



Declaration of broadband access services in regional Australia

Submission for the Competitive Carriers Coalition Inc. (CCC)

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Table of contents

1 Executive summary	2
1.1 Limitations of competition in regional Australia.....	2
1.2 Wholesale broadband disputes.....	3
1.3 Arguments for declaration.....	4
1.4 Conclusions.....	8
2. Introduction	10
3. Legislative framework	12
3.1 Long term interests of end-users.....	12
3.2 Pricing principles for declared services.....	14
4. Wholesale and retail broadband markets	15
4.1 Market definition.....	15
4.2 Wholesale broadband access market.....	15
4.3 Other related markets.....	21
5. The wholesale broadband access service	26
5.1 Preferred service description.....	26
5.2 Market description.....	27
6. Should this service be declared?	29
6.1 The role of declaration.....	29
6.2 Promotion of competition.....	29
6.3 Any-to-any connectivity.....	35
6.4 Efficient use of and investment in infrastructure.....	35
7. Conclusions	38

1 Executive summary

In this paper, the CCC requests declaration of a wholesale broadband access service for regional Australia.

1.1 Limitations of competition in regional Australia

Effective facilities and service based competition has partially developed in some areas of Australia, particularly in Australia's capital cities. In regional areas, however, competition is less developed, and availability of broadband access is more limited. In many locations, Telstra is the sole provider of broadband services, and in some locations broadband services are not available at all. Service competition exists in some areas, predominantly through utilisation of ULL and resale of Telstra ADSL. This is concentrated in the larger regional towns. Telstra's ADSL network is ubiquitous, and there are no broadly available alternatives, except for a small number of localised WiFi based networks providing broadband services in some regional areas. The CCC believes the reasons for the failure in competition and infrastructure investment in regional Australia are:

- Demand for broadband services in regional areas is currently low, fragmented and uncertain. The uncertainty of broadband demand has deterred many operators from entering regional markets. In some locations, it is apparent that facilities based competition is not feasible.
- Telstra's ubiquitous xDSL infrastructure represents a bottleneck in the delivery of broadband services in rural areas where there are no real alternatives. Therefore, Telstra is able to exercise market power in several ways.
- Telstra is focused on retail broadband services, and has demonstrated unwillingness to develop the wholesale broadband market except where required by declaration.

The CCC considers that declaration of a wholesale broadband access service is required to ensure that the interests of end-users, the promotion of competition with all its benefits and infrastructure investment are promoted in regional areas.

The CCC's preferred service description for this declaration is for a Layer 2, technology neutral wholesale broadband access service. The service description will include greater flexibility for access seekers to choose service functionality. The CCC believes that this will promote the Long Term Interests of End-users (LTIE) through enabling competitive operators to provide broadband services in regional areas, thereby promoting -

- competition;
- the efficient use of existing infrastructure; and
- investment in further infrastructure once competition is established.

The proposed declaration has been designed to allow those areas where effective competition in broadband access services exists to be exempted.

1.2 Wholesale broadband disputes

Telstra's approach to the wholesale broadband market has been to resist development of commercial wholesale broadband products unless required by regulation. Telstra has shown no interest in the development of wholesale broadband services on fair and reasonable commercial terms.

There is a history of competition notices filed against Telstra in relation to wholesale broadband services. In September 2001 a competition notice was filed as a result of Telstra's refusal to provide Wholesale ADSL services to competitors. More recently, in 2004 a competition notice was filed against Telstra as a result of price squeezing between Telstra's wholesale and retail offerings.

In addition to formal competition notices, there are also some major areas of complaint against Telstra in the provision of wholesale broadband services. Telstra's approach to provision of retail and wholesale services shows an unwillingness to develop the wholesale broadband market. There are a number of major areas of complaint including:

- Since the introduction of ULL, there has been a series of complaints about ULL pricing. This is still ongoing with arbitration continuing between ACCC and Telstra for agreement of ULL pricing.
- Telstra has not offered wholesale BDSL services in regional areas on terms that are commercially acceptable to competitive operators. The ACCC has acknowledged that the wholesale provision of ADSL and BDSL has been an ongoing source of complaint associated with the reasonableness of the terms and conditions under which Telstra provides these services¹.
- Complaints in relation to access to exchanges for DSLAM deployments by Telstra's competitors. There have been several complaints in this area.. Optus has complained that Telstra's has been too slow in making exchanges ready for ADSL2+ installations. Complaints have also been made with regard to ADSL2+, that Telstra is refusing to engage with wholesale customers' requests for information about when it intends to make ADSL2+ available to retail customers and whether it is also planning a wholesale product.

¹ A strategic review of the regulation of fixed network services, ACCC positioning paper, June 2006.

1.3 Arguments for declaration

1.3.1 Promotion of competition

Direct effects

Declaration of a wholesale broadband access service will affect competition in a range of markets; retail and wholesale broadband access markets for residential and small business customers, markets for business broadband and backhaul markets.

Currently Telstra is required to provide a number of wholesale ADSL products, and ADSL resale variants, and ULL. These products are used by other operators to provide retail broadband services where they do not own their own access infrastructure. While these products have been utilised by some operators in some regional locations, this has not led to development of effective competition on a widescale basis in regional areas. ULL and available wholesale ADSL products are not effective substitutes for a declared wholesale broadband access product, because they do not allow a sufficient functional control for the access seeker and they require a degree of additional and inefficient investment in infrastructure by the access seeker. In regional areas with limited competition, this has meant that these products have not been effective in the promotion and development of competition.

Over 80% of broadband services provided across Australia utilise Telstra's DSL network. Where there are no alternatives to Telstra's access network, Telstra is able to exercise market power in the delivery of broadband access through its ability to control the bottleneck service. Telstra has the opportunity to exercise market power in a number of ways:

- Through determining the costs of supply for its retail customers for broadband access, leading to opportunities for price squeeze.
- Through offering terms and conditions that are not considered reasonable by competitive operators.
- Through the ability to resist requests from competitive operators and discriminate in favour of themselves.
- Through controlling the functional service variables of its ADSL resale products through limiting the technical capabilities available to competitive operators.

There are technologies other than xDSL which can provide broadband services. 3G mobile services, WiFi, WiMAX and fibre are examples. Deployment of alternative technologies to xDSL is increasing in regional areas, and this will place some competitive constraint on Telstra's monopoly access network. However, these technologies and deployments are in their infancy and not competitive with Telstra's ubiquitous network. It is unlikely that these deployments will substantially reduce Telstra's capacity to exercise market power in broadband access in regional areas or that, where constraint is a possibility, that it will occur in the short and medium term. New technology deployments are focused primarily in metropolitan areas. In the short

and medium term, DSL will remain the technology of choice for delivery of relatively fast, efficient and high quality broadband services in regional areas.

Availability of retail broadband services varies. Some retail competition exists in the largest regional towns, although it does not match that in the most competitive metropolitan areas. However, in many areas Telstra is the only provider of retail broadband services, and in some areas there are no services available at all. Demand for broadband services in regional areas is growing but it is still lagging behind metropolitan areas. This is likely due to a number of factors including smaller population, the limited infrastructure availability, limited service innovation and greater price sensitivity in regional areas. Declaration of a wholesale broadband access product will enable operators to enter new retail markets, and will promote competition in retail markets through greater service functionality, diversity and innovation.

Business broadband services based on DSL technologies (BDSL) are of particular concern in regional areas. Telstra's exchanges are capable of providing BDSL services to retail and wholesale customers in many locations, but retail BDSL services are offered at higher prices in regional areas than in metropolitan areas and wholesale BDSL services are not offered on terms that are acceptable to competitive operators. Competitive BDSL offerings to Telstra are not available in most regional areas, and end-users of BDSL services do not have any choice other than Telstra in most cases. There are some possible technical substitutes to Telstra's BDSL products for competitive operators, but these are not competitive on price with Telstra's BDSL retail product. Corporate organisations (such as Government departments, police and ambulance, and banks for example) often require BDSL services to all of their offices. Currently these organisations cannot choose any operator other than Telstra to provide all of their needs in majority of regional locations, and are subject to higher pricing in regional areas for retail BDSL from Telstra.

