. A typical expression of this concern is:

> "My worry is if the government sells out of Telstra the level of service will decline. Private enterprise is focussed on profit. Can you imagine a private company wishing to maintain services in rural and outlying areas for small or no profit?"[1]

1.2 The Page Research Centre takes the position that competition is the most efficient way to ensure service delivery to non-metropolitan Australia at parity to metropolitan areas. However, it recognises that government has a social obligation to ensure services to non-metropolitan areas where competition fails.

1.3 The central element to the Page Research Centre's research was the development of a future proofing option, which would ensure telecommunications service delivery in non-metropolitan areas. A sound telecommunications service delivery and infrastructure can assist in the economic development of non-metropolitan communities. Service delivery and infrastructure in non-metropolitan areas is reliant to varying degrees upon government intervention.

1.4 There are three main issues embedded in that concern. The first is the belief that non-metropolitan areas are places that cannot attract competition. The second is service delivery to non-metropolitan areas is dependent upon government intervention. Third, public ownership is perceived by some as the only means of ensuring equitable access to telecommunications.

1.5 Regulation to ensure competition in service delivery and future investment in non-metropolitan telecommunications infrastructure are core issues.

1.6 The first part of this paper outlines how those issues are impacting upon telecommunications in non-metropolitan areas and include some recommendations to address those issues. The second part of the paper provides four holistic options that address the overall problem of future proofing[2] telecommunications in non-metropolitan areas.

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[1] A Statement made by Bob Conolly (Farmer), 25th February 2005 at a telecommunications forum held in Wagga Wagga, NSW.

[2] The term future-proofing in this paper refers to measures which ensure people in regional, rural and remote areas have access to telecommunications services comparable to those in metropolitan areas. Future

1.7 The Page Research Centre recognises there is a substantial amount of literature on telecommunications. In particular it recognises both the Besley and Esten's inquiries as important contributions to understanding the issues around service delivery in non-metropolitan areas. The Page Research Centre has not set out to replicate those inquires or existing literature, rather to use that information to assist in formulating a policy direction for future-proofing telecommunications. Central to the Page Research Centre was a desire to move responses to telecommunications from issue identification which already is well documented, to a level where policy options can be formulated and suggested. In conducting its research, the Page Centre emphasised consultation with a range of stakeholders. While there was no shortage of opinion on telecommunications, a concern of the Centre was contradictory information it received. The Page Research Centre has, based its position on information it believed was correct at the time.

Part 1.

Competition

2.1 While the Page Research Centre acknowledges there will always be a role for government in telecommunications service delivery, it believes competition is the most efficient means to creating a progressive telecommunications industry. The Page Research Centre believes that non-metropolitan Australia suffers from a lack of true competition in the telecommunications market. Telstra remains the major service provider with some competition from Optus and a few smaller providers. The Page Research Centre believes this lack of competition has adversely impacted on the cost, quality and choice of telecommunication services in non-metropolitan areas.

2.2 New telecommunications providers are faced with three substantial problems when delivering services in non-metropolitan Australia.

1. The potential returns on the cost of establishing an infrastructure network in areas of low population are less than those in metropolitan areas. This leads to additional costs for the consumer in non-metropolitan areas.

2. New telecommunications providers are often entering areas where Telstra not only has a high percentage of the market share but also have the network already in place. New telecommunications providers have to lease infrastructure from a competitor (often Telstra).

3. Historically service providers were building demand registers and respond to demand when it naturally reached a level where service provision was economically viable. Such a passive approach is more indicative of a bureaucracy rather than commercial enterprise. In some respects, this kind of culture has developed as a result of our leading telecommunications company having bureaucratic roots. While successive management teams at Telstra have brought about some change, the lack of competition has not hurried the process.

2.3 The lack of competition is also having a detrimental affect on telecommunications throughout all of Australia. Competition is a means to ensure ongoing research and development. Without competition consumers are forced to use technologies or infrastructure which is fast becoming outdated. The copper line network is a case in point. Most are in agreement that copper line is becoming redundant, but few companies are now actively introducing new alternatives.

2.4 ***Recommendation 1.***
Through strong regulation the government must ensure there is healthy competition in the telecommunications market place.

3.1 **Service Delivery/Customer Service**

It is difficult to ascertain the present condition of service delivery in Australia. Survey results from the Australian Communications Authority[3] reported mixed results in satisfaction with telecommunications service. While there was a decline in those dissatisfied with fixed line fault repair, general dissatisfaction was still high at 23 per cent. Yet satisfaction with the overall fixed line service connection was the highest recorded at 82 percent. [4]

3.2 The ACA survey found there was a large degree of dissatisfaction with call centres and directory assistance amongst householders. Furthermore, household consumers found it difficult to compare services offered by telecommunications companies. Generally, the Page Research Centre found complaints by householders were based on poor customer service in relation to products or registering faults. Small business also reported the same dissatisfaction but also registered dissatisfaction with price competition between carriers.

3.3 The Page Research Centre has found a requirement exists for considerable service improvements to be made by Australia's telecommunications industry particularly with regard to delivery of non-metropolitan service and makes the following recommendation in this regard.

[3] ACA, *Consumer Satisfaction Survey,* August 2004.
[4] *ibid*

3.4 ***Recommendation 2.***
The government legislate to ensure there is independent third-party monitoring of telecommunications companies compliance to service standards through the certification to the International Customer Service Standard.

