Fixed Services Review

A second position paper

April 2007

Public version

Executive Summary

In December 2005, the Australian Competition and Consumer Commission (Commission) initiated a Review of the Regulation of Fixed Network Services (Fixed Services Review).

In June 2006, the Commission released a Position Paper (June 2006 position paper) on a range of issues relating to the future regulation of fixed network services. Its immediate focus was whether to re-declare the Unconditional Local Loop Service (ULLS) and the Public Switched Telephone Network (PSTN) Originating and Terminating Access Services (PSTN OTA).[1] The paper also outlined the Commission's preliminary views on a forward-looking approach to the regulation of fixed-line services. Industry comment was sought on elements of this approach.

This paper is the next phase of the Fixed Services Review. Its primary purpose is to outline a robust framework for the review of existing service declarations under Part XIC of the Act. More broadly, this paper signals the principles which the Commission will apply to forward-looking regulation of fixed-line services.

Approach to ex ante regulation

The Commission considers that *ex ante* regulation under Part XIC of the Act should focus on those elements of the fixed-line network that continue to represent 'enduring bottlenecks'.

In this context, an enduring bottleneck is defined to mean a network element or facility that exhibits natural monopoly characteristics[2] and is 'essential' to being able to provide services to end-users in downstream markets in a way that promotes the long-term interests of end-users (LTIE). That is, duplication of the network element would result in a loss of technical and allocative efficiency greater than any competitive gains that duplication might achieve.[3]

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[1] The June 2006 position paper also canvassed the possibility of declaring a wholesale Digital Subscriber Line (DSL) service and resulted in the revocation of the Conditional Local Loop Service (CLLS). In December 2006, the Commission re-declared the ULLS and PSTN OTA se services on a national basis for a period of three years. The Commission revoked the CLLS declaration and decided not to declare a wholesale DSL service.

[2] The term 'natural monopoly' is subject to a varying array of economic definitions. Strictly, a natural monopoly exists where the relevant industry cost function is 'sub-additive'. An example is where a good or service can be more cheaply produced by a single firm, rather than spreading production over multiple firms. Natural monopoly cost conditions typically arise in industries where there are high fixed and sunk costs, and where economies of scale, scope and/or density are present (although these are not sufficient conditions). In fixed-line networks, natural monopoly cost conditions may exist over particular elements of a network, rather than across the entire supply chain.

[3] An enduring bottleneck may also arise in circumstances where an access seeker must purchase access to a particular service in order to ensure the any-to-any connectivity of its service to end-users.

Where an enduring bottleneck does not persist, the Commission will be inclined to progressively withdraw *ex ante* regulation where it is confident that declaration is not required to promote the LTIE.

The Commission's approach is based on the principle that where it is economically efficient, facilities-based competition is more likely to promote the LTIE. This is because this form of competition allows rivals to differentiate their services and compete more vigorously across greater elements of the supply chain.

It is also based on the principle that, for services or network elements which are not enduring bottlenecks, competitors that do not wish to invest in their own infrastructure will, more than likely, have the opportunity to enter into commercially negotiated arrangements for access with third parties (or the incumbent) without the need for *ex ante* regulatory intervention. In this regard, the withdrawal of access regulation at certain network layers does not necessarily suggest that these forms of competition will cease, or that their price will necessarily be raised excessively by the access provider. Rather, it is recognition that *ex ante* regulation is no longer required to ensure that these services are competitively priced at or near their underlying costs.

In areas where infrastructure-based competition is unlikely to emerge, the Commission will consider whether declaration of a wholesale end-to-end service will promote the LTIE. There may be strong reasons to declare a wholesale end-to-end service in these circumstances. However, it should not be automatically assumed that declaring this type of service would promote the LTIE. The Commission would need to be satisfied that there is the potential for efficient competition at this level, and that the benefits from *ex ante* regulation at this level would outweigh any regulatory burden associated with *ex ante* intervention. In considering these issues, the Commission is likely to examine confidential financial information of operators (expected or actual).

Further, in these circumstances, the Commission will also consider whether there are other regulatory tools, such as retail price controls, that can better achieve the relevant LTIE objectives. It is also important to note that it will remain open to the Commission to utilise the ex-post provisions in the telecommunications-specific conduct provisions in the Act (Part XIB) if there is sufficient market-based evidence to justify such enforcement action.

The Commission is cognisant that the rapid pace and evolution of change in the industry, including technological change, has the potential to alter the extent, type and scope of *ex ante* regulation that will be required to promote the LTIE in the future. That said, the Commission considers that the approach to regulation outlined in this paper remains applicable to market scenarios where the underlying technology, delivery platforms and points of interconnection (POI) may change, such that a consistent regulatory approach can be maintained.

Framework for the review of existing service declarations

A range of services were 'deemed' declared in 1997. Since this time, and in accordance with its statutory obligations, the Commission has conducted public inquiries to review certain service declarations. With respect to certain services which were deemed in 1997, the Commission has since determined that declaration is no longer required. With respect to at least one other deemed service, the Commission has narrowed the scope of declaration to only cover those elements where *ex ante* regulation is required to promote the LTIE.

Since 1997, the Commission has also, after undertaking a public inquiry in each case, declared a limited number of services where this was determined to be in the LTIE. Table 3.1 in this document summarises the range of service declarations that have been in operation, including those currently in operation.

The Commission considers that it is now important to outline its framework for the review of existing fixed-line service declarations. One of the key elements is that, where appropriate, the Commission will geographically delineate markets on a narrower basis than a 'national' scope, to reflect that competition has emerged (and is likely to continue to emerge) unevenly in different geographic regions of Australia. In particular, the Commission proposes to base future market definition exercises at the 'local exchange' level.[4]

To support its forward-looking analysis, the Commission has already proposed a more systematic collection of telecommunications infrastructure information. In March 2007, the Commission released a discussion paper regarding the proposed audit of telecommunications infrastructure. Comments are due by 27 April 2007.

In its review of existing service declarations, the Commission will consider both the state of *actual* competition in the relevant markets and the *potential f*or effective competition developing, in seeking to determine whether ongoing declaration of particular services is required to promote competition in the relevant markets.

In summary, the Commission's general framework for reviewing existing service declarations, within the LTIE framework, will involve three main steps:

- *enduring bottlenecks* – assessing over which elements of fixed-line networks 'enduring bottlenecks' are likely to persist in the foreseeable future;

- *assessment of the state of competition* – assessing the state of competition in the relevant markets (including consideration of the geographic dimension of markets based on up-to-date empirical information) and the extent to which ongoing declaration is required to promote competition in these markets; and

- *assessment of remaining LTIE criteria*– determining whether the declaration (including its current scope) is required to promote the LTIE.

The framework outlined in this paper necessarily remains flexible to account for specific issues that will arise in reviewing declarations. It is not intended, nor would it be appropriate, for the Commission to outline prescriptive thresholds under which regulation will necessarily be relaxed or removed. Such issues are more properly considered as part of a detailed review of specific service declarations, based on the most up-to-date information possible.

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[4] Using the Map Info program it is possible to get information on the number of customers served by each local exchange. According to Map Info data, Telstra operates 5,092 local exchanges across Australia.

As part of this framework, the Commission also proposes a timetable for a systematic review of existing declarations. It is recognised that there is a degree of interdependency between particular service declarations. For this reason, the Commission's preferred approach is to review the following declared services simultaneously prior to June 2009 – Unconditioned Local Loop Service (ULLS), the Line Sharing Service (LSS), the PSTN OTA, Local Carriage Service (LCS) and Wholesale Line Rental Service (WLR).

The Commission considers that other service declarations can be reviewed individually, and the timing of these reviews determined outside the scope of this paper.

LSS Declaration Inquiry

Notwithstanding the intention to conduct a more holistic review of certain service declarations, the Commission is required under the Act to review the declared LSS service prior to its expiry in October 2007. As a result, this paper also commences an LSS inquiry with a discussion paper seeking feedback from interested parties on various issues relevant to whether this service should be re-declared, and if so, what pricing principles should be applied to this service. In the event that the LSS is re-declared, the LSS will in any case be reviewed as part of the broader review of declared services outlined above.

The proposed timing of the upcoming declaration review processes is outlined below.

Table A: Proposed timetable for review

MILESTONE	INDICATIVE TIMING
Proposed record-keeping-rule released regarding the collections of telecommunications infrastructure information	March 2007
Phase 2 of the Fixed Services Review: Position Paper and commencement of LSS Declaration Inquiry ('current LSS Declaration Inquiry)	By end of April 2007
Final Decision in current LSS Declaration Inquiry	By September 2007
Commence review of declaration of all relevant fixed services (ULLS, LSS, PSTN OTA, LCS and WLR)	By mid-2008
Draft decision on declaration of all relevant fixed services	By end of 1st Quarter 2009
Final decision on declaration of all relevant fixed services (and timetable for next fixed services review).	By end of 2nd Quarter 2009.

Consultation periods arising from this paper

Given that the purpose of this paper is essentially twofold, the Commission proposes two separate consultation periods.

The first, in relation to the proposed framework for the review of existing services declarations invites interested parties to provide the Commission with written submissions by **30 June 2007**.

The second, in relation to the current LSS declaration inquiry, requires that interested parties provide the Commission with response submissions by **11 May 2007**. Chapter 1 contains further details on the public inquiry process.

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List of Abbreviations

ADSL	Asymmetric digital subscriber line
CAN	Customer access network
CSP	Carriage service provider
DSLAM	Digital subscriber line access multiplexers
FTM	Fixed-to-mobile
FTTN	Fibre-to-the-node
FTTP	Fibre-to-the-premises
HFC	Hybrid fibre-coaxial cable
IEN	Inter-exchange network
IP	Internet protocol
LCS	Local carriage service
LSS	Line-sharing service
LTIE	Long-term interests of end-users
MDF	Main distribution frame
POI	Point of interconnection
PSTN	Public switched telephone network
PSTN OTA	PSTN originating and terminating access
SAO	Standard access obligation
TSLRIC	Total service long run incremental cost
ULLS	Unconditioned local loop service
VoIP	Voice over Internet protocol
WLR	Wholesale line rental
xDSL	Refers to the ‘family’ of Digital Subscriber Line services (eg. ADSL, HDSL etc.)
LCS	The local carriage service is a service for the carriage of telephone calls from customer equipment at an end-user’s premises to separately located customer equipment of an end user in the same standard zone. The service is used by competitors to resell local calls.
LSS	The line-sharing service allows similar functionality to a ULLS service to a competitor, but where the voice service is still provided by another party.
PSTN OTA	Domestic PSTN originating access is the carriage of telephone calls from the calling party (the A-party) to a point of interconnection (POI) with an access-seeker’s

	network. A POI is usually located at a trunk (or transit) exchange. Domestic PSTN terminating access is the carriage of telephone calls from a POI within an access-seeker's network to the party receiving the call (the B-party).
ULLS	The unconditioned local loop service is the use of unconditioned communications wire between the boundary of a telecommunications network at an end-user's premises and a point on a telecommunications network that is a potential point of interconnection located at or associated with a customer access module and located on the end-user side of the customer access module.
Wholesale DSL services	Wholesale DSL services comprise both a local access component (analogous to ULLS) and a transmission component between DSL exchanges and CBD exchanges.
Wholesale line rental (WLR)	Wholesale line rental is a service providing line access to customers, but sold on a wholesale rather than retail basis.

1. Introduction

In December 2005, the Australian Competition and Consumer Commission (Commission) initiated a Review of the Regulation of Fixed Network Services (Fixed Services Review).

In June 2006, the Commission released a Position Paper (June 2006 position paper) on a range of issues relating to the future regulation of fixed network services. Its immediate focus was whether to continue existing declarations pertaining to the Unconditional Local Loop Service (ULLS) and the Public Switched Telephone Network (PSTN) Originating and Terminating Access Services (PSTN OTA).[5] However, the June 2006 position paper also outlined the Commission's preliminary views on the forward-looking strategy that it would apply to the regulation of fixed-line services under Part XIC of the Act; and the circumstances under which regulation would be adjusted to reflect changing market conditions. The Commission sought feedback from interested parties on elements of this strategy.

This paper commences the next phase of the Fixed Services Review. Its purpose is to outline the approach the Commission will take in reviewing existing service declarations. More broadly, this paper signals the principles which the Commission will apply in its forward-looking regulation of fixed-line services. In accordance with the Commission's statutory obligations, this paper also commences a review of the current LSS declaration of the LSS prior to the expiry of this declared service in October 2007.

The Commission proposes two separate consultation periods. The first, in relation to the broader framework under which the Commission will review existing service declarations invites interested parties to provide the Commission with written submissions by **30 June 2007**. The second, in relation to the LSS declaration inquiry, invites interested parties to provide the Commission with written submissions by **11 May 2007**.

The Commission seeks comment from all industry participants, other stakeholders and the public more generally on these two consultation processes. To foster an informed and robust consultative process, the Commission proposes to treat all submissions as non-confidential, unless the submissions indicate otherwise.[6]

5 The June 2006 position paper also canvassed the possibility of declaring a wholesale Digital Subscriber Line (DSL) service and resulted in the revocation of the Conditional Local Loop Service (CLLS). In December 2006, the Commission re-declared the ULLS and PSTN OTA services on a national basis for a period of three years. The Commission revoked the CLLS declaration and decided not to declare a wholesale DSL service.