Backhaul services are available in most areas of Australia, but in many areas Telstra is the only provider. Backhaul is a declared service under the domestic transmission capacity declaration, but this declaration does not set out pricing principles. Prices for backhaul therefore are left to be agreed on a commercial basis. In areas where backhaul infrastructure options are limited, Telstra and other backhaul providers to locations where backhaul competition is limited are able to exercise market power and charge prices far in excess of costs and a reasonable return. Very high prices for backhaul services acts to reduce the attractiveness of regional markets for wholesale and retail broadband services. Demand for backhaul services is driven by the demand for access services. In other words, the demand for access services defines the requirement for backhaul at any particular location. The declaration of a wholesale broadband access service which allows entry of competitive operators to rural and regional access markets will increase demand for backhaul to those locations. This might allow new entry and go some way to alleviating this persistent and difficult problem.

The CCC believes that declaration of a wholesale broadband access service will promote competition through allowing competitive operators to provide services in regional locations and provide greater competition in terms of service functionality to end-users.

Indirect effects

Operators will enter markets where there is a commercial opportunity to do so. Commercial opportunity is not only defined in terms of the demand for retail services, but the costs associated with addressing that demand. Where demand levels are untested and meeting them is dependent on the wholesale services of others, as in rural and regional areas, competitive operators are less likely to take the risks of market entry in the absence of a reliable regulated arrangement for access on fair and reasonable conditions. Failure to provide services to regional areas demonstrates that given current pricing and other terms and conditions, competitive operators have not been able to identify an acceptable commercial opportunity. Declaration of a wholesale broadband access service which allows staged investment in infrastructure by competitive operators as customer numbers are built up, will open new opportunities for operators to enter rural markets where there is more limited or untested demand. In turn, due to the 'stepping stone' effect, this may lead to further investment in markets once operators have been able to build a customer base. There is evidence of the success of this policy in the recent upsurge of investment in DSLAMs by competitors in metropolitan markets

There is little risk that declaration of a wholesale broadband access service will act as a substitute to investment for competitive operators, by removing incentives for investment. The incentives for competitive investment in most rural and regional markets are insufficient for the development of infrastructure-based competition on a widescale basis. Demand for broadband in rural areas is still developing. The CCC considers that declaration will lead to further development in demand and thereby result in changing the market dynamics to encourage new and sustainable investment. Again, the experience in metropolitan markets supports this.

1.3.2 Any-to-any connectivity

In principle, any-to-any connectivity is not affected by declaration of a wholesale broadband access service. In practice, network externality effects will benefit all those who are currently connected.

1.3.3 Efficient use of and investment in infrastructure

Economically efficient use of infrastructure

Broadband access networks in regional Australia exhibit natural monopoly characteristics. For such a natural monopoly it is uneconomic for a smaller operators to duplicate Telstra's existing network. This is due to the benefits of greater scale which can be obtained by Telstra, and the benefits of first market entry.

Declaration of a wholesale broadband access service will promote efficient use of existing infrastructure at the point where Telstra has been able to exercise market power through control of bottleneck services. In most rural and regional markets, competitive operators have the following choices -

- Using Telstra's wholesale ADSL services, where they exist, forcing them to offer services of limited functionality and quality
- Investing in alternative infrastructure which may not be economic or based on sustainable, competitive technologies
- Not entering the market at this stage.

None of these choices makes for the development of demand and of competition in these markets. The declaration of the broadband access service sought in this submission will make the critical difference and permit efficient and economic competitive entry on a sustainable basis.

Technical feasibility

As wholesale broadband services are available across Australia, a wholesale broadband access service is clearly technically feasible.

Legitimate commercial interest of the access provider

Telstra's legitimate commercial interests will be met where Telstra is able to achieve a market return appropriate for this type of investment. This will include the return required to account for Telstra's strategic investment in the CAN.

Economically efficient investment in infrastructure

The Commission is concerned to ensure that Telstra and other operators have an incentive to invest in new infrastructure based on new and innovative technologies where there is the commercial opportunity to do so. The initial concern for rural and regional broadband markets is the existence of appropriate infrastructure in the first place. Demand in these markets is generally less developed than in urban markets, and the potential is limited by the populations involved. For these reasons there is unlikely to be sufficient demand in the early period of broadband market development, to sustain competing infrastructures, and all the more reason, in terms of efficiency of investment and use of available capacity, to require the infrastructure owner to provide wholesale access on reasonable and appropriate terms.

Rational, efficient operators make up their minds where it is sensible to invest based on where there are opportunities. Wholesale broadband access will enable competitive operators to offer services and play their part in developing new and greater demand, and, once they have established their own customer bases in rural and regional markets, will provide incentives for them to invest in their own infrastructure where it is sensible to do so. However, without the declaration of a wholesale broadband access service, these same operators will have no further

incentive to enter these markets than now, and the additional demand stimulation and potential additional investment outcomes will not occur.

Regional Australia require scalable technologies which are able to provide greater bandwidths as the demand for broadband grows. Experience in Australia and in international markets shows that demand for greater bandwidth rapidly follows takeup of broadband services. High speed broadband is required in order that regional areas can benefit fully from the productive effects of broadband on regional communities. The CCC believes that through the 'stepping stone' effect, declaration will encourage expansion into new infrastructure on this basis.

Along with promoting investment in new technologies by competitive operators, the Commission is concerned to ensure that Telstra is not discouraged from investing through the declaration of a wholesale broadband access service. There are a number of factors that will create investment incentives for Telstra. First, the price level for a wholesale broadband access service will be an important factor. A reasonable pricing basis will be achieved through consideration of:

- Risk
- Cost
- Existing and future demand

Secondly, Telstra has made it clear that it will focus on the larger and more important regional towns where there is more concentrated demand and where response to a competitive threat is typically required. The CCC considers that Telstra is a commercial enterprise that will make rational decisions to invest in rural and regional broadband markets. Telstra will continue to invest for the following reasons based on rational decision making:

- The ability to provide services on a national basis
- The ability to support a national brand
- The ability to support a national consistent high level of service
- The ability to be efficient in promotion
- The ability to serve city markets that have associated rural and regional markets
- The ability to service business and government customers that have large coverage requirements
- The ability to obtain reasonable returns on investment in all markets.

1.4 Conclusions

This submission addresses whether LTIE could be promoted through declaration of a wholesale broadband access service. Our assessment of the market for broadband

access and services in regional Australia shows that market power is exercised by Telstra in the following areas:

- In the choice of locations for provision of retail broadband services
- In the bandwidths chosen for broadband services.
- Through pricing of BDSL higher in regional markets
- Through control of supply to its wholesale customers.

The declaration proposed has the flexibility to enable adjustment by the exemption of specific geographically defined markets if it is shown that competition has emerged on a sustainable basis in those markets. The CCC recognises that an exemption may be required in the five capital cities and especially in their CBD areas. The form of the declaration proposed is therefore adaptable to changing circumstances, whilst performing its key role in the promotion of competition, particularly in regional Australia.

Our assessment of the LTIE shows that declaration will benefit end-users, and therefore we believe that this wholesale broadband access service should be declared.

2. Introduction

In this paper, the CCC requests declaration of a wholesale broadband access service for regional Australia and sets out the arguments for why this service should be declared.

Facilities based competition has been developing in some areas of Australia, but is still very limited in most rural and regional areas. Microwave, fixed, wireless, optical fibre and satellite technologies have emerged in recent years. There are a number of local access networks across Australia which are providing facilities based competition to Telstra's ubiquitous copper Customer Access Network but these are almost exclusively in CBDs of capital cities. Future technology developments are expected, such as NGN deployment, and significant developments in wireless technologies, these will impact facilities based competition further. However, the use of alternative technologies by competitive operators is likely to continue to be directed to major urban markets in the first instance, with provision to rural and regional areas to occur later. Development of competition in the provision of broadband services based on separate infrastructure is therefore likely to be delayed in rural and regional markets, and will emerge on a piecemeal, market-by-market basis.

Technology developments may improve competition, but only to the extent that they are operated and controlled by competing organisations, and developments to date have not resulted in effective competition in all but the most populated regional areas and metropolitan cities. More importantly, future technology developments such as NGN and wireless are expected to concentrate on metropolitan areas for some time.

In this paper we address the failure of infrastructure development in regional Australia, and the impact failing infrastructure development has had on broadband markets. This problem has been caused by the fact that:

1. Demand for high-speed broadband services in many parts of Australia, and particularly in rural areas is uncertain, at best fragmented, and in most rural areas it is limited.
 - In most rural areas, there is only one infrastructure provider, Telstra.
 - This submission aims to draw distinction between areas where infrastructure competition does not exist and metropolitan areas, particularly CBD areas, where there has been development of effective competition². The characteristics which make for competition are found in many metropolitan and CBD areas, but are absent in many regional areas in Australia.