3.5 Where there exists an environment of distrust and perceptions of poor service, the benefits of independent third-party certification to International Customer Service Standard (ICSS) were easily apparent to the Page Research Centre.

3.6 Evidence was provided to the Page Research Centre that many highly reputable and successful organisations in Australia and internationally have adopted the International Customer Service Standard as the benchmark for internal management and a tool for reassuring stakeholders that adequate service standards are being set and attained. These organisations, both from the public and private sector (including one Telstra Call-Centre), have benefited from the certification process and have demonstrated how the Standard has helped reduce costs and improve productivity whilst delivering higher levels of customer satisfaction.

3.7 Significant evidence is available from the utilities sector where organisations such as Yarra Valley Water have succeeded as a monopoly utility in delivering high levels of service through early voluntary adoption and consistent certification to the Standard. Other examples show how ICSS is credited with delivering substantial benefits to organisations where remedial service work has been considered necessary by stakeholders.

3.8 Since 1999 Telstra itself extolled the 'whole of business' virtues of voluntary certification to the ICSS. Unfortunately whilst the Page Research Centre was presented with evidence that the 'will' to achieve full certification existed at senior executive levels, this commitment has been unfulfilled due to constant management and structural changes in the company.

3.9 Stronger encouragement from regulators and government would assist telecommunications companies in understanding the need to focus resources to achieve these standards company-wide.

3.10 Further, the Page Research Centre found that whilst effective in alternative dispute resolution, the Telecommunications Industry Ombudsman does not have powers which are effective in deterring and

preventing poor service delivery. A major concern is the inability of companies to quickly resolve issues – in fact, it seems that the Ombudsman is unable to penalise companies, which consistently allow protracted disputes. In the present climate the potential exists for consumers to 'give up' rather than seek the redress and compensation they may be entitled. Under the current system there is no incentive to fix poor service and complaint management processes. The most current data shows growth in complaints by 8% to 55,062 in the year 2002 to 59,850 in 2003.

The Customer Service Institute of Australia conducted a National Complaints Culture Survey which found from eight industry sectors communications companies were rated the lowest in a number of key categories relating to complaints including:

- Basic attitudes to complaints.
- Accessibility and process of complaints.
- Customer service policies and systems.

3.11 ***Recommendation 3.***
The government must legislate to ensure that once a certain number of complaints have been reached regarding a Telecommunications company, the Ombudsman should have the powers to order the responsible service provider to submit to an International Customer Service Standard re-certification audit. The findings of which, together with identified process improvement opportunities will be delivered to the company and the Ombudsman.

Recommendation 4.
The Ombudsman should also have the power to set a timeframe for the required improvements to be implemented and a follow up audit conducted within three months of the improvement deadline. Such a system has been in place with international quality standards and non-conformances for over a decade so the system has a successful precedent both internationally and in Australia.

3.12 The decision for service providers in Australia to adopt the ICSS and be certified annually to the Standard by an accredited third-party certification authority should, given the observed benefits, be easy and voluntary. Unfortunately, unlike other comparable industries, Australian Telecommunications companies, with the exception of some medium size players and a small portion of Telstra, have not embraced the ICSS certification program.

3.13 The Page Research Centre is unsure as to the reason for Telstra not obtaining certification to this Standard, especially given the positive testimonial comments and intentions of senior Telstra management. Because of this the Page Research Centre believes a legislative solution should be considered. In the current environment such legislation for independent audits to the International Customer Service Standard in the Telecommunications industry will provide considerable comfort for stakeholders and customers. The certification program outlined in this paper will create a requirement for the adequate monitoring of telecommunications industry service standards by the appropriate peak service certification body. This should not be considered onerous as Telstra already has to adhere to international accounting standards, so customer service standards should be treated no differently.

3.14 The Page Research Centre has made recommendations four and five as the benefits for stakeholders in the ICSS certification approach are many including: the added confidence of ongoing monitoring of service standards; implementation of a system for remedial action to be ordered by the Ombudsman; and the ability for the government to be seen to address the important service issue through Australia's peak independent customer service body.

3.15 The telecommunications industry has evolved from a highly technical, engineering focussed base. Deregulation in the 1990s saw the development of an aggressive 'commission-based' sales culture in a relatively short period of time. The commercial effects of competition, whilst mostly welcome, have seen staff and management rewarded solely for achieving sales targets often at the expense of catering to customer needs.[5]

3.16 A consequence of this evolution has been a distinct lack of senior and middle management with professional customer service qualifications. For example, within Telstra most key management positions are held by staff with either engineering qualifications or strong sales and marketing backgrounds.

3.17 The effect is to have a skills shortage of dedicated customer service managers. Given the size of leading Australian service providers, a reasonable number of suitably qualified customer service managers are considered vital to ensure the technical expertise and sales focus is backed up with quality service systems and processes to deliver on the sales promises made.

[5] see Telecommunications Ombudsman Report 2003

3.18 A study conducted by UK firm Telephone Bank First Direct the found that national productivity was reduced by 14 billion pounds in 2003 because of poor customer service. A large percentage of this lost productivity was attributed to poor customer service attitudes, systems and processes or time spent by customers following up on the resulting bad service and making complaints.

3.19 Establishing necessary systems and procedures which deliver customer service only go so far in ensuring acceptable outcomes. It came as a surprise to Page Research Centre members that an organisation the size of Telstra with over 41,000 employees has no Certified Customer Service Managers.