6 Unless the author requests that a submission be kept confidential, written submissions given to the Commission will be made available to interested parties upon request and will be published on the Commission's website at www.accc.gov.au. If submissions contain confidential information, the author should provide the Commission with a 'confidential' and 'public' version. Only the 'public' version will be placed on the Commission's website.

Submissions can be addressed to:

Nicole Hardy/Carl Toohey
Communications Group
Australian Competition and Consumer Commission
GPO Box 520
Melbourne VIC 3001

In addition to a hard copy, parties making submissions are encouraged to provide an electronic copy of the submission to nicole.hardy@accc.gov.au or carl.toohey@accc.gov.au.

This report is structured as follows:

- **Chapter 2** provides an overview of developments in the fixed-line sector in Australia;
- **Chapter 3** outlines the Commission's forward-looking approach to *ex ante* regulation under Part XIC of the Act and a framework via which existing service declarations will be reviewed;
- **Chapter 4** outlines the Commission's approach to assessing competition in relevant market(s);
- **Chapter 5** commences an LSS declaration inquiry with a discussion paper;
- **Appendix 1** provides the relevant legislative criteria within which the Commission will consider these matters;
- **Appendix 2** provides background on the previous phase of the Fixed Services Review, including the responses received to the June 2006 position paper;
- **Appendix 3** contains the LSS service description; and
- **Appendix 4** outlines how pricing information may be potentially used to assist the geographical delineation of markets

2. Overview of developments in the fixed-line sector

Summary of key trends

- Telstra remains the industry leader in terms of revenue, profitability and market share, in the provision of fixed-voice (PSTN) services.
- Fixed-voice revenues over Telstra's PSTN have declined, however they are still the major source of revenue.
- There has been significant growth in higher-speed broadband services over the period 2002 to 2006. This growth has been predominantly due to growth in ADSL broadband services provided over Telstra's fixed-line network.
- There has been increased take-up of declared ULLS and LSS services, which grew in the order of 100 per cent in 2006. That said, ULLS and LSS lines remain modest in total market terms.
- Despite the mobile services market nearing saturation, fixed-to-mobile substitution (in terms of consumers relinquishing fixed-lines to become 'mobile-only') appears to be very limited at this stage.

Introduction

Historically, telecommunications services mainly consisted of 'fixed-voice' services supplied over Telstra's ubiquitous PSTN.

However, the telecommunications industry has undergone substantial changes over the last 10 years. In particular, the significant growth in mobile penetration and the increased demand for high-speed data services have significantly altered the methods and services by which end-users communicate. Further changes appear on the horizon with the transition towards Next Generation Networks (NGNs)[7] and the increased development and take-up of voice-over internet protocol (VoIP) services. These changes to some extent have, and will continue to, render less clear distinctions between 'voice' and 'data' network services.

This chapter highlights some of the important empirical trends that have taken place in the 'fixed-line sector'. The primary focus is on empirical developments which relate directly to services provided over 'fixed-line' infrastructure, though where it is appropriate to provide broader context, other platforms are considered as well.

Key trends in fixed-line sector: an empirical snap-shot[8]

Financial performance: *Telstra, still the industry leader*

Table 2.1 shows selected industry players' Earnings before Interest, Taxes and Depreciation and Amortisation (EBITDA) margins for 2005-06.

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7 In the context of fixed line services, references to NGNs typically refer to a change to a full IP core network.

8 The Commission has used a number of data sources to compile this chapter. Data sources are specified in the relevant tables/graphs.

Table 2.1: Selected Financial Data of Telecommunications Companies (2005-06)

Company	Revenue		EBITDA[9]		EBITDA Margin[10]
	($M)	% of total	($M)	% of total	(%)
Telstra	22750	65.3%	9584	78.8%	42.1%
Optus	7192	20.6%	2038	16.8%	28.3%
Vodafone	1938	5.6%	366	3.0%	18.9%
Hutchison	925	2.7%	30	0.2%	3.3%
AAPT	1192	3.4%	75	0.6%	6.3%
PowerTel	199	0.6%	40	0.3%	20.0%
Macquarie Telecom	249	0.7%	5	0.0%	1.8%
iiNet	248	0.7%	25	0.2%	9.9%
People Telecom	111	0.3%	1	0.0%	0.5%
Unwired	23	0.1%	-17	-0.1%	-71.4%
Amcom	32	0.1%	11	0.1%	34.0%
Total	**34860**	100.0%	**12156**	100.0%	34.9%

Source: All data sourced from company financial reports. Time period is the financial year ended 30 June 2006, except PowerTel and Hutchison (December 2006) and Optus and Vodafone (March 2006). Revenue and EBITDA data have been rounded to the nearest whole number.

As shown, Telstra remains the industry leader in terms of revenue, EBITDA and EBITDA margins.

Revenues for the key players in the Australian telecommunications market totalled approximately $34.9 billion in 2005-06; which included revenues from fixed services (voice, internet and data) and mobile service.[11] The table highlights the relatively high degree of ‘revenue’ concentration within the Australian market. In revenue terms, Telstra accounts for 65.3 per cent of this revenue pool while Optus’ share is 20.6 per cent. The two major Australian telecommunications companies account for 85.9 per cent of revenue market share.

In terms of profitability, the degree of concentration is even greater. Telstra and Optus accounted for 78.8 and 16.8 per cent of total EBITDA respectively. That is, based on these data, the two major players accounted for 95.6 per cent of the industry’s EBITDA. In terms of EBITDA margins, the table shows that Telstra’s margin of 42.1 per cent (as reported without making allowances for restructuring and transformation costs)[12] is still significantly higher than its competitors. Optus, PowerTel and Amcom are the only companies with EBITDA margins in excess of 20 per cent. Most other carrier service providers EBITDA margins are in the low single digit figures.

9 EBITDA equals revenue minus operating expenses.

10 EBITDA margin equals EBITDA divided by revenue.

11 These data also includes revenues from overseas subsidiaries or ventures.

12 Telstra’s EBITDA margin has fallen from 47.2 per cent in 2004-05 to 42.1 per cent in 2005-06. The major reason for this has been due to transformation and restructuring costs incurred by Telstra during 2005-06. Allowing for these costs, Telstra’s underlying EBITDA margin is 44.5 per cent – still a reduction on the 2004-05 EBITDA margin.

Telstra's fixed-voice revenues: ***in decline, but still major revenue source***

Telstra Revenues

Table 2.2 below shows Telstra's revenue from its various service categories between 2001-02 and 2005-06.

Table 2.2: Telstra Revenues – 2001-02 to 2005-06[13]

Financial Year	2002	2003	2004	2005	2006	Growth
PSTN products	7755	7916	7984	7709	7192	-1.9%
Data and Internet Services	2693	2818	2975	3233	3598	7.5%
Intercarrier Services	1124	1155	1103	1146	1260	2.9%
Other Fixed Services	832	781	735	704	673	-5.2%
Total Fixed Services	**12404**	**12670**	**12797**	**12792**	**12723**	**0.6%**
Mobile Telecommunications Services	3468	3613	3822	4141	4349	5.8%
Other Services	4324	4209	4118	5228	5678	7.0%
Total Sales Revenue (TSR)	**20196**	**20492**	**20737**	**22161**	**22750**	**3.0%**
PSTN as % of TSR	38.4%	38.6%	38.5%	34.8%	31.6%	--
Total Fixed Revenue as % of TSR	61.4%	61.8%	61.7%	57.7%	55.9%	--
Mobile Revenue as % of TSR	17.2%	17.6%	18.4%	18.7%	19.1%	--

Source: Telstra financial reports

As shown above, Telstra's PSTN revenues have declined on average by 1.9 per cent over the period. As a proportion of its total sales revenue, Telstra's PSTN revenues have declined from 38.4 per cent in 2001-02 to 31.6 per cent in 2005-06. The overall decline in PSTN revenues (both in absolute and proportional terms) over this period is due to decreased revenues from 'local', 'national long distance' and 'international' calls, which have more than offset increasing revenues from 'basic access', 'PSTN value added' and 'fixed-to-mobile'(FTM) services.

Despite this, Telstra's PSTN products still represented the largest proportion of its total sales revenue in 2005-06 (31.6 per cent).

Further, Telstra's 'fixed-line' revenues more broadly defined to include those services which also utilise its underlying copper-based network (i.e. wholesale products, and various data and internet revenues) accounted for 55.9 per cent of Telstra's total revenues. In fact, Telstra's revenue from 'fixed-line services more broadly defined' has experienced low single-digit growth rates (average growth of 0.6 per cent) over this period, despite the fall in PSTN revenue. This is mainly due to the growth in 'data and internet' revenues (average growth rates of 7.5 per cent).

[13] 'Data and Internet Services' include Internet and IP services, ISDN, leased lines, packet switched data and Digital Data services. 'Other Fixed Services' include inbound calling products, payphones and Information and Connection Services. 'Other Services' include solutions managements, CPE, Pay-TV Bundling, Sensis, Offshore Controlled entities and other sales and services. The 'Growth' cited in the last column is compound average growth over the period.

Market share

A service-by-service analysis of Telstra's PSTN voice products reveals that:

- in 2005-06, Telstra remained the main supplier of local access services, with over 88 per cent of total lines, while Optus (4.2 per cent)[14] and 'Other lines' (7.5 per cent)[15] accounted for the residual;

- at the *retail* level, in 2004-05,[16] Telstra retained large revenue market shares of local telephony (75.3 per cent), domestic long-distance (69.4 per cent), international calls (61.4 per cent) and FTM (74.2 per cent) services; and

- at the aggregate level (i.e. retail and *wholesale* combined), Telstra's revenue market share for these services is even greater as many rival carriers purchase inputs from the Telstra network (i.e. WLR, LCS, PSTN OTA and ULLS products) in conjunction with their own infrastructure to provide fixed-voice services to end-users.

Based on retail market shares for Telstra, Optus, AAPT and Primus in 2004-05, the Hirschman-Herfindahl Index (HHI) for the retail PSTN sector is 5902.[17]

To put this figure in context, the HHI for the retail mobile sector, where there are four independent mobile network operators, was 3694 in 2004-05. To compare this with a different industry, in the event that the two largest players in the retail grocery industry were to merge, past data suggest that this would have yielded a HHI of a magnitude in the order of that cited above for the retail PSTN sector.[18] Notably, in the US, the 1992 Merger Guidelines indicate that a HHI of 1800 and over is considered a 'highly concentrated' market.[19]

Profitability of voice services (c-i-c section)

Table 2.3 presents the retail profits and margins for PSTN or voice services, and declared services. These data were provided confidentially by Telstra and Optus under the RAF.

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14 Optus, offers basic access services and local calls to residential and business customers over its hybrid fibre coaxial (HFC) cable network and fibre optic loops in capital city CBDs

15 *Source: Telstra and Optus public reports and ACMA Communications Report 2005-06*. Other fixed access lines includes the number of fixed lines corresponding to other Telstra networks (for example, ISDN lines of which there are approximately [**c-i-c]** and CBD and regional networks.

16 Market shares for 2005-06 are not publicly available at this point. The 2004-05 market shares cited are taken from the Commission's latest Market Indicator Report.

17 This is based on data provided to the Commission under the Regulatory Accounting Framework (RAF) and publicly disclosed in the *2004-05 Market Indicator Report*. It should be noted that these do not cover all retail providers of PSTN services in 2004-05. Moreover, the calculation of this HHI is not intended to suggest that end-user access, local call, domestic long-distance, international long-distance and fixed-to-mobile services are in the same market.

18 This is informed by data collected by 'Foodweek' for the year ending 26/01/03, and as reported by the Commission in *Assessing shopper docket petrol discounts and acquisitions in the petrol and grocery sectors February 2004*. It is also informed by the IBISWORLD Industry Report, *Supermarket and other grocery (except convenience stores) in Australia G5111*, November 2004. Notably, this industry is likely to have undergone changes since these data were reported.

19 See http://www.ftc.gov/bc/docs/horizmer.htm

Table 2.3: Telstra and Optus' Profitability of Retail and Wholesale voice services

	TELSTRA			OPTUS		
	Profit[20]	Profit Margin[21]	ROCE[22]	Profit	Profit Margin	ROCE
Retail Voice Services						
End-User Access	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c
Local Calls	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c
Domestic Long Distance	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c
Fixed-Mobile	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c
International	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c
Total PSTN	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c
Declared Voice Services						
ULL	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c
PSTN O/T	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c
LCS	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c
Local No. Port	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c
TOTAL SERVICES	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c

Source: RAF reports 2005-06

[c-i-c]

[c-i-c]

[c-i-c]

20 In this table, profit refers to Earnings Before Interest and Taxes (EBIT) due to the structure of the RAF database. EBIT equal revenue minus operating expenses minus depreciation and amortisation.