² Areas where effective competition has developed varies, but in general only applies to CBD areas.

- If demand for broadband increases in regional areas to a level where alternative infrastructure providers have incentive to enter the market, then this declaration has been defined to be flexible enough for those areas where effective competition exists to be exempted.
2. Telstra's activities in provision of wholesale broadband services has shown a clear intention to focus on the retail market. Telstra has resisted development of a commercial wholesale broadband business. Given this approach by Telstra, the CCC does not expect Telstra to initiate the development of the wholesale broadband market on a commercial basis. Given this approach, Telstra will only agree to provide wholesale broadband products in response to regulation, and this makes declaration essential where bottlenecks exist. Without minimum declaration there will be no improvement in the competitive supply of broadband services in regional areas, and the development of regional broadband services will continue to rely solely on decisions by Telstra.

3. Legislative framework

3.1 Long term interests of end-users

Part XIC of the Trade Practices Act sets out the access regime for telecommunications. Under the Act, in consideration of declaration of a wholesale access service, the commission is required to have regard to LTIE. The effect on the LTIE is assessed by considering whether:

1. Competition would be promoted in the markets for wholesale access services and services supplied by a wholesale access service.
2. Any-to-any connectivity would be achieved, for a wholesale access service involving communication between end-users
3. The economically efficient use of, and economically efficient investment in, the infrastructure by which a wholesale access service and services provided by means of a wholesale access service would be encouraged.

3.1.1 Promoting competition

To determine whether competition is promoted by the declaration of a broadband access service, the ACCC must establish whether declaration will remove obstacles to end-users gaining access to broadband services.

In markets which exhibit natural monopoly characteristics, such as fixed telecoms access networks, market power can be exercised where an operator has control of a bottleneck service. A natural monopoly has been defined by the ACCC as where services are supplied by a facility or a technology which is both a necessary input to a firm in dependent markets and is difficult or uneconomic to duplicate, Telstra's DSL broadband access network is an example. As the owner of such a bottleneck facility Telstra can reap abnormally high profits, either through restricting the supply of the service or demanding high prices³.

Competition is the process of rivalry between firms, where each market participant is constrained in its price and output decisions by the activity of other market participants, and benefits to end-users from competition, that is, lower prices, better quality and a better range of services over time. Competition is inhibited where the structure of the market allows an operator in the market to exercise power in that market. Market power is determined on the basis of well known legal principles, namely, the capacity of a supplier of goods or services to raise prices or reduce output without needing to consider the response of other suppliers in that market.

³ A strategic review of the regulation of fixed network services, ACCC position paper, June 2006, ACCC.

Market power can be exercised at a bottleneck such as access to the customer premises for fixed broadband services.

To make an assessment of whether a declaration of a wholesale access service is likely to promote competition in broadband services it is necessary for the commission to identify the likely impact of declaration on those markets relevant to a wholesale broadband access service, and other related markets.

3.1.2 Any-to-any connectivity

Achievement of any-to-any connectivity requires that each end-user who is supplied via a wholesale access service is able to communicate, by means of the wholesale access service with other end-user, whether or not they are connected to the same network.

The reference to similar services in the Trade Practices Act enables the objective of any-to-any connectivity to apply to services with analogous, but not identical, functional characteristics. For a wholesale access service, these might include fixed telephony services or Internet services which may have differing characteristics. When considering services other than those that involve communications between end-users this criteria has less weight than the other two criteria.

3.1.3 Efficient use of, or investment in, infrastructure

In considering the impact of declaration of a wholesale access service on efficient use of, or investment in infrastructure, the ACCC needs to consider a number of specific matters including:

- Whether it is technically feasible for the a wholesale access service to be supplied and charged for,
 - having regard to the technology that is in use or available
 - whether the costs that would be involved in supplying, and for charging for wholesale access services are reasonable,
 - the affects or likely effects that supplying and charging for the wholesale access service would have on operation or performance of telecommunications services.
- The legitimate commercial interests of Telstra (and any other potential suppliers) of a wholesale access service.
 - Encompassing obligations to the owners of the firm, the need to recover the cost of providing services and to earn a normal commercial return on infrastructure investment.
 - Whether or not excess capacity should be made available to an access seeker.

- Whether the access arrangement may affect the owners ability to realise economies of scale or scope.
- The incentives for investment in the infrastructure by which the wholesale access service are supplied.
 - Telstra (or any other supplier) should have incentives to invest efficiently in infrastructure.
 - Whether there are any expected disincentives to investment which might result from increased competition as a result of the declaration.

3.2 Pricing principles for declared services

One of the important factors in determining the impact of declaration of a wholesale access service on LTIE, and in particular the impact on competition for wholesale and retail broadband services will be the terms and conditions of the service, and particularly pricing. The ACCC is required to determine pricing principles relating to services that it declares. The pricing principles may contain price-related terms and conditions relating to access to the declared service.

An important consideration in ensuring that access to declared services is in the LTIE is whether the terms and conditions of access (including the price) are reasonable. This is because the mere provision of access by an access provider may not be sufficient to promote LTIE. The terms of conditions under which access is provided, particularly the price, are therefore also important in determining the degree to which the LTIE is promoted by declaration.

4. Wholesale and retail broadband markets

4.1 Market definition

The Trade Practices Act requires that market analysis be undertaken for markets affected by the declaration of a wholesale broadband access service. Market analysis is undertaken in order to understand better how the declaration will promote competition. Competition is likely to be promoted by declaration of a wholesale broadband access service where the following conditions are present.

- Where the wholesale access broadband service is an input that is used to supply wholesale broadband or retail broadband services (referred to as downstream services)
- Where competition in the market for the supply of wholesale broadband access services is unlikely to be effective in the future and this is likely to have an affect on the competition in markets for downstream services

In order to define the markets relevant to a wholesale broadband access service, it is necessary to identify the other markets and services that are currently available and are potential substitutes for provisioning of broadband access services. It is also necessary to consider competition in the supply of potential substitute services, and the geographic market boundaries.

4.2 Wholesale broadband access market

4.2.1 Potential wholesale broadband access substitutes

Telstra provides a number of wholesale ADSL based broadband products which enable competitive operators to provide broadband services to retail customers through utilisation of Telstra's network infrastructure.

ULL

Telstra is required to provide an unconditioned local loop (ULL) product. ULL involves the use of unconditioned copper pairs between the network boundary at an end-user's premises and a point in the network which the copper terminates. This allows competitors direct access to Telstra's copper lines that connect customers to local telephone exchanges. ULL allows access seekers to define the products and services they provide to their end-users. The access seeker deploys its own DSLAM (ADSL, ADSL2+) in Telstra's exchange to supply a range of downstream services, including broadband and voice services. The ULL product can also be used to supply

voice call on a wholesale basis, although, this requires further investment in switching equipment.

Telstra Wholesale DSL resale products

Telstra Wholesale provides a set of ADSL resale products which range from pure resale to products which allow access seekers to control service definition to their customers to some degree. Specifically, a Layer 2⁴ ADSL resale product is available which allows for the access seeker to control elements of service definition to the end-user, but the scope of service control is limited and this is not an end to end product, it requires access to ATM or Ethernet 802.3. Both ADSL and BDSL wholesale resale products are available.

The wholesale DSL products provided by Telstra are not substitutes for this wholesale broadband access service. They are limited, and have not successfully developed effective competition in regional areas. They are technology specific (i.e. ADSL based), and the resale products leave limited capacity for the access seeker to vary the specifications of service to their end-users.

Technology substitutes

Deployment of alternative broadband access technologies to ADSL by competitive operators can act to reduce Telstra's market power in broadband access, but only to a limited degree. Alternatives in regional areas include ISDN, Satellite and various wireless technologies. ISDN is dependent on the same technology as ADSL owned by Telstra, and therefore does not act as a effective substitute. Satellite is available across Australia, but is only used where there are no other options due to high pricing, and poor consistency. WiFi is available in some locations, but these networks are localised, and have limited bandwidth capacity.

Given Telstra's near ubiquitous ADSL network infrastructure which provides over 80% of broadband access these alternatives are not effective substitutes for a technology neutral wholesale broadband access service.