3.20 It is the Page Research Centre's view that it is in the interests of all telecommunications companies to facilitate and develop a service culture. Telecommunications industry needs trained and qualified Certified Customer Service Managers employed across the industry within 12 months. The required qualification could be obtained by staff studying part-time while employed.

3.21 The above should not be considered punitive, on the contrary, an investment by telecommunications companies in developing existing staff from a variety of backgrounds to professional customer service status should have a positive effect on profits. Rather than a 'cost', this training investment will, over the long term be part of a solution to current service issues and save money by identifying ways to reduce waste (time and resources) created by poor service. It is also anticipated the inefficient practice of "customer churn"[6] will be reduced as customers offer increased loyalty to high quality service providers – further improving profit margins.

4.1 Emerging Technologies

Reduced competition impacts on emerging technologies. Existing telecommunication providers in non-metropolitan areas only respond to demand and do not actively encourage the adoption of new technologies by consumers. In uncompetitive markets like Australia's it is possible that we will eventually fall behind the rest of the world in terms of new telecommunications technologies unless a more aggressive market place can emerge.

[6] "customer churn" or "turnover" is the drift of customers from on telecommunications company to another.

4.2 The Page Research Centre has seen a number of presentations highlighting a range of technologies which may be suitable to delivering telecommunications services in non-metropolitan areas. The Centre has concluded it maybe impractical to have a single technology servicing all non-metropolitan areas and particular regions may require different technologies. For example, it may be more efficient to have optic fibre to some places yet more appropriate to use wireless or satellite in others. It is vital that we do not become complacent about the existing technologies. Australia must leave itself open to new possibilities.

4.3 The Page Research Centre is concerned that Australia in general may be falling behind the rest of the world in terms of information and communication technology. According to an article by Graeme Philipson published in *The Age,* March 8, 2005, Australia has slipped from 13th to 23rd in the world in broadband penetration over the last four years. Furthermore, four years ago, IT market researcher IDC had ranked Australia third in the world in terms of computer and internet infrastructure. Today, Australia does not even feature in the top ten. This clearly shows Australia cannot afford to be complacent about its telecommunications industry.

5.1 Price and Service Parity

The Page Research Centre recognises that non-metropolitan people can suffer some disadvantage in delivery of services because of their location. But it believes that, because of the nature of the technology involved, telecommunications services should be subject to only minimal location disadvantage, and then only in our most remote locations. The Centre notes that this principle is already well established in Australia's telecommunications arrangements, through the Universal Service Obligation which provides a standard voice service to any Australian who requires it, at a standard cost. It is vital to the economic and social development of non-metropolitan areas that they have the same access to telecommunications as metropolitan areas. To encourage business to decentralise and promote regional development there must be parity of service between non-metropolitan and metropolitan areas.

6.2 To ensure parity, the Page Research Centre suggests there are regular reviews at least every three years, which compare metropolitan and non-metropolitan services. This includes access to services such as internet broadband and mobile phone coverage as well as fault and repair time frames. Parity reviews would also include new technologies and services as they emerge.

7.1 Government Intervention

The Page Research Centre takes the position that government will always have a role in the provision of telecommunications in non-metropolitan areas. Primarily, government should ensure the continuation of the Universal Service Obligation. It is paramount that all Australians have basic access to telecommunications. Government also has a role where there is unwillingness for telecommunications companies to provide a service in non-metropolitan areas. Where telecommunications companies do not provide a service, government must act to ensure access to those services. The government also has a role in creating a "level playing field" for healthy competition between telecommunications companies and access to those services at a parity price of like services.

Recommendation 5
The Federal Government must ensure that telecommunications legislation continues to include the Universal Service Obligation.

8.1 Universal Service Obligation (USO)

The Page Research Centre has heard a number of conflicting views on the cost of the USO. Telecommunications providers tend to agree that there is a need for the USO but dispute the cost and contribution telecommunications companies must make. One side of the argument is that there are financial benefits to providing the USO. A government commissioned study and a study funded by Optus found the USO provider receives a benefit of between $70 and $136 million.[7] However, the current USO provider, Telstra, argues that managing the USO cost approximately $550 million[8]. Meanwhile the government has estimated the cost at $211 million.

8.2 *Recommendation 6*

With such discrepancy between the amounts, the Page Research Centre recommends that before any sale of Telstra an independent

[7] Optus, *Policy directions in telecommunications: rural and regional funding*, submission to the advisory group, p. 5
[8] Telstra, *Regulatory Overview and Implications for Regional Service Equity*, submission to the advisory group, p. 10.

audit be conducted to ascertain the exact cost of the USO and a further study into what benefits management of the USO may afford the telecommunications supplier.

9.1 Regulation and Anticompetitive Behaviour

The Page Research Centre shares the same position as the Australian Telecommunications Users Group on the issue of regulation and anticompetitive behaviour.[9] The Page Research Centre seeks to strengthen ACCC powers to act quickly in cases of anticompetitive behaviour. Many of those who provided submissions to the Page Research Centre felt the process was too slow and by the time a ruling was handed down from the ACCC it was too late. The anticompetitive behaviour had already taken its toll.

Recommendation 7
The Page Research Centre recommends a specific body within the ACCC be established to respond to telecommunications complaints. The body should be headed by a deputy chairman who reports directly to the chairman.

Recommendation 8
The government increase the resources and powers of the ACCC and ACA.