21 The profit (or EBIT) margin equals ‘profit divided by revenue’.

22 Return on Capital (ROCE) is a measure of how effectively a company uses the money (borrowed or owned) invested in its operations. In this table, it is calculated by taking the EBIT and dividing by total capital employed (minus cash and investments minus non-interest bearing liabilities). Generally speaking, a ROCE can be compared to a pre-tax WACC to determine whether a company ‘created value’ in a given period.

Growth in Internet services: ***driven by ADSL broadband over Telstra's fixed-line infrastructure***

One of the most notable trends in the fixed-line sector is the growth of internet services, in particular the growth of ADSL broadband services. Table 2.4 shows Telstra's revenue from data and internet services over the period 2001-02 to 2005-06.

Table 2.4: Telstra Data and Internet Revenue 2001-02 to 2005-06

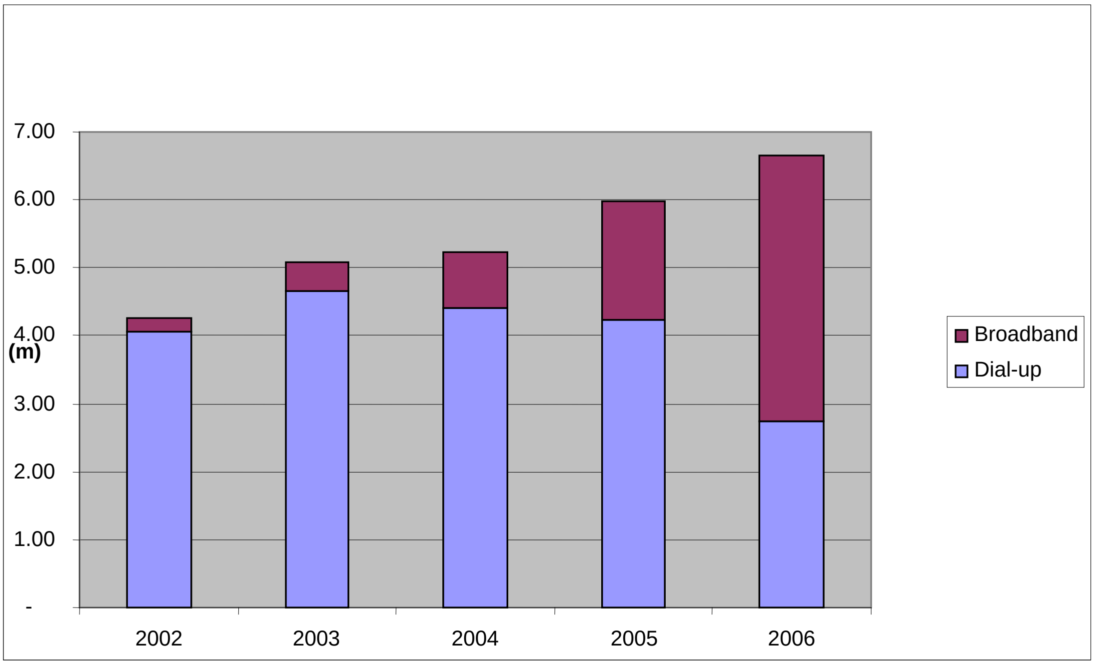
($M)	2002	2003	2004	2005	2006	% CHANGE
Internet and IP Solutions	605	817	1013	1377	1907	33.2%
ISDN Products	1037	951	927	890	807	-6.1%
Specialised Data	1051	1053	1035	966	884	-4.3%
Data and Internet Services	**2693**	**2818**	**2975**	**3233**	**3598**	7.5%

Source: Telstra Financial Reports

As shown, while Telstra's revenue from 'traditional' data services and ISDN declined by 4.3 per cent and 6.1 per cent respectively, its internet and IP revenues increased by 33.2 per cent over the same period.

The number of internet subscribers in Australia over the period 2001-02 to 2005-06 is shown in the graph below.

Graph 2.1: Growth and mix of internet subscribers



Source: ABS

The number of internet subscribers has increased from 4.27 to 6.65 million over the period 2001-02 to 2005-06,[23] representing an average annual growth rate of 11.7 per cent. Within this broader trend, there has been a significant shift in demand from

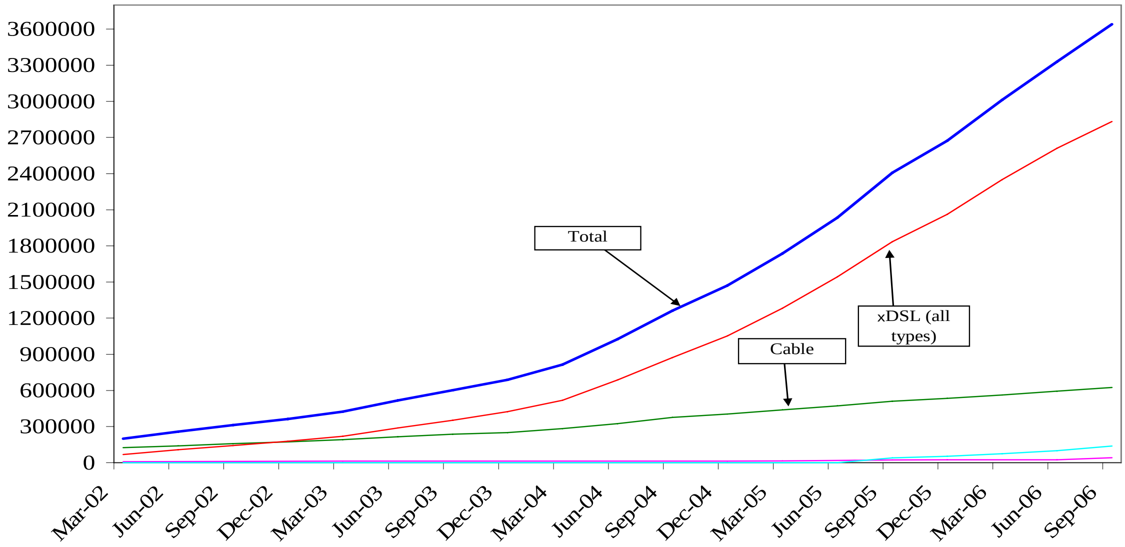
[23] ABS data for 2001-02 to 2004-05 is for the March quarter. For 2005-06 the data is for the September quarter.

'dial-up' to higher-speed broadband services.[24] The number of dial-up subscribers decreased from approximately 4 million services in 2001-02 to just over 2.8 million by September 2006. Over the same period, the number of broadband subscribers increased exponentially from just over 200,000 services to over 3.91 million services.

At 30 June 2006, broadband penetration in Australia was 17.4 per cent. This ranked Australia 17th in the OECD league table of 30 countries. Notably, however, Australia's broadband penetration rate was above the OECD average of 15.5 per cent.[25]

The graph below shows broadband take-up – by technology type – over the period March 2002 to September 2006.

Graph 2.2: Broadband take-up: by technology



Source: ACCC Broadband Snapshot

As shown, the main source of broadband growth has come via Digital Subscriber Line (xDSL) technology. The up-swing in broadband take-up is broadly mirrored by the trend in relation to xDSL technology. This is particularly significant in the context of assessing trends in the fixed-line sector, because DSL technology utilises Telstra's existing copper lines between local exchanges and end-user premises.[26]

At June 2006, xDSL technology accounted for 79 per cent of total broadband connections in Australia, with cable (17 per cent), 'other' (3 per cent) and satellite (1 per cent) accounting for the remainder. In comparison, across the OECD countries,

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[24] In this context, broadband is defined as an 'always on' Internet connection with an access speed equal to or greater than 256 kps.

[25] OECD, *Broadband Statistics to June 2006*, 12 October 2006. These penetration rates are a measure of 'the number of subscriber per 100 inhabitants'.

[26] DSL consists of a series of data link layer protocols enabling broadband capacity over continuous copper circuits of digital subscriber lines. DSL lines can carry both data and voice signals and the data part of the line is continuously connected.

xDSL technology accounted for 63 per cent of total broadband connections, with cable (30 per cent) and 'other' (8 per cent) accounting for the remainder.[27]

In Australia, by far the most prominent form of xDSL technology is ADSL.[28] At September 2006, it accounted for 91 per cent of all DSL services.

Under the current regulatory framework, access seekers are able to purchase an ULLS or LSS service from Telstra, and combine it with their own DSLAMs in Telstra's local exchange areas (termed 'quasi-infrastructure investment') in order to provide xDSL broadband services to end-users.

ULLS and LSS take-up was initially slow, and the total number of these lines remain relatively modest compared to the total number of broadband lines.[29] Notably though, confidential data available to the Commission indicates that take-up of each of the ULLS and LSS grew in the order of 100 per cent during calendar year 2006.

In its 2005-06 financial report, Telstra noted that an increase in its ULLS revenue was driven by access seekers reaching certain customer density thresholds and falling equipment prices.[30] It is also possible that increased take-up has been influenced by reductions in the regulated ULLS and LSS prices, and an increase for broadband services more generally across the community.

ACMA has reported that at June 2006, ADSL was provided by at least one service provider in 2109 exchanges around Australia.[31] This compared with 1760 exchanges at June 2005. Table 2.5 shows the number of infrastructure providers serving ADSL-enabled exchanges.

Table 2.5: Number of infrastructure providers by number of ADSL-enabled exchanges – 30 June 2006

NUMBER OF INFRASTRUCTURE PROVIDERS	NUMBER OF EXCHANGES
1	1,800
2	115
3	61
4	67
5	66

Source: ACMA Communications Services Availability in Australia 2005-06

27 OECD, *Broadband Statistics to June 2006*, 12 October 2006. In this context, the OECD defines 'other' to include satellite, fibre and fixed-wireless.

28 ADSL is asymmetric in that it uses most of the channel to transmit downstream to the user and only a small part to receive information from the user, for example 512K up/128K down. ADSL is reported separately in the Commission's *Broadband Snapshot* reports given the prominence of it compared to other DSL technologies.

29 The number of ULLS and LSS services in operation remains relatively modest compared to the total number of broadband lines. According to information provided by Telstra as at December 2006, there were [**c-i-c**]. These represented approximately **[c-i-c]** and **[c-i-c]** per cent respectively of the total number of broadband services. These data are collected confidentially by the Commission under a record-keeping-rule.

30 Telstra, *Annual Report 2006*, p. 24.

31 See ACMA, *Communications Services Availability in Australia 2005-06,* November 2006, p.15.

As shown, there is only one infrastructure provider in 1800 exchanges representing 85 per cent of ADSL-enabled exchanges. In the other 15 per cent of exchanges there are at least two competing quasi-infrastructure competitors; with 5 infrastructure providers in 66 DSL-enabled exchanges. Quasi-infrastructure competition is predominantly based in the capital cities of Adelaide, Brisbane, Melbourne, Perth and Sydney, with many consumers in these areas having access to two or more quasi-infrastructure based providers.

ISPs that have undertaken quasi-infrastructure deployments have predominantly rolled out ADSL2+ technology. This offers higher bandwidth than the original ADSL technology, providing theoretical download speeds of up to 24 Mbps. The number of ADSL2+ enabled exchanges is 14 per cent of total DSL enabled exchanges. They are predominantly in metropolitan areas of Melbourne, Sydney, Brisbane, Adelaide, Darwin, Hobart and Perth.[32]

In November 2006, Telstra announced plans to offer ADSL2+ services in exchanges where competitors were also offering ADSL2+ services. The Commission understands that, currently, Telstra mostly offers ADSL2+ in exchanges where it face quasi-infrastructure based competition, despite the fact that it has the capacity to offer ADSL2+ in many more exchanges.[33] Telstra has also increased the speeds available through its ADSL services from 1.5Mbps to up to 8Mbps.

The ABS has reported that connections with download speeds of 1.5 Mbps or greater increased to 1.13 million (17 per cent), of subscribers in September 2006 compared to 599,000 (10 per cent) of subscribers at the end of March 2005.[34]

The provision of broadband services offers an opportunity for new providers to establish themselves as key participants in the communications industry. Nonetheless, Telstra retains inherent advantages in the provision of these services to end-users. Its ownership of the two most important networks for the provision of broadband—the ubiquitous copper local access network and its HFC network—gives it control over the infrastructure supporting its retail operations. It also means that it does not have to rely on regulated access.

Despite this, information provided to the Commission on a confidential basis reveals Telstra's competitors have been able to obtain a larger market share in retail broadband than in the traditional fixed voice services.

Another notable trend in recent times has been the rationalisation of the number of ISPs operating in Australia. The ABS has reported that the number of Australian ISPs reduced by 32 per cent, from 689 to 467, between the period March 2005 and September 2006.[35] It has been reported that this fall comes amid intensifying

[32] ACMA, p. 15.

[33] In this regard, Telstra Director of Communications stated on 21 February 2007 that *"We can turn tomorrow, or the next day - in 48 hours, turn ADSL2+ on in every one of these red areas. Every one of those ADSL enabled [areas] can be turned on with ADSL2+ with 20 Mbps to all those homes…….if we could simply get an assurance from the ACCC and from DCITA that they would not appropriate our property if we turn it on…"*

[34] ABS, *Internet Activity Australia*, September 2006.