4.2.2 ADSL disputes

Since the ACCC has required Telstra to provide wholesale broadband products to competitors, Telstra's approach has demonstrated an unwillingness to develop

⁴ Layer 2 is a layer within the Open Systems Interconnection reference model (referred to as the OSI model). The OSI model divides the function of communications and computer network protocol into seven layers, from the physical layer to the application layer. Layer 2 is the data link layer, which provides functional and procedural means to transfer data between network entities. A Layer 2 wholesale product allows for greater control of service functionality for the access seeker than a Layer 3 wholesale product for example.

commercial wholesale broadband products other than as required by regulatory intervention.

This is demonstrated by two competition notices that have been filed against Telstra, and many complaints made by competitors. In September 2001 a competition notice was filed as a result of Telstra's refusal to provide Wholesale ADSL services to competitors. Telstra supplied FlexStream to wholesale customers at prices which allowed little margin for wholesale operators in residential and retail markets, and refused to provide a wholesale ADSL product. As a result of the competition notice, Telstra was required to provide a wholesale DSL service.

In March 2004, a competition notice was filed against Telstra as a result of price squeezing between Telstra for its retail and wholesale broadband offerings. The ACCC found that Telstra refused to offer ADSL broadband at prices other than that which allowed only a meagre margin between wholesale and retail prices. Following this, in a report by the ACCC "Assessing vertical price squeezes for ADSL services", the commission expressed concern about the effect of a price squeeze in ADSL services on the development of facilities based competition. As a result of the competition notice, Telstra reduced its prices for wholesale ADSL and the competition notice was revoked.

In addition to the formal competition notices, there are many examples of where sustained complaints have been made against Telstra. Some particularly relevant examples include:

- ULL pricing – Since the introduction of ULL, there has been a series of complaints about ULL pricing. This is still ongoing with arbitration continuing between ACCC and Telstra for agreement of ULL pricing.
- BDSL - Telstra is capable of providing wholesale BDSL service in some regional areas but these services are not offered on acceptable terms for competitive operators. The ACCC has acknowledged that the wholesale provision of ADSL and BDSL has been an ongoing source of complaint about the reasonableness of the terms and conditions on which Telstra provides broadband services⁵.
- Access to exchanges – While Telstra cannot outright refuse entry of another operator to an exchange for implementation of a DSLAM unless there is no space available, there have been complaints of resistance. Optus has complained recently that Telstra is taking a slow approach in enabling exchanges for provision ADSL2+ in exchanges for example.

⁵ A strategic review of the regulation of fixed network services, ACCC positioning paper, June 2006.

4.2.3 Fixed infrastructure competition to Telstra

Broadband access infrastructure in regional areas in Australia is limited, other than that owned by Telstra. Telstra owned ADSL (and some cable⁶) infrastructure is available over much of the east coast of Australia, in areas around the major capital cities and in a few other pockets across the country. There are a few smaller networks operating on a localised basis across the country, but these do not typically wholesale services to other operators⁷. 80% of broadband access is providing via utilisation of xDSL based on Telstra's customers access network (CAN)⁸. This proportion is likely to be higher in regions outside metropolitan areas.

Especially in less densely populated areas, away from the eastern seaboard, there is often no broadband access at all. Broadband access is typically limited to locations within towns where end-users are close enough to an ADSL enabled exchange to obtain broadband access via ADSL.

Figure 4.1 shows the distribution of broadband access infrastructure in regional areas.⁹ This is based on a survey conducted by Nielsen Media Research in March, April and May 2006. Figure 4.1 shows that those respondents who are aware of the access technology used to provide broadband services to them, DSL is by far the predominant technology. The high number of don't know responses demonstrate that amongst many Australians in regional Australia, the access technology used for delivery of broadband is not important. This fact supports the technology neutral approach which is preferred for this declaration.

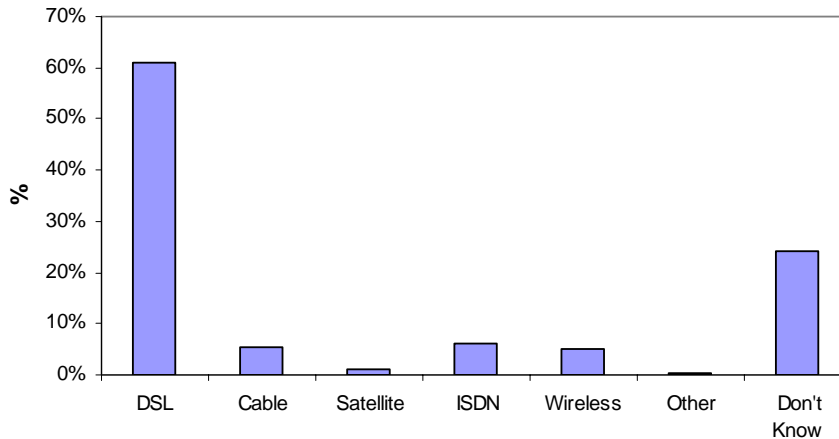
⁶ This refers to cable networks in Canberra

⁷ WiFi deployments in some regional areas deliver broadband services up to 512Kbits/s. However, these are not suitable for provision of wholesale services.

⁸ A strategic review of the regulation of fixed network services, ACCC position paper, June 2006

⁹ Regional areas for the purpose of Figure 3.1 include everywhere across Australia except for Sydney, Melbourne, Brisbane, Perth and Darwin.

Figure 4.1 **Distribution of access technologies in regional areas**



Source: Nielsen Media Research

Where infrastructure is available, most broadband services in regional Australia are provided at 256kbit/s or 512 Kbit/s. This is slow by international comparison, and limits the functionality of the broadband service for subscribers substantially. Telstra's ADSL1 technology is capable of delivering speeds substantially higher than these, particularly to subscribers close to the exchange, but Telstra has chosen to concentrate on lower speed entry level products. In metropolitan areas, Telstra and other operators are deploying ADSL2/2+ which can provide speeds up to 24 Mbit/s. In regional areas there have been only very limited deployments of ADSL2/2+. The ability of ADSL2/2+ to provide high speeds depends on the copper infrastructure available at each location and the distance of the subscriber from the exchange. In metropolitan areas, ADSL2/2+ can only provide high speeds to subscribers close to the exchange, but in regional areas the quality of copper infrastructure varies substantially. In some locations thicker copper exists, which Telstra claims allows ADSL2/2+ to provide very fast speed to much greater distances. This debate is still ongoing, but either way broadband services delivered through ADSL in regional areas is inconsistent due to variable infrastructure quality. Additionally, this realisation by Telstra has come out in the course of the debate but not through commitment by Telstra to offer the best possible service to its retail and wholesale customers.

Through provision of wholesale ADSL services to competitors, Telstra is able to control the input service elements and price to competitive retail broadband operators. Telstra Wholesale's resale broadband products set the upstream and downstream bandwidth available. This limits the flexibility of broadband services competitors to Telstra can provide and therefore the service variation in the market. Telstra's ability to exercise market power in this way and by the targeting and timing of its market response of entry to broadband markets in rural and regional areas, and further in determining the costs of supply for its retail competitors for broadband

access and backhaul, acts as a constraint to competition. Because of the experience of many operators dealing with Telstra the constraint can also take the form of dampening competitive interest in markets with only modest demand.

ULL in regional areas.

Operators can utilise ULL and deploy their own DSLAMs in regional exchanges to provide a competitive service to Telstra. Optus has utilised ULL in some of the larger regional towns, but compared to DSLAM investments made in metropolitan areas, these are limited.

The opportunity to utilise ULL and invest in DSLAM equipment has not acted to promote competition substantially outside metropolitan areas. There are a number of reasons for this. Relative to metropolitan areas, ULL prices are high in regional areas. Affordability levels in regional markets are typically different and often lower. Demand is uncertain and fragmented, and competitive operators entering these markets need to be able to demonstrate demand for a continuing service. Lastly, the marginal operating costs of serving customers in regional areas is often greater.

4.2.3 Mobile broadband infrastructure competition

Broadband services can also be provided by 3G cellular networks. Infrastructure competition in cellular mobile networks capable of delivering high speed data services is developing in Australia, although it is currently limited to metropolitan areas.