10.1 Spectrum Allocation

The introduction of wireless broadband technology into non-metropolitan areas is a major step toward greater competition. The Page Research Centre has heard representations from a number of wireless providers who cited poor management of spectrum licences as the greatest inhibitor of wireless availability in non-metropolitan areas. The Page Research Centre recommends government investigate the possibility of providing spectrum for non-metropolitan areas through "over the counter" licences rather than auction. The Page Research Centre would welcome an investigation into the possibility of allocating spectrum to local government with a "use it or lose it" and "community benefits" criteria. Another alternative could be a "use it or lose it" clause for telecommunications providers in cases where spectrum is not being utilised to meet community needs, government would require the spectrum holder to lease to another provider willing to use the spectrum immediately. The Page Research Centre recommends the government investigate the implementation of a "spectrum trading desk" to facilitate better utilisation of spectrum in rural

[9] See ATUG Opinion, *Election Agenda*, 8th September, 2004, p. 2

and regional areas. In general the Page Research Centre would like to see government investigate better methods for dealing with spectrum prior to the sale of Telstra.

Recommendation 9

Prior to the sale of Telstra the Telecommunications Minister report to the Parliament better methods for dealing with spectrum.

11.1 Backhaul

As previously mentioned the cost of infrastructure tends to make competition in non-metropolitan areas difficult. A major cost to service providers is the backhaul. There are a number of definitions of backhaul, but basically broadband backhaul means the "carriage of data on a high capacity link between a competitor primary site to an incumbent local exchange"[10] In many cases the service provider must seek access to Telstra's infrastructure. Because there is no right of access to telecommunications infrastructure, there must be a commercial arrangement made between Telstra and the service provider. At present parts of the backhaul are regulated.

The Page Research Centre believes that if government had greater regulatory control over telecommunications infrastructure it would be in a better position to provide more equitable access to service providers.

11.2 While there exists regulation on the Customer Access Network (CAN), the link from the home to the exchange, there is no regulation on the main trunk system which is predominately controlled by Telstra.

Recommendation 10
Prior to any sale of Telstra government introduce regulations to control the price of gaining access to the main trunk network.

12.1 Current Funding for telecommunications in non-metropolitan areas

The majority of submissions received by the Page Research Centre have welcomed current funding models such as the Coordinated Communications Infrastructure Fund (CCIF), the Higher Bandwidth

[10] Parliamentary Library, *Telecommunications and backhaul pricing*, 2005, p. 1.

Incentive Scheme (HiBIS) and the National Communications Fund (NCF). However, the Page Research Centre has observed that there are a number of smaller service providers who were unaware of the schemes. Even fewer individuals knew about HiBIS or how to access the fund. While funding is of great assistance to non-metropolitan telecommunications, more still needs to be done to raise people's awareness of the programs available.

13.1 Government Ownership

The Page Research Centre had given great consideration to the various options surrounding government ownership of Telstra. Ideologically the Page Research Centre is not against private ownership, but it does not support monopolies. It is the position of the Page Research Centre that the sale of Telstra without further regulatory measures would be detrimental to the telecommunications industry and the pursuit of competition within the sector. Allowing the final sale of Telstra without ensuring the protection of non-metropolitan communities through sound future proofing would be tantamount to completely abandoning those communities.

14.1 Structural Separation

In investigating the possibility of a structural separation of Telstra the Page Research Centre found a number of conflicting claims. The greatest difficulty was trying to find the correct value of the infrastructure or wholesale activities. Some had claimed that the copper line was going to be redundant over time and therefore would be of little value. However, at the suggestion that it would therefore be suitable to structurally separate that network, it was then claimed any such move would impact on the share price of Telstra.

14.2 While the Page Research Centre sees a role for government in providing infrastructure and service where competitive markets do not, structural separation would be difficult to achieve. The relationship between the wholesale and retail divisions of Telstra is anything but transparent. Accounting separation is a positive step toward better understanding the corporate structure. Efforts to date do not provide a clear understanding of the net value of the wholesale division. The Page Research Centre also supports further examination of the operational separation proposal.[11]

[11] The advisory group's vice-chairman Senate-Elect Barnaby Joyce has also expressed his interest in conducting an examination into the full structural separation of Telstra.

14. 3 The Page Research Centre believes that structural separation would prove administratively difficult and may impact on the overall value of Telstra. The main benefit behind a structural separation is the ability to make the wholesale side of Telstra offer the same price per product to all its retail customers including Telstra's retail business.[12] However, as the options presented in the next part of this paper will show, such an arrangement can be achieved through greater development of telecommunications infrastructure.

Recommendation 11
Prior to any sale of Telstra the ACCC conduct an independent inquiry on the need for an operational separation of Telstra.

[12] Gerrand, P. *The Telstra Challenge: Fixing the anomalies before T3*, 2005, p. 2

Part 2.

15.1 Infrastructure

Equitable access to infrastructure is recognised as a major barrier to new telecommunications companies competing in non-metropolitan areas. Carriers have complained that the cost of establishing new infrastructure in non-metropolitan areas was for the most part prohibitive, particularly when they were unsure of market demand. This position comes from a general agreement by carriers that infrastructure competition (alternative networks rolled out by carriers who compete to provide services) would not work in areas were there was low demand. Lower population densities cannot deliver the economies of scale required to generate investment.[13]

15.2 One of the most volatile issues surrounding infrastructure was the service providers concern that Telstra had control over the "last mile". The "last mile" refers to the section between the exchange and home or business also known as Customer Access Network (CAN). It is this section which service providers felt, despite ACCC regulation, leasing that part of the network was too costly. Wireless providers were the only carriers that felt confident their technologies could avoid the costs incurred in the "Last Mile" because they did not rely on that piece of infrastructure to provide its service.