[35] ABS, *Internet Activity Australia*, September 2006.

competition and the high cost of converting from dial-up to providing or reselling broadband.

Fixed-to-mobile platform substitution: *appears limited at this stage*

The mobile market is now highly mature in Australia. Statistics from the ABS indicate that as at June 2006, mobile penetration was approximately 96 per cent in Australia. Optus's most recent financial report for the period ended 31 December 2006 cites mobile penetration at 97 per cent.[36] The IDC has forecast that 100 per cent mobile penetration will be reached before 2008.[37]

A trend which has been noted in some overseas jurisdictions as having important implications for the future regulation of the fixed-line services is 'fixed-to-mobile platform substitution'. Broadly speaking, fixed-to-mobile substitution may take place in two ways. First, via the replacement of fixed-lines with mobile-only services. Second, and more gradually, via changes in the relative usage patterns of fixed-line voice and mobile services (i.e. migration towards mobile voice and SMS services).

One of the potential implications of increased fixed-to-mobile substitution is that, over time, it may influence the extent to which 'fixed voice' and 'mobile services' could be considered close substitutes for each other, and therefore, part of the same product market for the purposes of competition analysis. At the outset it should be noted that a range of additional information would be required to make definitive statements on this issue (aside from evidence of fixed-to-mobile substitution), including whether there are ongoing price differentials between mobile and voice services as well as other information relating to convenience factors. This is beyond the scope of this paper. Nonetheless, an examination of trends in fixed-lines and mobile services in operation (SIOs) provides interesting background.

Evidence from other international jurisdictions

In commencing its review of Telecommunications (2004-2005), Ofcom noted that there was evidence of some consumers taking 'mobile services only'. Specifically, at that time 9 per cent of UK households had access to a mobile phone only.[38] At the conclusion of its review, Ofcom considered that mobile networks could one day become sufficiently close substitutes for fixed networks, particularly in voice services, placing a competitive constraint on fixed networks. However, it concluded that for substitution to develop to the point where mobile companies exerted effective competitive pressure on fixed services, it would be necessary for the differences in prices between these services to decline quite significantly.[39]

In a report prepared for the Commission in November 2005, WIK Consult noted fixed to mobile substitution trends. WIK noted that mobile-only homes are as high as 33 per cent in Finland and Portugal, and that the average is 15 per cent across Europe.

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[36] SingTel, *Singapore Telecommunications Limited and Subsidiary Companies, Management Discussion and Analysis of Unaudited Financial Condition, Results of Operations and Cash Flows for the Third Quarter and Nine months Ended 31 December 200*6, p. 42.

[37] IDC, Press Release, Australia's Mobile Phone Use to Exceed 100% in 3 Years, Predicts IDC.

[38] Ofcom, First Consultation document, paragraph 5.13.

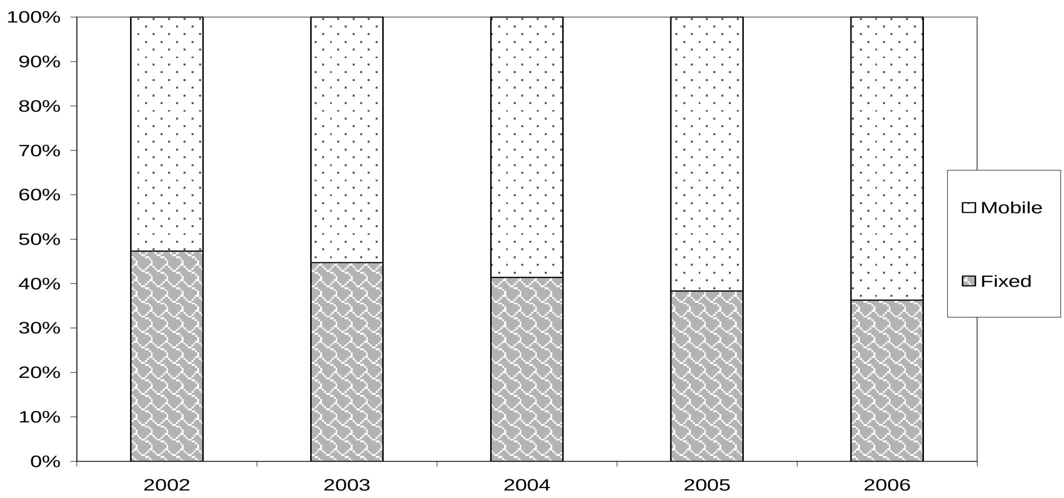
[39] Ofcom, Final Statements, p. 19.

WIK estimated that the corresponding number for Australia was 6 per cent, although its expectation was that this process will accelerate in the next few years in Australia.

Evidence from Australia on number of fixed-lines

The graph below shows that the number of mobile SIOs in Australia now exceeds that of fixed lines services in absolute terms.

Graph 2.3: Proportion of Fixed Lines and Mobile SIOs



Source: ACMA

In 2001-02 fixed lines represented 47.3 per cent of total lines (fixed lines plus mobile SIOs). By 2005-06, this proportion has steadily decreased to 36.3 per cent.

The table below shows the number of basic access lines in operation in Australia over the period 2001-02 to 2005-06.

Table 2.6: Basic Access Lines in Operation

	2002	2003	2004	2005	2006	Mkt Share for 2006
Telstra	mill	mill	mill	mill	mill	%
Residential	6.35	6.10	5.87	5.60	5.46	
Business	2.39	2.71	2.57	2.45	2.32	
Wholesale	1.27	1.55	1.84	2.07	2.16	
Total Telstra	10.01	10.36	10.28	10.12	9.94	88.3
Optus						
HFC	0.54	0.51	0.50	0.49	0.47	4.2
Other			0.88	0.85	0.85	7.5
Total	11.4	11.6	11.7	11.5	11.3	100

Source: Telstra and Optus financial reports and ACMA Communications Report 2005-06.

As shown, the total number of basic access lines has declined over this period 2001-02 to 2005-06, but only marginally from 11.4 million to 11.3 million – a 1 per cent decline. On the other hand, the number of mobile SIOs has significantly increased from 12.7 million to 19.8 million over the same period – by 56 per cent.

In terms of the usage of mobile and fixed platforms, there has been a discernable substitution away from traditional ‘fixed’ voice minutes, towards minutes that are originated by, or connect with, mobile platforms.

For an indication of this trend, Telstra’s annual reports can be examined.[40]

Over the period 2001-02 to 2005-06, the number of retail local calls provided by Telstra declined by 28 per cent. Over this same period, the number of national long-distance minutes supplied by Telstra declined by 22 per cent.

On the other hand, Telstra’s number of mobile originated minutes increased by 26 per cent, while the number of fixed-to-mobile (FTM) minutes increased by 22 per cent. The growth in FTM minutes over this period highlights the complementarity aspect between mobile and fixed platforms.

The above information suggests that while complete fixed-to-mobile platform substitution appears to have been very limited to this stage, there has been a discernable shift in usage patterns towards mobile related services.

An additional factor that may have influenced the rate of complete fixed-to-mobile platform substitution is that dominant broadband technology in Australia is DSL which still requires end-users to have access to a fixed-line.

Based on the information presented above, no definitive statements can be made on the whether the trends discussed above have necessarily changed the relative intensity of substitution possibilities between fixed and mobile platforms to such an extent that they should now be considered in the same product market for the purposes of competition analysis. To further inform itself on this particular issue, the Commission would consider a number of additional issues, including:

- the extent to which there are ongoing price differentials between the two services such that mobiles still attract a price premium. Any analysis of this issue needs to consider the impact of handset subsidies still prevalent for mobile handsets; and

- the extent to which there remains a high degree of complementarity between mobile and fixed-line platforms with evidence on FTM and MTF minutes.

40 Telstra annual reports, various years.

3. Approach to *ex ante* regulation

Summary of key points

- Where it does not result in the economically inefficient[41] duplication of infrastructure, facilities-based competition is more likely to promote the LTIE.
- *Ex ante* regulation should:
  - focus on elements or services that are enduring bottlenecks;
  - be withdrawn from elements or services which are not 'enduring bottlenecks' provided that these declarations are not required to promote LTIE; and
  - reflect that effective infrastructure-based competition (or the potential for such competition) is likely to emerge unevenly across different geographic regions of Australia.
- In areas where infrastructure-based competition is unlikely to emerge, the Commission will consider whether to declare a wholesale end-to-end service, but it should not be automatically assumed that declaration would ensue; particularly, as there may be other regulatory tools that can better achieve the relevant LTIE objectives
- The framework for reviewing existing service declarations within the LTIE framework involves:
  - identifying where enduring bottlenecks remain;
  - assessing the state of and potential development in competition in relevant markets (including where relevant the appropriate geographic delineation of markets); and
  - assessing the remaining LTIE criteria.
- Existing service declarations relating to fixed services that have obvious inter-relationships (ULLS, LSS, WLR, LCS and PSNT OTA) will be reviewed simultaneously prior to 1 July 2009.

This chapter outlines the Commission's approach to *ex ante* regulation under Part XIC of the Act. It is divided into three main sections:

- the first provides background on existing services declarations;
- the second outlines the Commission's approach to the *ex ante* regulation of fixed-line services; and
- the third section outlines the Commission's proposed framework for reviewing existing service declarations under the Act, including a proposed timetable for review.

At the outset, it is important to indicate that the framework for considering the removal or relaxation of existing service declarations is outlined at a general level. It is not intended, nor would it be appropriate, for the Commission to outline prescriptive thresholds under which regulation will necessarily be relaxed or removed.

[41] This concept is developed further below. Essentially, it refers to the situation where the efficiency gains from increased competition in downstream markets outweigh any losses that arise from the loss of technical and/or allocative efficiencies as a result of the duplication of infrastructure.

Such issues are more properly considered as part of a detailed review of specific service declarations, based on the most up-to-date empirical information possible.

The Commission is cognisant that the rapid pace and evolution of change in the industry, including technological change, has the potential to alter the extent, type and scope of *ex ante* regulation that will be required to promote the LTIE in the future. That said, the Commission considers that its approach to regulation outlined in this chapter remains applicable to market scenarios where the underlying technology, delivery platforms and points of interconnection (POI) may change, such that a consistent regulatory approach can be maintained.

Background

As outlined in Appendix 1, when determining whether to declare a service under Part XIC of the Act, the Commission is ultimately required to consider whether declaration will promote the LTIE – having regard to the statutory criteria that underpin this. In this context, a fundamental challenge for the Commission is to design and administer a regulatory framework that mirrors outcomes that could be expected in competitive market circumstances. This is because, in competitive market circumstances, it is often more likely that each of the three objectives underpinning the LTIE would be satisfied without regulatory intervention.

The deeming of declared services in 1997

In 1997, the Commission was required to prepare a statement, in consultation with AUSTEL, specifying a list of 'deemed' telecommunications services which were then declared under Part XIC of the Act (the 'Deeming Statement'). Specifically, subsections 39(1) and (2) of the *Telecommunications (Transitional Provisions and Consequential Amendments) Act 1997* required that eligible services covered by access agreements registered under *s.144 of the Telecommunications Act 1991* needed to be specified in the statement.

The list of declared services proposed to the Commission covered eligible services between the three existing carriers at that time – Telstra, Optus and Vodafone. The Commission was to inherit and administer access to these declared services pursuant to the telecommunications-specific access regime.

In the Deeming Statement, the Commission considered that regulated access would promote the LTIE, generally where the service is:

(i) a bottleneck service; and/or

(ii) a service necessary for the achievement of any-to-any connectivity.

Under case (i), the determination of whether a service is a 'bottleneck' service requires that the production technology of the service exhibit natural monopoly characteristics, and that the service is 'essential' to being able to compete in a particular market in a way that promotes the LTIE.

In determining whether a service is 'essential', the Commission considers whether there are close substitutes for:

- the service as an input to the production of a particular final market service at a comparable cost; and

- the downstream service, which can be produced without the bottleneck service.

Most services required for any-to-any connectivity under case (ii) would also be bottleneck services and thus covered by case (i), or alternatively would be competitively provided such that there is no need for declaration. However, it was noted in the Deeming Statement that there may be certain circumstances where case (i) alone may not capture some services critical for any-to-any connectivity.[42]

In light of the above discussion, the terms ‘bottleneck’ and ‘natural monopoly’ are not strictly interchangeable concepts. As noted, while bottleneck services will usually exhibit natural monopoly characteristics, the concept also encompass ‘essential’ services which are necessary to provide services to end-users due to a complete absence of substitutes – for example, termination services.

For this reason, although they are often related concepts in fixed-line markets, the term ‘enduring bottleneck’ will be used in this paper to indicate where *ex ante* regulation in fixed-line markets should be focused going forward.