GSM networks upgraded for GPRS and EDGE, are available in many regional areas and rural areas and are capable of delivering data at speeds suitable for low bandwidth applications such as e-mail and picture messaging (at slow speed), but this is the limit of their broadband capability. 3G cellular mobile technologies such as HSDPA are capable of bandwidths equivalent to that delivered ADSL1. For example, implementations of HSDPA in the US can deliver between 400 Kbit/s and 700 Kbit/s in the downlink¹⁰. The industry expects further technology developments and faster speeds from 3G technologies in coming years.

Telstra is the only operator who has immediate plans to deploy 3G networks in areas outside the metropolitan areas. Telstra claims its planned W-CDMA network implementation at 850 MHz will cover the same area as the CDMA network which is planned for shutdown¹¹. The W-CDMA network will deliver speeds of 400 to 700 Kbit/s.

Telstra has not yet publicly decided whether or not to allow access to its W-CDMA network to other operators. Refusal to provide wholesale access to its planned W-CDMA networks, in combination with the shutdown of its CDMA network, would mean there will be no wholesale mobile services available across Australia capable of

¹⁰ The uplink is limited to 64Kbit/s using current technology.

¹¹ Telstra's CDMA network covers most of regional Australia.

delivering widespread wireless broadband. Therefore the shutdown of the CDMA network will in fact increase Telstra's dominance in provision of wholesale broadband services to regional areas.

4.2.4 Geographic dimension to wholesale broadband access markets

Demand for broadband services in regional Australia is specific to local geographic areas. Assessment by potential market entrants of whether or not to provide broadband services at any particular location is based on expected demand and supply costs at that location. The costs faced by Telstra and competitive operators of serving end-users at any particular location are assessed with regard to the available infrastructure at that location, and its proximity to other required network infrastructure. Alternative access infrastructure such as WiFi have been deployed where access to local demand, backhaul and local topographic variations allow. This is relevant because competition in regional Australia has developed on a localised basis.

This declaration allows for locations to be exempted as competition develops, and when the benefit of the declaration is no longer required, because of the existence of effective competition, in any geographically defined local broadband service market.

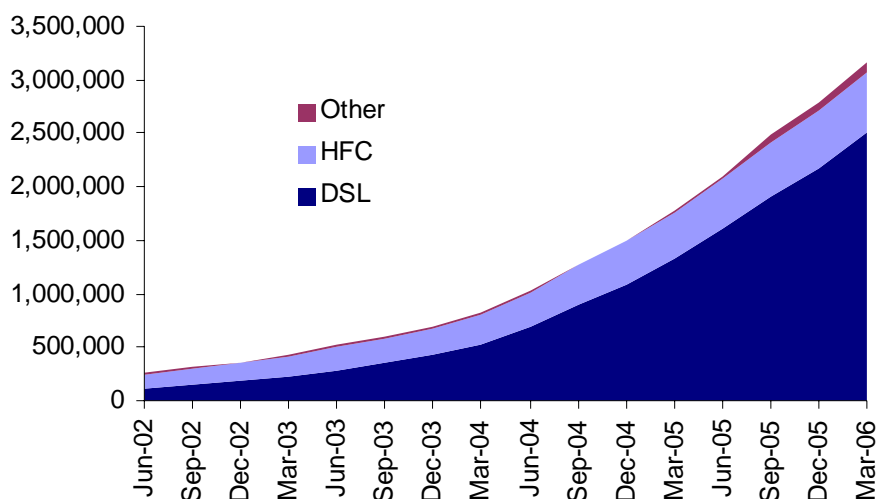
4.3 Other related markets

4.3.1 Retail Broadband markets

Demand for broadband services is growing across Australia. In December 2005, the ACCC recorded take-up of broadband nationally at 2,785,000, and the volume of growth has increased by more than 100% in the three consecutive quarters¹². Figure 4.2 shows the growth in broadband connections nationally.

¹² A strategic review of the regulation of fixed network services, ACCC position paper, June 2006, ACCC

Figure 4.2 **Growth in broadband connections**



Source: ACCC

Operators have experienced higher growth rates to date in metropolitan areas than regional and rural areas. Slower demand growth in regional areas is in part due to the infrastructure available. International experience has shown that regional subscribers should exhibit the same profile once infrastructure is available.

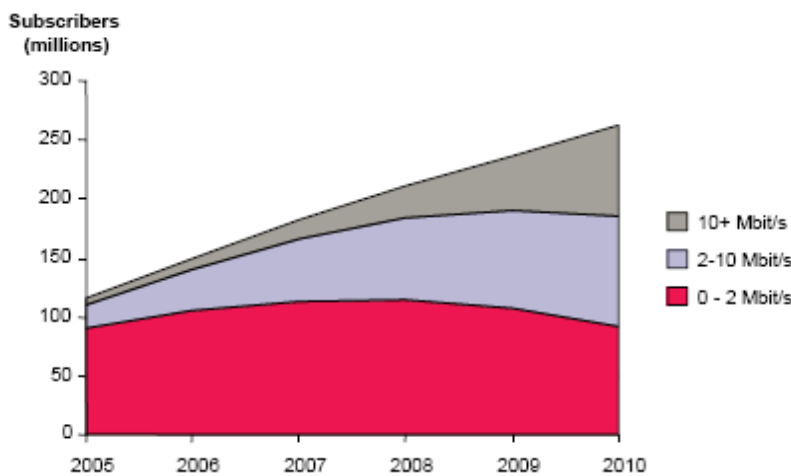
Availability of broadband services across Australia varies. In many regional areas of Australia where retail broadband services are available, services are provided by Telstra with no competition. Some areas do not have broadband services available at all. Telstra's focus is on providing retail services in locations which represent a sound commercial opportunity, i.e where significant demand exists, and often where entry is required in response to competition.

Bandwidths available in regional areas where broadband is available are also often limited. Asymmetrical bandwidths of 256 Kbit/s and 512 Kbit/s downstream and 64 Kbit/s upstream are typical. ADSL is capable of delivering speeds in excess of this, but WiFi networks are not. Typically bandwidths higher than 512Kbit/s are required to use transactional applications and download bandwidth hungry Internet websites easily without significant waiting times.

Arguably, rural and regional customers, particularly in remote areas, have more to gain from high speed broadband services. Transactions involving commercial, business and personal information which can be undertaken using high speed Internet services offer regional subscribers the opportunity to save costs in terms of money and time. Overseas experience has shown that demand for broadband access increases dramatically once a critical takeup point has been reached. That is takeup is slow at first, and then rapidly increases at some point in the takeup cycle.

Additionally, overseas experience has shown that once subscribers gain access to entry level broadband services, demand for faster speeds, capabilities and bandwidth rapidly follows. Figure 4.3 shows a forecast of the growth in bandwidth requirement globally. It shows that demand for entry level broadband reaches a peak and then reduce, and that demand for 10+ Mbit/s broadband grows strongly to 2010. This is based on Ovum experience in markets globally, and based on overseas experience it is reasonable to expect metropolitan and regional areas have the same demand growth profile.

Figure 4.3 **Global growth in bandwidth requirements**



Source: Ovum

Source: Ovum

Therefore declaration of a wholesale broadband access service which allows more operators to enter the rural market where they recognise a commercial opportunity to do so will act to support the development in demand in rural areas and further infrastructure investment in the future as the demand grows.

Symmetric Business broadband services

Business-DSL (BDSL) broadband services are provided by Telstra to business customers who require services to address a different set of needs to the asymmetric broadband services provided to the residential and small business markets. BDSL provides symmetric bandwidth capacity, more secure and committed data quality and better service levels. Telstra is capable of providing retail and wholesale BDSL services in some metropolitan and regional areas, but wholesale and retail BDSL is offered at higher prices in regional areas. Terms for wholesale BDSL in regional areas are not commercially acceptable to competitive operators, and therefore little

competition to Telstra's retail BDSL service has developed outside of the capital cities.

4.3.2 Retail voice markets and other retail markets

Increasingly retail customers are purchasing broadband as part of a bundle of services from the same supplier. Service combination which might include fixed voice, mobile voice and data, broadband and television, for example. Bundling services allow customers to benefit from cost savings across all products groups, and the result for operators is significantly lower churn rates.

Therefore declaration of wholesale access service will affect competition in markets for fixed services and calls, VoIP, mobile calls, and IPTV. The competitive effects of bundling will be considered further on in this report.