15.3 If the market cannot sustain a variety of networks in non-metropolitan areas, then the question arises, who should own the single network? At present Telstra controls the majority of infrastructure in Australia and leases it to service providers. The commercial agreements between Telstra and other service providers have become increasingly contentious. Competing carriers level two complaints at Telstra. First, carriers argue the cost of leasing the infrastructure is too high. In some cases carriers complain that the cost of leasing infrastructure was greater than the cost Telstra were charging their retail consumers, for example, broadband access. Secondly, service providers complain that Telstra may use its wholesale division to provide market intelligence to its retail division so it can pre-empt sale campaigns of other carriers. Whether the complaints are completely valid or not, there is certainly evidence to suggest that a monopoly in infrastructure by a company which also competes in the retail

[13] Telstra Corporation Limited, *Submission to the Page Research Centre Telecommunications Advisory Group*, February 2005, p. 19.

sector will create an environment of cynicism and accusation. Such an environment is not suitable to create healthy competition.

15.4 Recommendations to address the problem of infrastructure are covered in the second part of this paper which outline options for future-proofing telecommunications in non-metropolitan areas.

16.1 The following Options are designed to promote discussion and provide some possible direction for future-proofing telecommunications in non-metropolitan areas. Building upon the issues identified in part 1, the Options incorporate a range of strategies and attempt to complement some existing telecommunications policy structures. It is important to keep in mind the Options below are not a complete road map for future proofing but rather models for further exploration.

Option A

17.1 **Optic Fibre Rollout.**

The Page Research Centre has heard a number of proposals for laying fibre optic cables and appreciates that at present fibre optics are the most efficient means to transmit data. Providing fibre optics to non-metropolitan consumers means communities could, in addition to a basic telephone service, enjoy:

- Voice over internet telephony
- Cable television
- Access to future commercial television video on demand services delivered over IP – already available overseas, most notably in select Asian countries such as Hong Kong and South Korea.
- Video conferencing
- Greater access to telemedicine, even if it is via a simple and tremendously inexpensive voice over IP telephony or preferably video webcam link to the 'local' doctor, who could be anywhere in Australia or around the world
- Broadband Internet Access
- Online services - online banking, bill payment, online shopping, buying and selling in online auction websites, access to Government services and much more from any location, when desired.
- Weather forecasts from the Bureau of Meteorology
- Access to streaming media, letting you listen to online radio stations and watch online TV stations and other audio and video programming. An example allows rural and regional users of mobile broadband to tune into the online broadcast of ABC NewsRadio.
- Access to educational materials and all levels of schooling, from primary to tertiary studies

- Access to all of the information available on the Internet, when desired, at high speed.

17.2 Fibre optic cables to non-metropolitan areas would assist in the social and economic development of those communities and provide greater flexibility in the workplace or even home based work.

17.3 The Page Research Centre proposes the following option as a means to achieving fibre optic connections to consumers in non-metropolitan areas:

- The government contracts a supplier to lay fibre optic cable to a majority of consumers in non-metropolitan Australia, exempting approximately 6000 remote users where satellite coverage is provided.

- The fibre optic cable would replace the existing Customer Access Network, currently made up of what is predominately copper line; also known as “the last mile” (from the exchange to the user).

- The government would then lease the infrastructure to service providers including Telstra, at a fair and equitable price. It would also put out the contract for maintenance and repair. By the government controlling this part of the infrastructure it would remove some anticompetitive practices and create a transparent pricing regime. Furthermore, infrastructure would be no longer in the hands of a monopoly.

- Telstra would retain the rest of the infrastructure but would be heavily regulated with an independent pricing cap on the leasing of the main trunk system.

- Proceeds from the sale of Telstra would fund the fibre optics program. The Page Research Centre has received an approach from a business consortium with a preliminary costing of $7 billion to rollout the infrastructure, with a view to project completion in five years. The Page Research Centre notes that Telstra’s assessment is $30 billion over 20 years. Over a period of time, the government would recoup the cost through leasing the infrastructure to service providers.

- As many have stated, the copper network is fast becoming redundant, therefore by Telstra relinquishing the CAN it should not impact adversely on the overall share price. Further to this, Telstra could surely recoup any losses through the ability to provide a greater number of services to non-metropolitan communities through the new technology.

17.4 By adopting this option, the government retains a stake in Australia's telecommunications infrastructure and makes a sound capital investment. Commercial in confidence prevents the Page Research Centre from specifically outlining the construction details, however, research indicates such a project is possible at a reasonable cost.

Recommendation 12

17.5 ***The Page Research Centre recommends that government commission a feasibility study into the cost of laying fibre optic cable to a majority of consumers in non-metropolitan Australia.***

Option B

Combined Fibre / Wireless Rollout.

18.1 The Page Research Centre has also heard a number of proposals for wireless providers and appreciates that wireless is one of the emerging most economic and most efficient solutions to transmit voice and data at broadband capacity both in an urban environment as well as in rural and regional communities. Today there are major carrier class wireless rollouts to rural and regional communities underway throughout the world with countries including New Zealand, Canada, China, India, South Africa and the developing European Countries adopting wireless to reach their communities.