Subsequent decisions by the Commission

Since the initial deeming of these services in 1997, the Commission has, in accordance with its statutory obligations, reviewed existing service declarations. As part of the 2002 amendments to the Act, section 152ALA specifies (among other things) that an expiry date for declaration must occur within the five year period beginning when the declaration was initially made, and that the Commission must undertake a public inquiry to review an existing service declaration during the 12 month period prior to expiry. In June 2003, the Commission issued a Final Report which set expiry dates for existing declarations.

In line with this report, the Commission has undertaken public inquiries to ascertain whether to extend, revoke or vary existing service declarations. In many cases, services that were initially deemed declared have either been revoked or varied. Further, in accordance with section 152AL of the Act, the Commission has, after an extensive public inquiry in each case, declared additional services where it has determined that declaration would promote the LTIE. A summary of the services that were initially deemed, those that have since been revoked, and those that have been declared after a subsequent public inquiry, is contained in Table 3.1 below.

[42] Specifically, it was noted that this could include services for which access may only have a marginal impact on competition or which may be capable of eventually supporting competitive provision but which would be provided only by Telstra for the immediate period following 1 July 1997.

Table 3.1 Register of current declared services

DECLARED SERVICE	FIRST DECLARED	SUBSEQUENT DECISION TO REVOKE, VARY OR RE-DECLARE	CURRENT GEOGRAPHIC SCOPE	CURRENT EXPIRY DATE
Deemed in 1997				
Domestic PSTN Originating and Terminating Service (PSTN OTA)*	30 June 1997	Re-declared PSTN OTA service in July 2006 for three years.	National	31 July 2009
Domestic GSM originating and terminating access (now only **Mobile Terminating Access Service or MTAS***)	30 June 1997	In March 2002, these declarations were varied to include other mobile services currently in use, making the declarations technology neutral. In June 2004, declaration of the mobile 'originating' access service was allowed to expire but MTAS was re-declared.	National	30 June 2009
Domestic AMPS originating and terminating service	30 June 1997	Revoked 7 February 2001	NA	NA
Domestic Transmission Capacity Service*	30 June 1997	Re-declared in April 2004, but removed additional elements from declaration.[43]	Excludes domestic transmission capacity between main capital cities; and between 14 capital-regional routes	31 March 2009
Digital Data Access Service (DDAS)*	30 June 1997	Re-declared from 1 July 2005.	Excludes CBD and metropolitan areas of the capital cities	30 June 2008
Conditioned Local Loop Service	30 June 1997	Revoked in July 2006.	NA	NA
AMPS to GSM diversion service	30 June 1997	Revoked on 7 February 2001.	NA	NA
Broadcasting access service	30 June 1997	In August 2000, the Full Federal Court found that the initial deeming statement was invalid with respect to this service. Declared void on 18 August 2000.	NA	NA
Declared since 1997				
Integrated Services Digital Network (ISDN) Originating and Terminating Service*	4 November 1998	Re-declared from 1 July 2005.	Excludes CBD and metropolitan areas of the capital cities	30 June 2008
Local PSTN originating and terminating service	1999	Final decision in July 2006 that these services were encompassed by the broader PSTN OTA service and re-declaration not necessary.	NA	
Local Carriage Service (LCS)*	4 August 1999	Re-declared in July 2006 for 3 years.	Excludes LCS in the CBD districts of the five major capital cities	31 July 2009
Unconditioned local loop service (ULLS)*	4 August 1999	Re-declared in July 2006 for 3 years.	National	31 July 2009
Line Sharing Service (LSS)*	30 August 2002	NA	National	October 2007
Wholesale Line Rental Service (WLR)*	1 August 2006	NA	Excludes WLR within the CBD area of five major capital cities.	31 July 2009

[43] The initial deeming statement in 1997 already excluded transmission capacity between routes between Brisbane, Sydney, Canberra, Melbourne, Adelaide and Perth.

*Services highlighted in bold are those that remain declared.

A feature of the current mix of declared services is that access seekers are permitted mandated access to Telstra's fixed-line network at different network layers. There are three broad ways that competition in the provision of fixed-line services occurs:

- *Full-facilities based competition* – competing forms of standalone infrastructure that is capable of providing a range of end-to-end telecommunications services that are substitutable for each other (e.g. the provision of local call services over Telstra's copper network and Optus's HFC network);

- *Quasi-facilities based competition* – entrants use a combination of access to a third party's infrastructure in combination with investment in their own infrastructure to provide services to end-users (e.g. the provision of broadband services to end-users using the ULLS or LSS combined with investment in DSLAM technology in local exchange areas); or

- *Resale competition* – entrants compete by purchasing a wholesale service in combination with their own retailing activities (e.g. examples of resale based competition include the provision of fixed voice services using WLR or LCS).

Table 3.2 below sets out the various declared services and the downstream services they are, or can be, used to supply.

Table 3.2 Use of currently declared services to supply downstream retail services

RETAIL SERVICES	**DECLARED SERVICES**							
	PSTN OTA	ULLS	WLR	LCS	LSS	MTAS	ISDN OTA	DDAS
National long distance voice calls	*	*						
International calls	*	*						
Local calls		*		*				
Line rental (access)		*	*					
Dial-up internet services		*		*				
Broadband data services (including xDSL)		*			*		*	*
Fixed to mobile calls	* (originating only)	*				*		

The above table demonstrates that there are a number ways for providers to use declared services to compete in downstream telecommunications markets:

- *Pure resale model:* Competitor acquires WLR (for retail line rental product), LCS (for local calls and/or dial-up internet), PSTN OTA (for national long distance and international calls) and ISDN and/or DDAS for high speed data services;

- *Partial resale/quasi-facilities based model*: Competitor acquires WLR (for retail line rental product), LCS (for local calls), PSTN OTA (for national long distance and international calls) and the LSS (for broadband data services – specifically, ADSL); or

- *Quasi-facilities based model*: Competitor supplies voice and data using the ULLS (for retail line rental product, local calls, national long distance and international calls and broadband data services) and PSTN OTA (for national long distance and international calls).

Responses to the June 2006 position paper

Submissions from Telstra and Optus

In response to the June 2006 position paper, Telstra asserted that it was clear that the Commission 'continues to endorse the stepping-stone or ladder-of-investment model of telecommunications regulation…' and 'seems intent on continuing to provide access seekers with every flavour of access imaginable – even though this approach is not required to meet the LTIE'.[44] Telstra further asserted that the stepping stone approach is a 'failed policy' and that concerns with it as a regulatory strategy 'are appearing right around the world'.[45]

In contrast, Optus submitted that its planned national DSL roll-out would not have been possible if the PSTN OTA service was not available as a means of enabling Optus to build scale through its customer base. Optus also noted that other carriers were planning to build their own DSL rollouts on the back of building customer scale through resale.[46]

The Commission's view

Self-evidently, there is an ongoing discussion, both in the literature and by various regulatory/industry agencies and telecommunications companies, not only about the merits of the 'stepping stone' hypothesis,[47] but also how entrants should be encouraged to move up the so-called 'ladder of investment'.

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44 Telstra submission, p. 3.

45 To support its view, Telstra re-produced a review of a report prepared by the British consultancy group, Indepen, for the Brussels Round Table of leading European telecommunications operators and equipment manufacturers. In previous submissions, Telstra has also referred to a report prepared by the European Telecommunications Network Operators Association (ETNO).

46 Optus Submission, September 2006, p. 5.

47 The 'stepping stone' hypothesis is based on the premise that access seekers should be permitted access to an incumbent's fixed-line network at different network access points (i.e. stepping stones). Proponents suggest that, as entrants' gain market share over time, the risks associated with infrastructure investment diminish, increasing their incentive to 'climb the ladder of investment'. At the limit, entrants will move towards full-facilities based competition, obviating the need for mandated access entirely. This analogous 'ladder of investment' concept was originally considered in an influential paper by Martin Cave and Ingo Vogelsang (2003). More recent extensions in the literature include those by Cave (2004, 2006).

The ‘stepping stone’ hypothesis could broadly describe any regulatory framework that permits entrants to access an incumbent’s network via at least two network layers. In this regard, a range of jurisdictions, including Australia, currently permit entrants mandated access to the incumbent’s fixed-line network at different network layers (including access to the unbundled local loop).

The Commission has previously expressed qualified support for the ‘stepping stone’ hypothesis in the regulation of fixed-line services. In its June 2006 position paper, the Commission supported the ‘stepping stone’ approach to competition, but with the very important caveat that ‘full facilities-based competition is the end goal in all circumstances’.[48] Further, the Commission notes that the stepping stone hypothesis does not necessarily suggest that multiple forms of mandated access at different network layers should be left in place indefinitely. The Commission’s position has consistently been that it will only seek to promote facilities based (full or quasi) competition where it is likely to be economically efficient, and therefore in the LTIE.[49]

The Commission considers that an approach to regulation that encourages competitors to invest in their own infrastructure, where it is economically efficient, is likely to promote the LTIE. Facilities-based competitors do not rely on gaining access to an incumbent’s network (or to a lesser extent than under resale competition). As a result, they have a greater ability to:

- control their own costs and supply chain;
- differentiate service offerings; and
- improve service quality.

Facilities-based competition is more likely to lead to sustainable competition, spur dynamic innovation and encourage the diffusion of new technologies over time; ultimately providing greater prospects for the relaxation or removal of access regulation.

That said, there are enduring features of telecommunications markets, in particular fixed-line networks, which suggest that full-facilities based competition across all elements of this infrastructure is not likely to be a realistic, or even a technically feasible goal in the foreseeable future.

Certain features of fixed-line markets suggest that there are likely to be enduring bottlenecks across particular elements of the network. At one level, these enduring bottlenecks may exist due to the ongoing presence of natural monopoly cost characteristics across particular elements of the network, and because these elements continue to represent essential facilities for the provision of downstream services. For instance, the Commission has previously expressed the view that the Telstra’s local customer access network (the ‘CAN’) is likely to exhibit natural monopoly

48 ACCC, June 2006 position paper, p. 13.

49 For example, the Commission indicated [in its June 2006 position paper?] that it would not be appropriate to encourage facilities based competition where the demand for services in a market can be satisfied at a lower cost by one facility than two or more facilities. In these circumstances, the LTIE would be best served by an effective access regime.

characteristics in the foreseeable future, and remains an essential facility for the provision of certain downstream services.[50]

The ‘stepping stone’ hypothesis is premised on the assumption that facilities based competition (where it does not result in the technically inefficient duplication of infrastructure) is more likely to promote outcomes akin to those found in competitive markets. One of the useful insights that follows from the hypothesis is that there are often inter-linkages between regulated access at different layers of a fixed-line network.

That said, it increasingly appears that the seamless continuum that is implied under the stepping stone hypothesis – between resale-based competition and full-facilities based competition – is unlikely to be a realistic outcome for the regulation of fixed-line services. Moreover, it appears increasingly likely that the presence of enduring bottlenecks in fixed-line markets is likely to differ in nature across different geographic regions of Australia.

In its June 2006 position paper, the Commission acknowledged that it is appropriate that the *ex ante* regulatory framework reflect the fact that infrastructure-based competition (either full-facilities or quasi-facilities) is likely to emerge (and has emerged) differently in different geographic regions. The Commission has clearly indicated it is appropriate that the regulatory regime is flexible enough to:

- withdraw from certain types of regulation in geographic areas where it is no longer required to promote the LTIE; and
- remain targeted at those areas where it is required to promote the LTIE.

Approach to the regulation of fixed services

The Commission is of the view that *ex ante* regulation under Part XIC of the Act should focus on those elements of the fixed-line network that continue to represent enduring bottlenecks. This is because duplication of these network elements may be economically inefficient and/or the bottleneck nature of the service means that an access seeker cannot provide an end-to-end service without access to an essential service.

For elements of the fixed-line network where an enduring bottleneck does not persist, the Commission will be inclined to progressively withdraw access regulation where it is confident that declaration is not required to promote the LTIE.

This approach is based on the principle that because rivals are able to differentiate their services and compete more vigorously across greater elements of the network supply chain, the gains from facilities-based competition (or the credible threat of such competition) are more likely to promote the LTIE.

[50] The Commission accepts that the (albeit limited) emergence and availability of alternative inter-modal delivery platforms such as cable, fixed-wireless, mobile-wireless and satellite in certain geographic locations might obviate the enduring bottleneck characteristics of the CAN. However, it expects that if this does occur, it is likely to be highly localised.

It is also based on the principle that, for services/network elements which are not enduring bottlenecks, competitors that do not wish to invest in their own infrastructure will more than likely have the opportunity to enter into commercially negotiated arrangements with third parties (or the incumbent) without the need for *ex ante* regulatory intervention.

The withdrawal of access regulation at certain network layers does not necessarily suggest that these forms of competition will cease, or that prices will be raised excessively by the access provider. Indeed, the withdrawal of *ex ante* regulation is not intended to foreclose those modes of competition. Rather, it is recognition that *ex ante* regulation is no longer required to ensure that these access options are competitively priced at or near their underlying costs.[51]

This approach suggests that:

- in areas where there is evidence of *full-facilities based competition* (either intra or inter-modal competition), or the potential for sustainable and efficient full-facilities competition, the main question for review is whether any form of *ex ante* regulation promotes the LTIE;

- in areas where there is evidence of *quasi-facilities based competition*, or the potential for sustainable and efficient quasi-facilities based competition, the main question for review is whether regulated re-sale based services are required to promote the LTIE; and

- in areas where there is only evidence of regulated *re-sale based competition, or no competition at all*, the main question for review is whether mandated access at 'deeper' levels of the network (e.g. ULLS) is likely to promote the LTIE.