4.3.3 Market for backhaul services

Backhaul infrastructure competition

There is backhaul infrastructure serving most populated areas in Australia. Areas along the east coast of NSW, Victoria and Queensland, where there is greater population density and shorter distances between towns, have much more backhaul infrastructure competition. More remote areas such as in the Northern Territory, northern South Australia, and mid and northern Western Australia are served by only very limited backhaul services. In these areas the only technologies available are often satellite and terrestrial radio concentrator systems. The majority of fibre and radio backhaul infrastructure in regional areas is owned by Telstra. There is backhaul infrastructure competition from operators such as Optus, PowerTel, AAPT and Agile Communications and others serving large regional towns and along the intercapital routes. Outside of these areas, Telstra is very often the only provider of backhaul infrastructure.

Backhaul pricing

Domestic backhaul is a declared service under the domestic transmission capacity declaration, and therefore Telstra is required to provide backhaul services to other operators. However, this declaration does not set pricing principles for backhaul services. Backhaul prices are set on a commercial basis between the parties.

In regional areas away from the main network of backhaul linking capital cities, especially where Telstra is the only provider, and in the absence of competitive pressure, backhaul pricing is set at a level well above cost and a reasonable return. It is difficult to obtain evidence of pricing for backhaul since it is not published, but there is strong anecdotal evidence that where there is competitive pressure on Telstra's backhaul services, Telstra's backhaul prices are significantly reduced. Very high backhaul prices reduce the attractiveness of alternative operators to enter regional markets for wholesale and retail broadband services, and therefore there is little demand for backhaul services in regional areas.

In one example an alternative infrastructure provider was able to obtain prices for backhaul from Telstra which were obtained by a major mobile operator. In an attempt to constrain their own market risk, the small alternative infrastructure provider sought their own prices in the market found the resulting prices to be at least 4 times greater than those obtained it's large mobile operator contact. This example, and a lot of other anecdotal evidence demonstrates that in many rural markets, Telstra exercises market power for backhaul and the result is that few alternative operators enter rural markets for broadband service delivery.

5. The wholesale broadband access service

The CCC proposes that the Commission declare a wholesale broadband access service. There are a number of possible approaches to the definition of the service description for this wholesale broadband service. The key objectives of this submission, are to ensure that the service description is flexible enough to allow service differentiation regardless of technology, and adequately future proof enough to allow for technology developments and other market changes as the broadband market in regional Australia develops.

As shown in Section 5, ADSL is the predominant technology delivering broadband services today however now but there are a number of other technologies (fibre and 3G mobile particularly) capable of delivering high speed broadband services and technology developments will continue into the future. In order to ensure this service description can be as relevant as possible, the preferred approach for service description is for technology neutrality. This is the basis on which the following service description has been put together.

If a flexible and technology neutral approach is not suitable to the ACCC, our second alternative is for a general description based on speeds based on speeds available but still technology neutral, and the third option for a technology specific service description focused on delivery of a wholesale ADSL service.

5.1 Preferred service description

The service description will be for a Layer 2 wholesale service delivering broadband data services, that is a data service at speeds 256Kbps and over. This service will have an end to end option.

The service description will be technology neutral and will be set out in broad terms at two levels of detail. The first level of the description will be general and will describe the elements which can be varied by the customers. This service will allow the access seeker to vary the service functionality as required to their customer segments. Major elements of service functionality to be controlled by the access seeker will include:

- Data rates
- Upstream vs downstream rates
- Quality of service
- Variability of bit rate

The second level of the service description will comprise more specific examples of access technologies to which the declaration will apply. The preferred service description for this wholesale broadband access services is for inclusion of both fixed

and mobile (cellular and wireless) technologies. Broadband can be delivered over many platforms and therefore this should be reflected in the service description. ADSL is the predominant technology through which broadband is delivered currently, however this may change. Deployment of 3G cellular, wireless, and potentially NGN technologies potentially all could be used to provide a wholesale broadband access service. At this point it is difficult to predict how technologies will develop, particularly in rural areas, therefore it is the most prudent approach to have a technology neutral service description. Additionally, the ACCC has acknowledged that from subscribers point of view substitution between technologies is feasible and prevalent.

The technologies listed as examples in the service description will include:

- xDSL
- wireless broadband access services
- and any other access technologies which are considered by the ACCC as relevant in the future.

Wireless broadband technologies covered by the service description will include 850 UMTS and other cellular mobile technologies capable of delivering greater than 256Kbits/s, and non cellular wireless broadband technologies such as WiMAX.

The particular form of the declaration is important. The service description needs to make it clear that functional service management and control must be with the access seeker to enable service differentiation to end-users. This will promote competition in retail service markets through the development of retail services that are experienced by end-users differently and which may have different functionality both from the access seeker's services and from each other.

5.2 Market description

The declaration will apply across Australia in the wholesale markets for high speed broadband services. However, there will be some markets where there is effective competition, and in this case where an operator can demonstrate that sufficient competition in broadband services exists at any particular location covered by the declaration, an exemption to the declaration may be sought. In particular, an exemption may be expected in the five major capital cities in both residential and business wholesale broadband markets. The declaration should apply in all other areas where effective competition does not exist.

5.2.1 Use of exemptions

The use of exemptions in declarations for local carriage services, and domestic transmission services demonstrates that use of exemptions by the Commission is an established approach used to ensure that a declaration only applies strictly in markets where it is required. In both cases, exemptions were granted in specific geographic locations where effective competition was judged to exist.

Local carriage service exemption

An exemption was applied to the local carriage service declaration in July 2002 for local carriage services in CBD areas in Adelaide, Brisbane, Melbourne, Perth and Sydney. In the decision the commission believed that the alternative infrastructure would provide effective competition and constrain wholesale and retail local call pricing in CBD areas."¹³

Domestic transmission exemption

An exemption was applied to the domestic transmission service on certain routes in May 2001. The following routes were exempt from the declaration.

- Sydney to Brisbane route: New entrants were expected on this route, leading to greater competition. The commission concluded that having regard to the likely future development of the intercapital transmission markets, it is unlikely that continued declaration of this route will promote competition or efficient investment in these circumstances. The Commission, therefore, believes that varying the domestic transmission capacity service declaration to remove the Sydney to Brisbane route will promote the LTIE¹⁴.
- Melbourne Adelaide and Perth routes: The commission concluded that based on likely improvements in competition in the future, on balance these routes should be exempted from the declaration⁷.

¹³ Future Scope of Local Carriage Service, Final decision, ACCC, July 2002.

¹⁴ Domestic Transmission Service Capacity Final Report, ACCC, May 2001

6. Should this service be declared?

6.1 The role of declaration

The CCC believes that a declared wholesale broadband access service is required to drive wholesale and retail broadband service delivery in areas across Australia where effective competition has not developed. The CCC believes there are four key reasons for this:

- In areas outside of metropolitan zones, the demand for broadband services is uncertain, fragmented and limited in many places
- Telstra's clear intention is to pursue a retail approach, and is not developing the commercial wholesale market. Therefore at a minimum declaration is required, rather than the voluntary approach taken for delivery of wholesale broadband services to date.
- Promotion of competition in markets Telstra has chosen to forego because there is no competitive threat and more fragmented demand.
- To meet the LTIE in regional markets where it is currently not being met.

As set out in Section 3, under the Trade Practices Act, any service can be declared if the Commission can demonstrate that LTIE are promoted. In this Section we will put forward the arguments for why a wholesale broadband access service should be declared on this basis.

6.2 Promotion of competition

6.2.1 The market or markets in which competition may be promoted

The commission must consider the impact declaration of a wholesale broadband access service will have in all the markets that are affected. Where competition in the market for the supply of wholesale broadband access services is already effective, then declaration of the wholesale broadband access service is unlikely to lead to any significant changes in demand quantity, price or other terms and condition of the supply of broadband services. On the other hand where competition in the market for the supply of wholesale broadband access services is ineffective, and likely to remain so, declaration could lead to changes in the quantity, price and other terms and conditions of supply of wholesale broadband services, and thereby improve competition in downstream broadband markets¹⁵.

¹⁵ A strategic review of the regulation of fixed network services, ACCC position paper, June 2005

The CCC believes that the declaration of a wholesale broadband access service will promote the level of competition in the following wholesale and retail broadband markets directly.

- Wholesale market for residential and business broadband access
- Retail market for residential and small business broadband services
- Retail market for business broadband services, including corporate and government markets nationally.
- Market for backhaul services

In addition to the direct affect, declaration of a wholesale broadband access service will promote competition in a number of other ways. Declaration will allow an entrant to bundle broadband services with one or more of fixed telephony, mobile etc, to regional areas. Use of service bundling in all telecommunications markets is increasing in Australia, and along with fixed telephone services, broadband services are a key input to the bundle of products. Therefore the declaration of a wholesale broadband access service will impact on the level of competition for each of the potentially bundled products.