18.2 Providing wireless to non metropolitan homes means communities could in addition to a basic telephone service enjoy:

- Voice over internet telephony
- Cable television
- Access to future commercial television video on demand services delivered over IP – already available overseas, most notably in select Asian countries such as Hong Kong and South Korea.
- Video conferencing
- Greater access to telemedicine, even if it is via a simple and tremendously inexpensive voice over IP telephony or preferably video webcam link to the 'local' doctor, who could be anywhere in Australia or around the world
- Broadband Internet Access
- Online services - online banking, bill payment, online shopping, buying and selling in online auction websites, access to Government services and much more from any location, when desired.
- Weather forecasts from the Bureau of Meteorology

- Access to streaming media, letting you listen to online radio stations and watch online TV stations and other audio and video programming. An example allows rural and regional users of mobile broadband to tune into the online broadcast of ABC NewsRadio.

- Access to educational materials and all levels of schooling, from primary to tertiary studies

- Access to all of the information available on the Internet, when desired, at high speed.

18.3 A Carrier Grade Wireless Broadband Network to non metropolitan areas would assist in the social and economic development of those communities and provide greater flexibility in the workplace or even home based work.

18.4 The advisory group proposes the following options as a means to achieving wireless connections to homes in non metropolitan areas:

- The government contracts a firm to rollout a carrier class wireless broadband to the majority of homes in non metropolitan Australia except for those homes in extreme remote or black spot locations where satellite would be a more efficient means.

- The Carrier Grade Wireless Network would replace the existing Customer Access Network, currently made up of what is predominately copper line; also know as "the last mile" (from the exchange to the home) including minimising the cost of fibre networks.

- Fibre Networks would be rolled out mainly for their backhaul capacity.

- The government would then lease out the infrastructure to service providers including Telstra at a fair and equitable price. It would also tender out the contract for maintenance and repair. By the government, controlling this part of the infrastructure it removes some anticompetitive practices and creates a transparent pricing regime. Furthermore, infrastructure is no longer in the hands of a monopoly.

- It is expected that proceeds from the sale of Telstra could fund the Wireless Broadband rollout program. The Page Research Centre has been quoted that the rollout of a Carrier Class Wireless Network could be substantially less than the preliminary costing of $7 billion quoted for the Fibre Network. Over a period of time, it could recoup its cost

through leasing the infrastructure to service providers.

- As many have stated the copper network is fast becoming redundant therefore by Telstra relinquishing the CAN it would not impact on their overall share price. Telstra could surely' recoup any losses through the ability to provide a greater number of services to non metropolitan communities.

18.5 By adopting this option, the government also retains a stake in Australians telecommunications infrastructure and is making a sound capital investment. Commercial in confidence prevents the Page Research Centre from specifically outlining the construction details; however, research indicates such a project is possible at a reasonable cost.

Recommendation 13
The advisory group recommends that government commission a feasibility study of into the cost of providing wireless to non-metropolitan homes.

Option C

19.1 **The Community Model**

Option C proposes that through local government, communities undertake a telecommunications needs analysis of their population and design a tailor-made telecommunications plan which will be implemented with the assistance of federal government funding, made available through a "telecommunications infrastructure fund" derived from a portion of the proceeds of the proposed Telstra sale.

The Community Model is best outlined through steps.

19.2 Step 1.

Local governments are granted funding on application to undertake a community needs analysis. This analysis would involve discussions with health and educational professionals, local business, community groups, and individuals. If necessary, it would also allow for the short term appointment of a telecommunications consultant. This audit would establish the real communications needs of the community.

19.3 Step 2.

Local governments, on behalf of the community approach telecommunications companies with their local telecommunications plan. If the telecommunications company sees a sound business case for suppling the service then it can be assumed that the audit has been successful in demonstrating customer aggregation and services will be delivered by commercial means.

19.4 Step 3.

Where telecommunications companies demonstrate a lack of interest in supplying those services identified by communities, then an application could be made to access a Commonwealth Future-proofing Fund financed by the sale of Telstra to build the necessary infrastructure. The

application would be assessed to ensure applications are in keeping with metropolitan parity. It may be possible to extend the function of the proposed Regional Telecommunications Independent Review Committee into a standing committee which would review the applications.

The new infrastructure would then be owned by the "community" as a local government asset. The infrastructure and service would be put out to tender to telecommunications companies. A commercial relationship between the community and telecommunications service provider is then established. At the end if the contract period the service would be put out to tender again. Either way, the infrastructure stays in the hands of the local government.

18.5 Step 4.

If there is no intent from service providers, local government can make a further application for government to fully fund a locally run service. At present there are a number of not-for-profit telecommunications companies set up by communities to provide "last mile" service. The Murray River Regional Telecommunications Company Ltd trading as Country Tel is an example of a successful local telecommunications provider.

19.6 It is not expected that every non-metropolitan community would need to undergo the final stage for all their telecommunications services as the market may provide the majority of services. Some communities may have to seek assistance on particular services where there was insufficient desire to provide a service. For example, there may be healthy competition in the mobile sector yet internet service provision was poor. The Page Research Centre believes that it would be rural and remote areas that would require the most intensive government assistance as outlined in Step 4.