In addition, and with respect to the third scenario, the Commission considers that in circumstances or areas where infrastructure-based competition is unlikely to emerge, the Commission will consider whether declaration of a wholesale end-to-end service will promote the LTIE. There may be strong reasons to declare a wholesale end-to-end service in these circumstances. However, the Commission notes that it should not be automatically assumed that declaring this type of service would promote the LTIE. In declaring this type of service the Commission would need to be satisfied that there is the potential for efficient competition at this level and that the benefits from this form of competition would outweigh any regulatory burden associated with *ex ante* intervention. In considering these issues, the Commission is likely to examine confidential financial information of operators (expected or actual).

[51] For example, consider a region where there is evidence of effective ULL-based competition, or it is determined that the potential for sustainable effective competition exists. In this case, it may be determined that the continued declaration of re-sale based services such as WLR and LCS etc is not required to promote the LTIE. However, if declaration were removed, it might be in the incumbent's financial interests to continue to provide these services on competitive terms. Indeed, as regulation is withdrawn the incumbent may (as the credibility of facilities based entry increases) actually have an incentive to offer more attractive access prices to forestall its rivals from moving to a level of facilities-based competition.

Further, in these circumstances, the Commission will also consider whether there are other regulatory tools that can better achieve the relevant LTIE objectives.

Alternative regulatory tools to *ex ante* regulation

One potential option would be the imposition of retail price controls on the price for certain end-user services in certain geographic locations. The Commission notes that the regulation of retail telecommunications prices has to date been the responsibility of the relevant government Minister (currently the Minister for Communications, Information Technology and the Arts). However, on a number of occasions the Commission has reviewed price control arrangements and advised the Minister on:

- the appropriate form of future price control arrangements;
- whether any complementary arrangements are required to work in conjunction with the future price control arrangements; and
- mechanisms for assessing and enforcing compliance.

Furthermore, it must also be recognised that the *ex ante* provisions under Part XIC of the Act are not the only tool available to the Commission to influence market outcomes in the fixed-line sector. In this regard, as noted in Appendix 1, Part XIB of the Act contains telecommunications-specific anti-competitive conduct provisions. These provisions supplement the general misuse of market power provisions in Part IV of the Act.

In circumstances where the Commission determines that the relaxation, amendment or removal of regulation is warranted having regard to the LTIE, it will remain open to the Commission to utilise the *ex post* provisions in Part XIB (and the Part IV conduct provisions). These provisions provide a mechanism to prevent the exploitation of market power if there is sufficient market-based evidence to justify such enforcement action. For this reason, the removal of declaration does not necessarily suggest that particular services/markets will become wholly ‘unregulated’.

In its approach to regulation, the Commission does not consider Parts XIB and XIC as direct substitutes for each other. Rather, they are more properly described as complements. In certain cases it may be appropriate for these provisions to interact simultaneously.

For example, on 12 April 2006, a Part A competition notice was issued to Telstra in relation to Telstra's wholesale and retail pricing of line rental. In issuing a competition notice, the Commission’s primary objective is always stopping and preventing any anti-competitive conduct.

The declaration of the WLR service came into effect on 1 August 2006. This allowed for options for the resolution of disputes about wholesale access to and pricing of the service.

In light of this, the Commission reached the view that competition concerns about WLR pricing could be effectively addressed by Part XIC of Act. In consideration of all relevant factors, including an assessment of the alleged effects of Telstra's pricing conduct and the evidence obtained, the Commission decided further enforcement action was not warranted and the Part A competition notice was revoked.

On 5 April 2007, the Federal Court ruled that the Commission was not entitled to issue the Part A competition notice it issued on 12 April 2006.

Consistent approach in dynamic market circumstances

The regulatory principles outlined above, including the need for the regulatory framework to be flexible enough to take into account that different forms of competition may emerge unevenly in certain geographic regions, is consistent with regulatory decisions made by the Commission in the past.

For example, in its most recent declaration decisions with respect to the Domestic Transmission Capacity Service (April 2004) and the WLR/LCS services (July 2006), the Commission relaxed *ex ante* regulation in geographic regions where it considered that it was not required to promote the LTIE due to the emergence of facilities-based competitors in these areas (further detail on this decision is provided in Chapter 4).

The Commission is also cognisant that the rapid pace and evolution in the industry has the potential to alter or erode the extent, type, location and scope of enduring bottlenecks in fixed-line markets. For this reason, it is imperative the Commission's approach to regulation remains applicable to market scenarios where the underlying technology, delivery platforms and points of interconnection (POI) may change, such that a consistent regulatory approach can be maintained.

One relevant example in this context is the issue of whether the ULLS service description should (or needs to be) varied to include different points of interconnection on the line. Although the potential point of interconnection may change, the Commission's view is that *ex ante* regulation should still focus on the enduring bottleneck remains relevant to new technological scenarios.

The underlying technology of local access networks is likely to evolve over time. One development which is the focus of much political and industry debate at present is the upgrading of the fixed copper wire network to incorporate fibre closer to end-users – either as part of an fibre-to-the-node (FTTN) or fibre-to-the-premises (FTTP) deployment. FTTN, for example, involves the deployment of optical fibre (to replace or augment copper) between the Local Exchange and Remote Access Units (RAU) as part of the local access network infrastructure. Such developments may require access seekers to interconnect at a RAU site.

The ULLS and LSS declarations under Part XIC of the Act provide for third party access to an end-users copper access wire pair. These declarations clearly cover the case where access seekers have their POIs at the local exchange. Specifically, both ULLS and LSS service descriptions refer to communications wire:

> …between the boundary of a telecommunications network at an end-user's premises and a point on a telecommunications network that is a potential point of interconnection located at, or associated with, a customer access module and located on the end-user side of the customer access module.

However, some industry participants have raised concerns that the current service description may not be sufficiently technology neutral to adapt to new forms of networks that use the communications wire but not devices that are connected to customer access modules as currently defined in relevant declarations. In particular, there is concern that a RAU (ie. node) is a passive device that may not fall within the current meaning of a customer access module. Hence, this could mean access at the new location of the bottleneck in the network – at the node – is not regulated. This is sometimes referred to as sub-loop access.

Because of its forward-looking focus on the enduring bottleneck, the Commission is considering whether to commence an inquiry into the need to vary the definition of the ULLS at present.

Decision-making framework for existing service declarations

This section outlines the Commission's proposed framework and timetable within which the Commission will pro-actively review existing service declarations under Part XIC of the Act.

At the outset, it is important to note that the decision making framework set out in this paper remains at a general level. The intention is not to outline prescriptive thresholds, such as sunset clauses or market-based tests, under which regulation will necessarily be relaxed or removed. Rather, this framework outlines some of the indicators that the Commission will take into account when considering whether existing declarations (including their current scope) are required to promote the LTIE.

Broadly speaking, the Commission considers that within the LTIE framework, there are three main steps involved in its application:

- *identify enduring bottlenecks* – assessing over which elements of fixed-line networks enduring bottlenecks are likely to persist in foreseeable future;
- *competition assessment* – framing the relevant markets for consideration (including, where appropriate, a robust methodology for the geographic delineation of markets) and assessing the state of competition in the relevant markets; and
- *assessment of remaining LTIE criteria* – ultimately determining whether the declaration (including its current scope) is required to promote the LTIE.

Determining enduring bottlenecks

A necessary starting point for the Commission's forward-looking framework is to consider where, over what elements/services and to what extent, enduring bottlenecks are likely to remain in the foreseeable future.

A recurring theme in this paper is that a forward-looking approach to the *ex ante* regulation of services under Part XIC of the Act will take into account that infrastructure-based competition (either quasi or full-facilities) will emerge differently in different geographic regions. In this context, the Commission must take into account that enduring bottlenecks will differ in different regions of Australia.

Determining the existence of enduring bottlenecks is not necessarily a simple exercise; particularly in dynamic markets where technological change and other developments such as movements in population density and changing demographic factors have the ability to alter market dynamics and the potential for economically efficient facilities-based competition.

One suggested approach is that evidence of the ‘replicability’ of fixed-line network elements may provide guidance towards practically assessing whether it is likely to be economically efficient for competitors to duplicate infrastructure. In this context, replicability means that there is evidence that a particular network, or network element, has been duplicated.

The Commission notes that evidence of replicability is not necessarily a sufficient condition to determine the absence of enduring natural monopoly cost conditions. In the first instance, investment in competing facilities does not necessarily mean an infrastructure investment is efficient. Secondly, the existence of alternative infrastructure is insufficient, in and of itself, to warrant the removal/adjustment of regulation; just as the absence of alternative infrastructure is not necessarily sufficient to satisfy a case for the continued declaration of a service.

Nonetheless, the Commission considers that evidence of replicability may be indicative that there is not an enduring bottleneck problem. In this regard, it will be appropriate to consider both evidence of replicability in an Australian and overseas context. In terms of information on Australia, the recently proposed audit of telecommunications infrastructure will assist the Commission’s analysis on the nature and location of enduring bottlenecks across different geographic regions in Australia. More broadly, the Commission will continue to monitor overseas developments and, where appropriate, will inform its analysis accordingly.

Competition assessment

Identify the relevant market(s) for consideration

In the context of previous Part XIC matters, when framing the geographic scope of the relevant market(s) the Commission has generally (but not always) applied a ‘national’ geographic dimension. There are a number of reasons why ‘national’ markets have been considered an appropriate basis for analysis in this context (see Chapter 4). However, there is increasing evidence that different types of infrastructure competition (i.e. both full-facilities and quasi-facilities) have emerged in certain geographic regions of Australia. Given the apparent uneven development of these types of competition, the main question for consideration is whether the application of ‘national’ market definitions remains appropriate.

The Commission’s proposed approach to, where appropriate, geographically delineating markets on a narrower than ‘national’ basis is outlined in the first part of Chapter 4.

Assessing competition in the relevant market(s)

Once the relevant markets have been defined, the next logical step is to assess the state of competition in the relevant markets. In conducting this analysis, the Act permits the Commission to consider both the market within which the eligible (declared) services is provided, and also any relevant upstream or downstream markets.

There are a variety of factors that the Commission will consider in assessing the state of competition in the relevant markets, including (but not limited to) market concentration levels, the height of barriers to entry and/or expansion and the extent of vertical integration in the relevant markets.

The Commission's proposed approach to assessing the state of competition in the relevant markets (and whether declaration is required to promote competition) is outlined in the second part of Chapter 4.

LTIE assessment

The final step in the Commission's analysis will be to determine overall whether declaration (including the scope of declaration) is required to promote the LTIE. To the extent that declaration is not required to promote the LTIE, the Commission will be inclined to remove/adjust the declaration accordingly. As outlined in Appendix 1, in considering the LTIE the Commission must have regard to a range of factors. These are outlined in some detail in that appendix.

Timetable for future review of fixed-line service declarations

As noted previously, amendments to the Act in 2002 specified that an expiry date for declaration must occur within the five year period beginning when the declaration was initially made. Table 3.1 set out the services that are currently declared under Part XIC of the Act, and the expiry date of each service.

Aside from a requirement to review existing declared services prior to their current expiry date, the Commission is not required to review service declarations in any particular order, or as part of a collective group.

However, there are obvious interdependencies between service declarations at certain layers of the fixed-line network. For example, a consideration of whether re-sale based service declarations such as WLR and LCS are required to promote the LTIE must properly take into account whether, and the extent to which, the ULLS declaration affects the relevant downstream markets. Further, a consideration of whether the PSTN Originating service is required to promote the LTIE must take into account the potential for the ULLS to provide access seekers with sufficient access to Telstra's underlying copper network to originate voice calls.

For this reason, the Commission considers that a worthy issue for consideration going forward is the structure within which existing service declarations are reviewed. The Commission considers that there are three main options for a future review of existing service declarations to be considered.

Option #1- Review services individually

One of the main advantages of this type of approach is that it allows the Commission to focus specifically on an individual service, and is therefore likely to be less data/information intensive, and potentially, more timely. Focusing on an individual service does not imply that other service declarations would necessarily be ignored (including their impact on relevant downstream markets) as part of the analysis.

In the past and in certain cases, the Commission has favoured this type of approach, predominantly because it is in line with its statutory obligation under the Act and, can, lead to a faster resolution of whether each individual service should be declared or not. However, increasingly over time, the Commission has acknowledged that accounting for certain interdependencies between service declarations might be better served by conducting more holistic reviews. In this regard, the Commission notes that its two most recent reviews – the final decision on a range of declared services in July 2006 (ULLS, PSTN OTA, CLLS and consideration of wholesale xDSL service) and its Local Services Review (July 2006) – considered certain service declarations simultaneously.