Secondly, declaration of this wholesale broadband access service may be a complement to investment in alternative infrastructure. The ACCC has previously argued that resale of wholesale services such as a wholesale broadband access service will allow competitive entrants to build market share and gain market information thus limiting the risk associated with lumpy investment in infrastructure. To the extent that this is true, declaration of the wholesale broadband access service will encourage movement up the investment ladder, and it will provide another tool for competitors in markets where there are none.

Thirdly, declaration of this wholesale broadband access service will be important in addressing the anti-competitive conduct issues in these markets which have persisted over a period of eight years. It is Telstra's declared intention to increase its already dominant market share in broadband.¹⁶ Given the history of resistance by Telstra in the markets for wholesale broadband services and Telstra's recent aggressive approach to regulation and its wholesale customers, the CCC anticipate that further disputes will emerge in the next 24 months if this wholesale broadband access service is not declared

Finally, as identified by the Commission,¹⁷ there may be some regional locations where infrastructure based competition will not develop due to insufficient population to support duplicated infrastructure. In these communities, a declaration of a new broadband service will maximise the likelihood of service-based competition developing.

¹⁶ Telstra annual report and remuneration report

¹⁷ Fixed network review

6.2.2 The effect of declaration on competition

Direct effects

Declaration of a wholesale broadband access service will affect competition directly in wholesale and retail markets for broadband access in the business and residential sectors, markets for business broadband and backhaul markets.

While some competition does exist in most metropolitan areas generally, the approach to wholesale broadband products has not achieved any degree of effective competition in regional areas. In regional areas there is limited broadband infrastructure other than Telstra's DSL network. Broadband infrastructure is expensive to build and involves significant economies of scale. Infrastructure competition which does exist in regional areas consists of DSLAM deployments and some WiFi implementations. Service based competition exists in some locations through resale of Telstra's network, but this is limited, and concentrated on major regional towns where demand is the highest. Over 80% of broadband services are provided either directly or indirectly by Telstra.

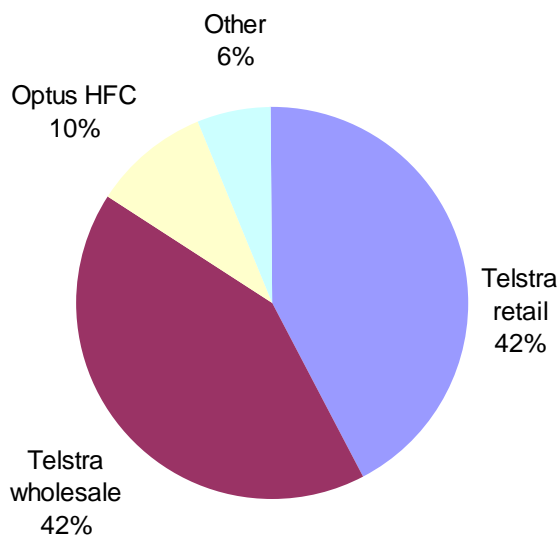
In regional areas, Telstra has the ability to choose the locations where retail DSL will be made available. Telstra controls the cost of supply for wholesale competitors, and many functional service variables which effectively allows Telstra to control the type of broadband services provided by competitors and consequently limits service innovation and therefore resulting competition. It is apparent that access seekers customers have little bargaining power in dealing with Telstra to ensure that the wholesale service is provided on reasonable terms and conditions.

Telstra's market power is reflected in its very high and stable market share of retail broadband services. The ACCC has acknowledged that the ubiquity of Telstra's DSL infrastructure, together with Telstra's very high market share in the supply of residential and business broadband services, does suggest that Telstra is currently unlikely to be effectively constrained in its wholesale pricing and product offerings¹⁸. In other words, Telstra's access network represents a bottleneck in the provision of broadband services in regional areas where little competition exists, and the wholesale product offerings in the market are not promoting competition effectively far enough. Figure 6.1¹⁹ shows the market shares in December 2005 for broadband access across Australia.

¹⁸ A strategy review of the regulation of fixed network services, ACCC position paper, June 2006

¹⁹ This is an analysis of national broadband markets, Optus HFC and other are predominantly deployed in metropolitan areas. Other includes iinet, Internode, Primus and Powertel

Figure 6.1 **Broadband access – market shares**



Source: Ovum

Competitive operators to Telstra recognise the opportunity that the limitations of service availability in regional areas represents, however entry to the market is difficult given low demand levels, likely competitive response by Telstra and high backhaul prices. Given low demand levels, the probability of a competitive response from Telstra makes investment in wholesale services an uneconomic prospect for competitive operators and demonstrates Telstra's ability to control competitive outcomes in the marketplace.

Declaration of a wholesale broadband access service will improve the opportunities available to wholesale customers of Telstra generally to competitively supply a retail service. It will allow entry of more broadband providers at a wholesale level, that otherwise would not have entered the market and this will in turn feed through to competition in the retail broadband markets.

There are developments in technologies alternative to DSL which have the potential to reduce Telstra's control of monopoly bottleneck access infrastructure in the provision of high speed broadband. WiFi for example is increasingly being deployed in rural areas by competitive operators, and WiMAX and fibre deployments may occur. Additionally broadband services can be deployed by 3G technologies which Telstra and potentially others are planning to deploy in regional areas. However, there are a number of reasons why these technology developments will not make a major difference to Telstra's market power in the delivery of broadband services.

- Plans for deployment of WiMAX and NGN in Australia concentrate on metropolitan areas, this will remain the case for some time. These technologies are extremely expensive to deploy and at current demand levels in areas where there is little or no competition, justification of this investment is difficult.
- WiFi works well over short distances at speeds less than 512 Kbit/s but is not scalable to higher levels of broadband (over 512kBps), additionally WiMAX is a shared technology and cannot provide over 1.5 Mbps to each subscriber. Both of these technologies will have a place in rural broadband development, particularly where DSL cannot reach customers, but will not wholly replace DSL.
- Telstra's access technology is ubiquitous, scalable and relatively cheap (compared to alternatives which can provide equivalent bandwidth) and has the potential to provide speeds greater than all other technologies except for fibre.

The arguments that have been presented apply to both residential and business markets where asymmetric broadband services are required, and utilise ADSL technology or any other type of technology. However, in business markets, there are further competitive issues related to provision of wholesale and retail BDSL²⁰. Outside of metropolitan areas Telstra's wholesale BDSL service is not offered on acceptable commercial terms and therefore in most regional areas Telstra is the only provider of symmetrical xDSL. The ACCC has acknowledged that while technical substitutes do exist for BDSL services²¹, the price differences prohibit those from being effective substitutes in a competitive market.

Telstra's prices for retail and wholesale BDSL are higher in regional areas than metropolitan areas, and the ACCC has acknowledged that while this may be in part due to higher costs in regional areas, it is also likely to be a result of market power²². Dispersed organisations that require BDSL solutions in regional and metropolitan areas are limited in most cases to Telstra if they wish to use one supplier. Such organisations would include:

- Government departments
- Government organisations such as police and
- Retail organisations such as banks and department stores.

The declaration of a wholesale broadband access service will also affect the national market for backhaul services. Backhaul services competition is driven by access

²⁰ BDSL refers to Business-grade Digital Subscriber Line. BDSL delivers a symmetric bandwidth capacity, more secure and committed data quality and better service levels.

²¹ Transmission, Frame Relay, ISDN and ATM

²² A strategic review of the regulation of fixed network services, ACCC position paper, June 2006, ACCC

availability, in other words access availability defines the requirement for backhaul at any particular location. Backhaul services are a declared service as part of the declaration of domestic transmission services declaration. Declaration of access technologies which allow entry of competitive operators to rural and regional markets will increase demand for backhaul to those locations.

Indirect effects

Along with the direct effects declaration of a wholesale broadband access service, will have on wholesale and retail markets, declaration could also affect competition in a number of other different ways. The ACCC has argued previously that resale of wholesale services will allow a competitive entrant to build market share and gain market information thus limiting the risk associated with lumpy investment in the future²³, this is referred to as the stepping stone effect. Operators will enter markets where there is a commercial opportunity to do so. The fact that operators have not entered rural and regional markets for wholesale and broadband services suggests that they have not been able to identify a commercial opportunity.