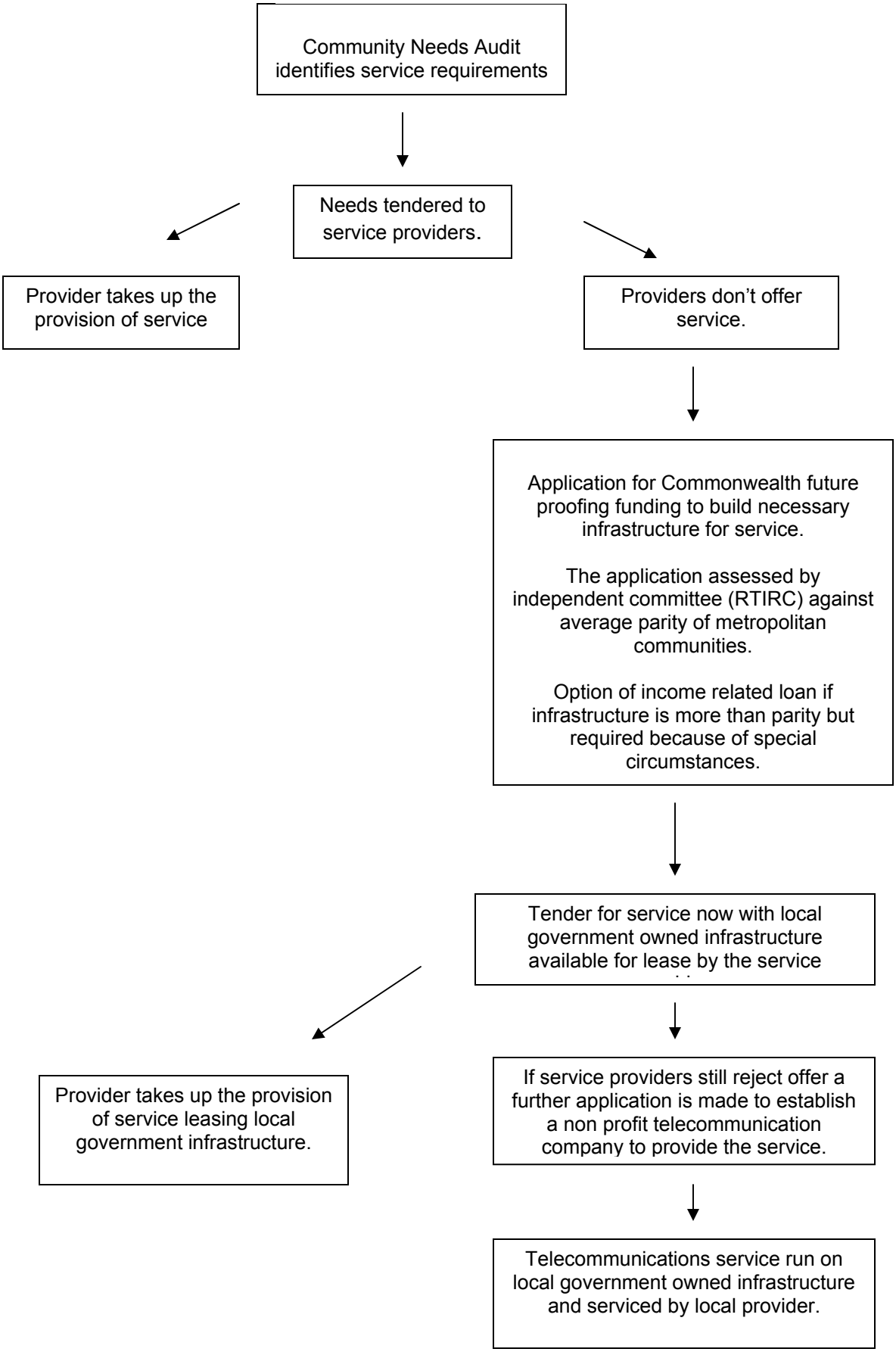
19.7 **General Remarks**

- It may be possible to expand the existing funding model of HiBS to work on a more community level rather than individual. As identified in the first part of this paper in the section of government funding, few were aware of the scheme. Rather than the incentive, payment being made on a per subscription basis, it could be on a per community basis.

- A community may have a unique need for a certain telecommunications service which falls beyond parity with metropolitan areas but is required because of special circumstances. Under this model, local government could make an application for an income assisted loan to build the infrastructure. Through an income assisted loan, the local government

would repay government over time through any income generated by the infrastructure.

Option C Model



Option D

Private Control of Infrastructure with Option C as a Future-proofing Mechanism.

In this option, a private company is invited by government to rollout wireless or optic fibre cable for the CAN or “last mile” in non-metropolitan areas (as described in Option A and B), with a concession that it is the sole provider of telecommunications infrastructure for a period of time.