Option #2 – Review service declarations with obvious interpendencies in 'groups'

As noted above, the Commission has increasingly moved towards a more holistic approach in its two most recent reviews of service declarations. Going forward, this raises the option that service declarations that relate to fixed-line networks should be reviewed in certain 'groups'.

Broadly, the declared services that relate to the fixed-line network can be categorised into three main groupings based on the depth of the network service layer:

- end-to-end wholesale services (ie. WLR, LCS);
- interconnection products (PSTN OTA); and
- physical access services (ie. ULLS, LSS).

The service layer options can be considered as running from physical access (e.g. ULLS) to interconnection services (e.g. PSTN OTA) to end-to-end wholesale products (e.g. WLR and LCS). In light of these groupings, there are two possible alternatives for the review of existing declarations as summarised in the table below.

Table 3.3: Options for declaration reviews

	OPTION A	OPTION B
First stage	End-to-end wholesale services;	Physical access services
Second stage	Interconnection; and	Interconnection products; and
Third stage	Physical access services	End-to-end wholesale services.

The Commission considers that if the choice was to be made between these two options, it should commence at the 'deepest' network layer and work down. In other words, the review should start by assessing whether to declare physical access service products such as ULLS and LSS.

The reason for this order is that, for example, any decision to remove or relax *ex ante* regulation at the re-sale based level would appear to hinge heavily on the prospect for, in particular, effective ULL-based competition. Therefore, to have already conducted the analysis on the case for declaration of the ULLS would allow a more informed assessment of the ongoing need for re-sale based service declarations.

Option #3 – Review service declarations as a whole

A third option would be for the Commission to conduct a simultaneous and holistic review of existing service declarations that relate to the provision of fixed services, and have obvious interdependencies. The end-purpose of such a review would be to determine what mix of service declarations (including the scope of any declaration) would most likely promote the LTIE.[52]

The Commission's preferred approach

The Commission considers that the most appropriate approach is to conduct a holistic review that canvasses the most appropriate mix of service declarations that is likely to promote the LTIE. In other words, the Commission's preferred approach is to review the ULLS, LSS, PSTN OTA, LCS and WLR services simultaneously. To the extent that technological or other developments within the relevant markets are relevant, the Commission may also consider as part of this broad-ranging inquiry, whether any new forms of declaration are required to promote the LTIE.

The Commission also considers that a relevant consideration is also the advice that it may be asked to provide the Minister on the retail price controls that should apply beyond 30 June 2009.

A number of these declarations (in fact, all those with the exception of the LSS) are due for expiry in 2009. The Commission considers that it is preferable to commence a review of these service declarations well before their current expiry dates, based on the most up-to-date empirical information available.

The Commission's proposed timetable for future decisions with respect to Part XIC was outlined in Table A on page v of this report.

Questions for interested parties:

- How should the Commission balance its obligation to provide regulatory certainty against the changing dynamics of the telecommunications industry, and the need to maintain flexibility to respond to these changes?
- Would the above timetable provide regulatory certainty to the industry? If not, why not and what alternatives are there?

[52] Section 152AN allows the Commission to conduct combined inquiries about the declaration of services.

4. The approach to competition assessment

Summary of key points

- The Commission has typically (but not always) applied a 'national' geographic scope to markets when considering service declarations under Part XIC of the Act.
- Market developments suggest that it may be appropriate for the Commission to, in certain cases, geographically delineate markets on a narrower basis to account for the uneven emergence of facilities based competition in different parts of Australia.
- The Commission considers that the most appropriate geographic unit upon which to base its market definition exercise is at the 'exchange' level.
- The Commission will continue to take into account a range of factors when assessing the state of competition in relevant markets (and the extent to which ongoing declaration is required to promote competition) including evidence of *actual* competition and evidence of the *potential for* the development of effective competition.
- Efficient, facilities based competition is more likely to be 'effective competition' (and therefore promote the LTIE) because rivals are able to differentiate their services and compete more vigorously across greater elements of the network (and supply) chain. It is also more likely to produce enduring benefits because competitors that have invested in their own infrastructure are more likely to remain in the market (because of high sunk costs).

When conducting an inquiry to determine whether an 'eligible service' should be declared under section 152AL of the Act, sub-section 152AB(2) requires the Commission to consider whether declaration of an eligible service is likely to promote competition in markets for particular carriage services and services supplied by means of carriage services.[53]

The Act directs the Commission's attention to the market(s) in which competition is likely to be promoted. In some cases, this is likely to be the market(s) for downstream services rather than the market in which the eligible service is supplied (where these markets are separate). That said, the Act does not prohibit the Commission considering the market in which the eligible service is supplied where this will assist in examining the impact of declaration on competition in the relevant markets.

A more detailed outline of the relevant statutory criteria that the Commission is required to have regard to conducting a declaration inquiry is provided at Appendix 1.

From the above discussion, however, it is clear that framing the relevant market(s) for consideration is a critical first step in conducting a competition assessment. Once defined, the next logical step is to assess the state of competition within those markets; and specifically, whether declaration of a particular eligible service is required to promote competition in any of the relevant markets.

This chapter provides guidance on two main issues:

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53 s. 152AL(1) of the *Trade Practices Act (1974).*

- the approach that the Commission will take in geographically delineating relevant fixed-line markets; and
- the factors that the Commission will have regard to in its competition assessment.

Approach to market definition

General approach

At a general level, the purpose of market definition is to focus the boundaries of analysis to take into account sources of supply, or potential supply, which constrain the pricing and output decisions of a particular firm. Typically, the Commission considers the product, geographic, functional and temporal dimensions of a market.

To commence its analysis, the Commission identifies the services under consideration and the firm(s) supplying those services. Once the relevant services and source(s) of supply have been identified, the Commission seeks to establish the market boundaries by considering all sources of closely substitutable products, to which consumers would (or could) turn in the event that a firm attempted to exercise market power.

The Commission considers both demand and supply-side substitutability constraints. From the *demand-side* a relevant consideration is to what extent consumers can substitute towards other services (or sources of supply) in the event of a significant price rise, or equivalent exercise of market power, by an incumbent firm. From the *supply-side* a relevant consideration is the extent to which (and how quickly) firms could switch or expand supply in the event of a significant price rise, or equivalent exercise of market power, by an incumbent firm.[54]

The Commission is also guided by the 'commercial realities' of a particular industry (such as actual patterns of supply) to ensure that market(s) which it identifies accurately reflect the arena of competition.[55] The Commission will also take into account that declaration and the overall telecommunications regulatory regime itself might affect the dimensions of particular markets.

Market definition analysis is not necessarily intended to be a determinative exercise. Rather, it is more properly used as a purposive tool to assist competition analysis. The courts have also established that the boundaries of the relevant market are a question of 'degree'. For example, the Tribunal stated that:

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[54] The hypothetical monopolist or 'SSNIP' test is often cited as useful tool to assist a market definition analysis and consideration of demand and supply-side substitutes; although it is rarely used in a practical sense. Essentially, the conceptual experiment involves establishing the smallest 'product' or 'geographic' space over which a hypothetical monopolist would impose a 'small but significant increase in price' without reducing its profits. If consumers would switch, or suppliers would expand, supply to other products or geographic areas to such a degree that the price rise was unprofitable; the market definition should be expanded to include these substitute product/areas.

[55] The relevant case law emphasises that the Commission should be cognisant of 'commercial realities' when defining, inter alia, the geographic dimension of a market. In Re Australia Meat Holdings, (1989) ATPR 40-932 at 50,011 and 50,092 it is stated that 'Any geographic market … must be one that corresponds to the commercial realities of the industry and represents an economically significant trade area. Because a geographic market determination looks to actual trade patterns, it is not required that geographical boundaries be drawn with exactitude…'

> … all competition or substitution does not cease at the outer boundaries of the market; the economy as a whole is a network of substitution possibilities in consumption and production; competition is a matter of degree.[56]

This suggests that even within a market the constraints imposed by competitors may differ greatly depending on the customer type, geographic location or other factors.

Part XIC of the Act does not require the Commission to precisely define the scope of relevant markets for the purpose of a declaration inquiry. In certain declaration inquiries, it may be sufficient to broadly identify the scope of the relevant markets likely to be affected by declaration. Accordingly, a market definition analysis under Part XIC of the Act should be seen in the context of shedding light on how declaration would promote competition rather than in the context of developing 'all purpose' market definitions.[57]

Determining the 'geographic dimension'

The Commission's Merger Guidelines (the Merger Guidelines) indicate that delineation of the relevant **geographic** market(s) involves the identification of the area or areas over which the merged firm and its rivals currently supply, or could supply, the relevant product and to which consumers can practically turn.

In principle, this approach involves starting with the geographic area (or areas) supplied by a merged firm, and gradually expanding this to incorporate sources of supply to which consumers would turn (*demand-side substitutability*) and firms which supply, or would supply, the relevant product into that area (*supply-side substitutability*) – in the event of a significant price rise, or equivalent exercise of market power, by the merged firm.

The Merger Guidelines also outline that the Commission has regard to a large number of factors in determining the geographic dimension. These include:[58]

- the convenience to customers of accessing alternative sources of supply;
- the costs of switching to alternative sources of supply; and
- the relative price levels and price movements of different geographic sources of supply.[59]

Approach in Part XIC declaration inquiries

To date, when framing the geographic scope of the relevant market(s), the Commission has generally (but not always) defined the geographic scope of relevant markets as 'national' in Part XIC matters. However, this approach may be

[56] *Re Tooth & Co Ltd* (1979) ATPR 40-113 at 18196-197.
[57] Refer to ACCC, *Telecommunications services – Declaration provisions – a guide to the declaration provisions of Part XIC of the Trade Practices Act*, 1999.
[58] The *Merger Guidelines 1999* (p. 36) also refer to the end use of product and potential substitutes, the physical and technical characteristics of product and potential substitutes, the views of past behaviour of buyers regarding substitution possibilities, the cost of switching production, and the views/business records and past behaviour of suppliers.
[59] ACCC, *Merger Guidelines*, June 1999, paragraph 5.62.

increasingly less tenable given the uneven roll-out of infrastructure competition across different geographic regions of Australia. There are at least two main reasons why ‘national’ markets have generally (but not always) been considered an appropriate basis for analysis in these assessments.

First, with respect to fixed-line telecommunications services, there are difficulties with traditional demand and supply-side substitutability analysis which could render derived market definitions analytically meaningless. For example, the opportunity for demand-side substitution is limited by the fact that the fixed-line infrastructure is physically connected to a household. A consumer is unlikely to move to another geographic area simply due to a price increase (or degradation of quality), particularly because (among other things) the cost of re-location will probably far outweigh any saving made on fixed-line services. The underlying end logic of demand-side substitutability in this context is that the appropriate geographic market scope is each individual household. However, such a definition may create practical difficulties in terms of data collection and analytical difficulties because the markets might be too narrow to assist meaningful analysis.

There may also be difficulties in applying supply-side substitutability analysis to fixed-line telecommunications services. For example, the nature of fixed-line networks, including the sunk and lumpy characteristics of investment and the long lead times often involved in deployment, raises the possibility that rivals will often have limited scope to quickly re-deploy supply to geographic areas in response to a non-transitory price increase, or the degradation of quality.

Second, the definition of ‘national’ markets has been consistent with the ‘commercial realities’ of the telecommunications industry such that this geographic scope has captured the competitive constraints in practice.

In this regard, Telstra remains the only telecommunications carrier with a ubiquitous fixed-line network, and it supplies a range of services via this network on a national basis. Further, past information available to the Commission has indicated that Telstra does not distinguish between different geographic areas within Australia when pricing many of its wholesale and retail services. The Commission acknowledges that Telstra’s decision to price certain services on an ‘averaged’ basis may have been influenced by the regulatory framework itself. Nonetheless, in the past the Commission has considered it appropriate to proceed using ‘national’ market definitions.

The Commission also notes that the practice of framing ‘national’ geographic markets has been broadly consistent with the approach adopted by a number of telecommunications regulators in overseas jurisdictions.

Re-assessing the ‘geographic dimension’ of markets

The uneven roll-out of competing infrastructure, and the uneven development of full-facilities and quasi-infrastructure competition in parts of Australia, raises the possibility that the competitive dynamics differ in discrete geographic regions. In other words, it raises the possibility that Telstra faces different competitive constraints depending on the type, intensity and magnitude of infrastructure competition in certain areas.[60] There are various reasons why infrastructure-based competition has developed unevenly (and why it may continue to do so):

- *population density* – sustainable entry is more likely in geographic areas where population density is higher, compared to sparsely populated metropolitan/regional areas, due to the potential for more significant economies of scale and density;

- *demographic factors* – factors unique to a particular area or region, such as the type of customer base and their average 'willingness to pay', may make sustainable entry more likely in certain areas, and less likely in others;

- *technical supply side issues* – technical factors such as the length of copper loops in certain exchanges may make sustainable entry more likely in certain areas; and

- *regulatory framework* – the current regulatory framework itself may have influenced the development of certain forms of competition (i.e. quasi-facilities competition).