The declaration of a wholesale broadband access product which allows greater control of service variables to the end-user and does not require investment in equipment to serve relatively small communities would improve the commercial opportunities to competitive operators. To the extent that the stepping stone effect continues to be true, the declaration of a wholesale broadband access service will encourage takeup of wholesale broadband services initially, and once competition has been established, will lead to further investment in infrastructure. Further, as raised by our discussion of demand in rural areas in Section 4 experience internationally has been that in growing markets, competition in retail broadband markets has the effect of increasing demand for services in the population and usage levels.

Analysis of current regional market dynamics shows that there is little commercial incentive to build networks and compete with Telstra at current pricing levels based on available terms and conditions. Taking a long term view of investment consistent with LTIE, declaration of a wholesale broadband access service will result in greater utilisation of Telstra's network. Greater utilisation of Telstra's network could even result in investment by Telstra in its network as a result of this declaration. Declaration may therefore change the investment mix over time. Telstra's scale and relative efficiency will mean that network investments can be made on the most efficient basis in any case.

The CCC believe that declaration of a wholesale broadband access service will promote competition and develop demand in regional areas, thereby changing the market dynamics, and the basis on which competitive operators can make assessment of whether to enter the market. Further declaration of a wholesale

²³ Declaration of Local Telecommunications Services, ACCC

broadband access service will allow competitive operators to enter markets where there is currently no competition to Telstra.

6.3 Any-to-any connectivity

In principle, any-to-any connectivity is not affected by the declaration of a wholesale broadband access service. In practice, network externality benefits to all who are currently connected will be improved. The increase in demand will allow better services to be developed.

Government agencies and commercial organisations will be better off as a result of the declaration of a wholesale broadband access service. Without declaration of this service, organisations with regional and rural offices are required to treat customers in different areas differently, depending on the infrastructure available. Further, any-to-any connectivity availability in rural areas will bring real value such as time and transport cost savings gained by utilising high speed Internet access rather than physically having to undertake the task or attend to the transaction required.

6.4 Efficient use of and investment in infrastructure

6.4.1 Economically efficient use of infrastructure

Broadband access networks in regional areas in Australia where no effective competition exists and where Telstra is the sole owner of available infrastructure exhibit monopoly characteristics. Telstra's capacity to exercise market power in the delivery of broadband access services is demonstrated in several ways. As set out in Section 1, a number of competition notices have been filed against Telstra for ADSL. For business broadband services, Telstra is capable of providing wholesale and retail BDSL services to some regional areas, but Telstra's BDSL services are offered at a higher price in regional areas than in metropolitan areas, and regional BDSL competition has not developed. Further Telstra is able to control the supply costs and terms and conditions to its wholesale customers including substantial functionality specifications.

In a natural monopoly such as this, it is uneconomic for a smaller operator to duplicate Telstra's existing network. Due to the benefits of greater scale which can be obtained by Telstra, Telstra can provide broadband access services at lower cost than smaller competitors, and additionally Telstra has the benefit of first market entry in those markets where it is already providing retail broadband services.

Declaration of a wholesale broadband access service will promote efficient use of existing infrastructure at the point where Telstra has been able to exercise market power over bottleneck services. The ability to utilise Telstra's infrastructure at acceptable terms and conditions will ensure that other operators in the market are sent appropriate investment signals, and to ensure that investment is economically efficient. This will also apply to Telstra. The bottleneck characteristics associated with access services means that alternative operators cannot enter the markets as an

efficient, rational investor unless they have access to government funding or if the commercial opportunity changes. On this basis competitive operators will not enter the market at all unless there is declaration of the bottleneck service, that is declaration of the broadband access service.

Lastly efficient use of existing infrastructure will be promoted where the infrastructure is priced according to the costs of supply. The purposes of this submission is not to assess the price of a wholesale broadband access product, however, price is a very important input to determining the effective use of existing infrastructure.

6.4.2 Technical feasibility

As wholesale broadband services are available across Australia, a wholesale broadband access service is clearly technically feasible.

6.4.3 Legitimate commercial interest of the access provider

Telstra's legitimate commercial interests will be met where it is able to achieve a market return appropriate to the type of investment. The purpose of this submission is not to set the pricing level for a wholesale broadband access service, however, pricing is an important factor in determining whether Telstra's legitimate commercial interests are met.

The requirement for appropriate commercial returns for Telstra applies to all infrastructure types over which a declared wholesale broadband access service would be provided. The ACCC has previously expressed a view that the CAN is a dominant source of Telstra's market power and that it is likely to continue to invest in the CAN for strategic reasons. Therefore, Telstra's legitimate requirement for a risk-adjusted and otherwise appropriate return on its CAN investment will have to be considered at the same time as its need for an appropriate return on the investments needed to provide a wholesale broadband access service.

6.4.4 Economically efficient investment in infrastructure

In general, efficient investment in the current infrastructure will be supported so long as Telstra is able to gain an appropriate market return from its investment and operators are not incentivised to duplicate. In addition to further investment in existing infrastructure, the Commission is concerned to ensure that Telstra and other operators are suitably encouraged to invest in new infrastructure based on new and innovative technologies where there is a commercial opportunity to do so.

The absence of investment is a result of there not being enough demand currently to promote investment in rural markets given Telstra's ability to exercise market power. Rational, efficient operators invest where there are commercial opportunities to do so. Commercial operators make up their mind where it is sensible commercially to invest and act on this basis. The proposed declaration will enable competitive operators to use Telstra wholesale services to deliver their own services. These services will not necessarily have the same functional characteristics as Telstra services. The

competitive operators would be expected to build their own customer base, and to help develop overall demand. Once that happens, the opportunities for new competitive infrastructure increase, and the prospect of efficient, sustainable competitive investment grows. These outcomes are less likely, and in many cases, completely unlikely in the absence of the declaration.

The CCC believe declaration will improve competition and through the “stepping stone effect”, that is eventually encourage expansion to investment in infrastructure which can provide higher capacity services. Rural Australia will require scalable technologies which can provide greater bandwidths as the demand for capacity grows into the future.

Along with encouraging alternative operators to enter new markets and ensure they have incentives to make their own infrastructure investments outside of metropolitan areas, the Commission is also concerned that Telstra is not discouraged from investing through the declaration of a wholesale broadband access service. This initial submission for a wholesale broadband access service has not included the detailed terms and conditions of such a service including pricing. This is because the agreement of terms and conditions for this service will be facilitated by the ACCC once the declaration has been agreed. In other words agreement of terms and conditions will be part of a further process which requires specification by the ACCC. For a reasonable alternative operator, reasonable pricing on this basis should be an incentive to invest in the long term. The appropriate return for this service will be put together with regard to the following.

- Risk
- Cost
- Existing and future demand

Telstra has made it clear that its approach to broadband does not stop at metropolitan areas, but that they will focus on the larger and more important towns where there is much higher levels of demand first . Working on this basis Telstra will make rational decisions having regard to the specific markets concerned. The CCC believes that Telstra will continue to invest for the following reasons, based on rational decision making:

- to provide services on a national basis
- to support a national brand
- to support national consistent high level of service
- to be efficient in promotion
- to serve city markets that have associated rural and regional markets.
- to serve business and government customers that have large coverage requirements
- to achieve a commercial return on all investments.

7. Conclusions

This submission addresses whether LTIE could be promoted by declaration of the access bottleneck, that is a wholesale broadband access service. Our assessment of the market for broadband access and services in regional Australia shows that market power is exercised by Telstra in the following areas:

- In the choice of locations for provision of retail broadband services
- In the selection of bandwidths chosen for broadband services.
- Through pricing of retail and wholesale BDSL in regional markets
- Through control of supply to its wholesale customers.

The declaration proposed has been set out in order to allow flexibility which will be required as broadband markets in regional areas develop. This is enabled through allowing control of service functionality to the access seeker, and through technical neutrality of the service description. The service description also ensures that in areas where competition exists on a sustained basis, exemption of specific geographically defined markets can be obtained. The CCC recognise that an exemption may be required in the five capital cities and especially in their CBD areas. The form of the declaration proposed is therefore adaptable to changing circumstances, whilst performing its key role in the promotion of competition, particularly in regional Australia.

Our assessment of the LTIE shows that declaration will benefit end-users, and therefore we believe that this wholesale broadband access service should be declared.