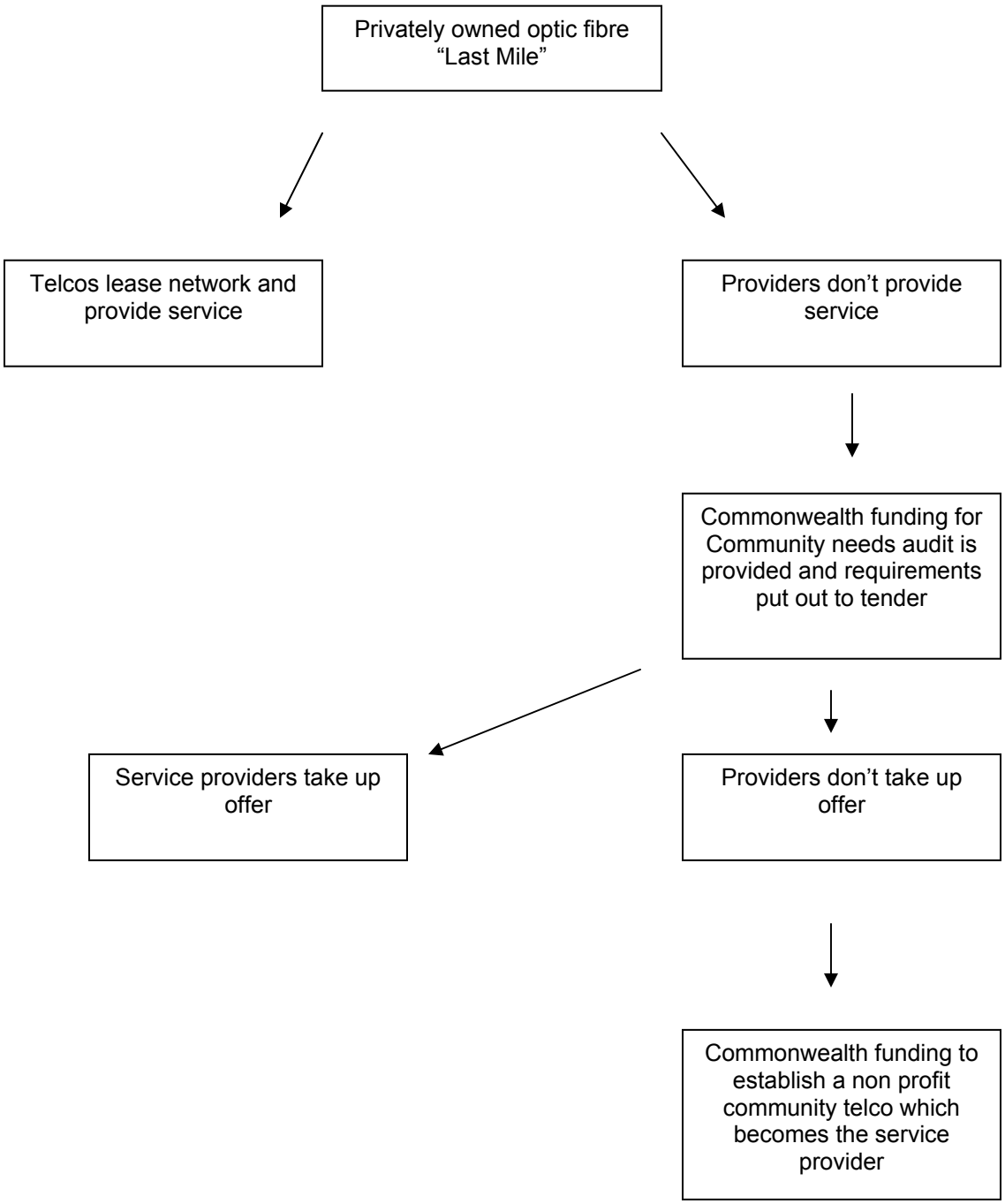
The Page Research Centre believes there could be two options to be considered for this:

1) The infrastructure provider would have sole rights over the network. Telstra would have to remove its CAN but would still retain a regulated control of the main trunk system. While it is a large undertaking on behalf on Telstra, the telco would also benefit through having access, at a fair rate, to a better technology and therefore a greater ability to provide more services.

2) Telstra retains its copper line and the sole provider of optic fibre infrastructure is given exclusive rights over optic fibre infrastructure for a period of time. However, the company is not allowed to establish a retail presence in the telecommunications industry.

As a mechanism for future-proofing, Option C would be included this option and funded through a portion of the proposed sale of Telstra to ensure new services and technologies would continue to be introduced into non-metropolitan areas in the future.

Option D Model



Conclusion

The Sale of Telstra

The decision to sell any government asset has almost always attracted criticism. In terms of Telstra, many non-metropolitan people believe that it is only through government control that they are assured that the services they currently have will continue. There is a great fear that without government involvement, the lack of economic incentive to provide services in non-metropolitan areas will discourage competition and future services will not be provided on an equitable basis. It had never been the Page Research Centre's aim to put a case for or against the sale of Telstra. Rather it has sought to suggest a mechanism which would provide parity of service in the event of the full privatisation of Telstra.

The Page Research Centre does not reject the privatisation of Telstra providing two elements are put in place:

1) It leads to the achievement and maintenance of parity between metropolitan and non-metropolitan communities and that parity is guaranteed through a blend of regulation and competition; and

2) Measures are introduced to create greater competition in the telecommunications sector through regulation designed to address the monopolistic characteristics of Telstra's market position.

The Page Research Centre is of the opinion that regulation and legislation will only go so far towards ensuring parity of service between metropolitan and non-metropolitan areas. It is the development of competition in non-metropolitan areas which will ensure parity of service and price. Efforts must be directed toward creating an level playing field for new competitors. One major step toward fair competition is the establishment of telecommunications infrastructure which is independent of service providers. It is unlikely non-metropolitan Australian could sustain every service provider having its own infrastructure, so there is a role for government or independent wholesaler to provide that infrastructure as means of fostering greater competition in the retail sector.

Economic and social development in non-metropolitan areas hinges on telecommunications that are progressive and first class. Without a robust telecommunications industry in non-metropolitan Australia it would be impossible to ensure, jobs, health care, education and regional development.

The implications for not finding sound solutions to the telecommunications issues identified in this paper are detrimental. If Australia is to remain internationally competitive and productive, policymakers must recognise the need for government to provide the right environment.

The Page Research Centre believes through its research it has generated a measure of debate regarding the very complex issue of telecommunications. Through the publication of this position paper, the Page Research Centre hopes to now shift the debate into possible solutions to future-proofing telecommunications in non-metropolitan areas.

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