The uneven development of different forms of infrastructure-based competition potentially has important implications for the appropriate geographic scope of markets, and therefore, for the assessment of competition in the relevant market(s). If competitive dynamics are substantially different in different geographic areas the case for maintaining a 'national' market scope for relevant markets is open to question.

A delineation of the geographic scope of relevant markets to more accurately reflect differing competitive dynamics is likely to assist the Commission to target declarations at geographic areas where competition is unlikely, and to remove the scope of declaration from areas where it is not required to promote the LTIE.

The Commission has, in certain cases, already explicitly recognised these factors in previous declaration decisions, and approached the market definition and LTIE analysis accordingly.

- *Domestic Transmission Capacity* – In April 2004, the Commission removed 14 capital-regional routes from the scope of the Transmission Capacity Service declaration.[61] This decision was reached on the basis that there was effective competition on these routes (three or more optical fibre providers). The remaining capital-regional routes remain within the scope of declaration.

- *Local Services Review* – In July 2006 the Commission re-affirmed its view that in the CBD areas of Sydney, Melbourne, Brisbane, Adelaide and Perth, there was sufficient alternative local access infrastructure and declared services, such as the ULLS, to provide a constraint on Telstra's prices for WLR and the LCS.

[60] That is, the competitive dynamics may be different depending on whether a competitor uses its own infrastructure entirely (facilities-based competition), accesses the incumbent's infrastructure for part of its service (quasi-facilities-based competition) or resells a service (resale competition).

[61] This decision also re-affirmed that the inter-capital transmission routes should remain outside the scope of declaration.

> Accordingly, it was determined that the relevant markets for WLR and LCS should be seen as national markets but excluding the five CBD areas.[62]

Consultation in June 2006

In its June 2006 position paper, the Commission sought interested parties' views on the appropriateness of maintaining geographic market definitions on a 'national' basis for the relevant markets identified in that report (and any other markets considered relevant). The Commission received limited feedback.

Telstra did not comment explicitly. However, at a general level it argued that regulation needs to be targeted at those areas where there are 'bottleneck hotspots only' and that the 'blanket approach to regulation' via the use of national market definitions will 'increase unnecessary regulatory costs'.[63] In a later submission, Telstra re-affirmed its view that the Commission should conduct (and regularly update) an infrastructure audit to improve its fact base on the extent and location of infrastructure across Australia. Further, Telstra suggested that the Commission should actively gather information on retail market offerings (service bundles and features), prices, cross-shareholdings of competitors, 'inter-industry tie-ups', infrastructure sharing arrangements and the influence of global equipment vendors.[64]

Optus argued that the Commission took a 'prudent and logical approach to identifying the markets relevant to its declaration inquiry into the ULL and PSTN OTA services', including the use of a 'national' market scope. Optus also argued that 'market definitions must be determined on a 'case-by-case basis'. For example, Optus noted the Commission's approach of adopting a narrow geographic market definition in the case of the WLR, where it removed wholesale regulation in certain CBD areas.

Proposed approach for geographic delineation

The Commission agrees that in light of emerging infrastructure investment at the customer access and quasi-infrastructure based levels, there is a need to obtain empirical data more systemically for future decisions under Part XIC of the Act.

As noted previously, in March 2007 the Commission released a proposed record-keeping-rule under which it will collect (and regularly update) information regarding the nature and location of competing infrastructure. This information will assist the Commission in future considerations of Part XIC matters, including its ability to geographically delineate markets where this is warranted by robust empirical evidence.

The Commission also accepts that market definition needs to be undertaken on a case-by-case basis, and that a decision on whether to geographically delineate markets more narrowly than on a 'national' basis will depend on the specifics of the service in question. Nonetheless, the Commission considers that there is merit in outlining a proposed framework under which the 'geographic dimension' of relevant markets will be considered for future Part XIC matters.

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62 ACCC, *Local Services Review*, July 2006, p. 32.
63 Telstra submission, July 2006, p. 3.
64 Telstra submission, September 2006, p. 10.

There is unlikely to be any single piece of information or test which will categorically determine whether it is appropriate to delineate markets more narrowly than on a 'national' basis, and if so, how they should be divided. These issues remain a matter of judgement and degree. Therefore, the Commission will integrate a diverse set of information to assist its analysis on this issue.

Recognising this, Ofcom (2006) has proposed that the definition of geographic markets might be best undertaken on the basis of 'homogeneity of competitive conditions' or discrete areas within which there are 'common pricing constraints'.[65] Under this type of approach, it would be appropriate to aggregate together those discrete geographic areas which have common pricing constraints (or exhibit similar competitive conditions). This approach is broadly consistent with past practices of the Commission, the Federal Communications Commission and recent work undertaken by the CRTC in Canada on this issue.

When assessing the appropriate geographic scope of a market on this basis there are two broad issues for consideration:[66]

- the geographic unit that should be used; and
- the factors that should be used to identify/determine 'similar' or 'homogenous' competitive conditions.

The geographic unit used

Ofcom considers that for any geographic market assessment it is necessary to define the geographic units (or 'building blocks') to be used. Ideally, the geographic unit selected needs to be small enough to group together areas which exhibit homogenous competitive characteristics. In other words, it should not be so large as to arbitrarily mix together areas which exhibit heterogenous competitive characteristics.

In this context, there is an obvious trade-off between 'granularity and practicality'. For example, while highly disaggregated data which allows for the accurate grouping together of homogenous areas is likely to be desirable, there may be practical difficulties or significant costs in actually collecting these data.

In an Australian context, there are a number of potential 'geographic units' that could be used to guide an analysis of geographic market scope in fixed-line markets:

- Households (approximately 7.7 million);[67]
- Exchanges (5,092 Telstra exchanges in Australia);[68]

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65 Ofcom, *Review of wholesale broadband access markets 2006/07*, p. 39.

66 Ofcom, *Review of wholesale broadband access markets 2006/07*, p. 41.

67 ABS, 2007 Yearbook Australia, p. 222. http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/D6C6B02D31617DA4CA25726D000467A6/$File/13010_2007.pdf

68 According to Map Info data, Telstra operates 5,092 local exchanges across Australia. Using the Map Info program it is possible to get information on the number of customers served by each local exchange.

- Pricing band identified by Telstra (four bands determined in Telstra's pricing structure for ULLS – 1,2,3,4); or

- CBD, metropolitan and rural & regional split (3 areas).

The potential advantages and disadvantages of each are canvassed below.

Household level – The use of households as the geographic unit for analysis would, in principle, support highly detailed assessments of geographic market scope. If implemented accurately this approach would avoid the inadvertent mixing of households that face different competitive conditions.[69] However, there are likely to be severe practical difficulties in this approach (e.g. obtaining and collating accurate data).

Exchange level – In certain cases, it is necessary to distinguish between an 'exchange service area' (ESA) and the number of 'exchanges'. This is because there may be multiple exchanges within an ESA.

The potential advantages of using the 'exchange' as the geographic unit is that it may closely reflect the extent to which there are different competitive conditions in different geographic regions, compared to arbitrary delineations between different geographic levels such as between CBD, metropolitan and rural & regional areas.

Declaration of the ULLS and LSS has allowed competitors to install their own DSLAMs in Telstra exchanges in order to provide retail broadband (and in some cases retail voice) services to end-users. However, as already indicated, the information available suggests that quasi-facilities infrastructure has developed unevenly. One of the important factors influencing an access seekers decision to install DSLAMs in a particular exchange is the number of potential customers connected to that exchange. This will influence the available 'economies of density'. Once a carrier has installed equipment in an exchange, it is likely to have a strong incentive to maximise the number of customers that it services from that exchange in order to spread its fixed costs over the widest possible base.

An approach that focuses on aggregating exchanges that exhibit 'like' competitive dynamics (e.g. those with significant degree of quasi-facilities entry as versus those with no entry) may more accurately capture the differences in competitive dynamics between geographic regions.

That said, a potential disadvantage with this approach is that it might be difficult to capture alternative infrastructure platforms that exist within a local exchange area and are used to provide downstream services. For example, Telstra, Optus, TransACT and Neighbourhood Cable operate HFC networks which cover varying footprints of customers in parts of Australia. These networks have the capability of providing a range of services to end-users, including voice and broadband services. There is also increasing evidence of a range of competing local access networks in CBD areas. These alternative forms of infrastructure, however, may not easily accord with the area covered by an exchange.

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69 Ofcom, *Review of the wholesale broadband access markets 2006/07*, p. 42.

***Telstra bands 1-4* –** As part of its ULLS pricing, Telstra divides Australia into four different pricing bands (1 to 4). Band 1 covers the most densely populated CBD areas, while Band 4 covers sparsely populated rural and regional areas in Australia.

In the past these geographic delineations have been used for the purpose of reviewing existing service declarations and setting prices. However, there is little information on how these different bands were delineated by Telstra to know whether they accurately capture differing competitive dynamics across the different bands.

***CBD, Metro, R&R split* –** A more simplified approach may be to distinguish between broad geographic areas such as CBDs, metropolitan areas and rural & regional areas. While this is an attractive option in terms of practicality, it will not necessarily capture different competitive dynamics within these areas (e.g. two different metropolitan areas that have different population densities, customer demographics or supply-side constraints). While these broad delineations might ultimately reflect the geographic delineations considered appropriate, they are not a robust starting point for this analysis.

***Commission's view* –** The Commission acknowledges that there is an obvious trade-off between granularity and practicality in terms of the geographic unit to be used in considering the geographic delineation of markets, as there is with access pricing. While there is some attraction in using existing delineation units such as CBD/metro/R&R or Telstra Band 1-4 pricing structure, generally speaking, and without further information, the Commission is not satisfied that these approaches would necessarily accurately capture the extent to which there are differing competitive dynamics in particular geographic regions.

For this reason, the Commission considers that the most desirable and analytically meaningful approach in relation to the fixed-line sector would be to consider geographic units at the exchange level. This is particularly because a main driver for a shift in competitive dynamics across discrete geographic regions is likely to be the take-up (and potential for take-up) of ULLS and/or LSS services, and that the strategies of access seekers in terms of the areas they target is likely to be heavily influenced by the characteristics of an exchange (i.e. no. of customers connected etc).

Determining 'similar' competitive conditions across units

Another important consideration is the basis upon which different geographic areas will be aggregated together as the same 'class' of market because they have 'similar' competitive conditions. Importantly, this is not to suggest that such areas would strictly form part of the same geographic market at the retail service level. Clearly, there are likely to be circumstances where there is limited demand and supply-side substitutability between particular geographic regions – even in the event that they tend to exhibit similar competitive conditions. Rather, this aggregation approach is simply to suggest that these 'like' geographic units could warrant a similar regulatory approach at the wholesale level (e.g. declaration of a particular service in these areas).

There is a range of possible 'indicators' that, in principle could be used to aggregate exchange areas based on the fact that they exhibit 'similar' competitive characteristics. These include:

- structural factors such as the number of facilities-based competitors that operate in a local exchange (e.g. if there are 3 or more, these local exchanges would be considered a separate market from those where there are 2 or less);

- population density thresholds (e.g. if there are 10,000 or more customers connected to a local exchange, these could be considered a separate market from those where there are less than 10,000 customers; and/or

- evidence of price discrimination or price correlation between different geographic regions (e.g. if there is evidence that Telstra consistently offer different prices for homogeneous services across different local exchange areas, this may be an indication of where geographic market boundaries lie). Some further detail on this point is provided in Appendix 4.

While the aggregation exercise is a useful one in terms of practicality in order to target *ex ante* regulation at the wholesale level in areas where it is required to promote the LTIE, it may first be appropriate to conduct an assessment of the state of competition within the relevant geographic units (in this case each exchange area) – and specifically, what type of thresholds are likely to be an appropriate basis with which to geographically delineate markets. This is because the thresholds or evidence used in order to geographically delineate markets takes into account similar factors that will also be indicative of the state of competition in those markets.

The next section considers the factors that the Commission will have regard to in assessing the state of competition in the relevant markets.

Approach to the assessment of competition

Once the relevant markets have been defined, the next logical step in the analysis is to assess the state of competition in the relevant markets. Importantly, assessing the state of competition is not a static analysis limited to a description of current conditions and behaviour. Rather, it should also take into account dynamic factors such as the potential for sustainable competition to emerge and the extent to which the threat of entry (or expansion by existing suppliers) constrains pricing and output decisions.

If competition in the relevant markets is determined to be effective, then continued declaration of the eligible service is not likely to have an effect in terms of promoting further competition or the LTIE. In this regard the Explanatory Memorandum states:

> … it is not intended that the access regime embodied in this Part impose regulated access where existing market conditions already provide for the competitive supply of services. In considering whether a thing will promote competition, consideration will need to be given to the existing levels of competition in the markets to which the thing relates.[70]

This section sets out the factors to which the Commission will have regard to in determining whether there is effective competition in the relevant markets. First, however, it outlines the concept of ‘effective competition’.

[70] Explanatory Memorandum for the Trade Practices Amendment (Telecommunications) Bill 1996 – item 6, proposed s. 152AB.

The concept of ‘effective competition’

At the theoretical level, the concept of ‘perfect competition’ describes a market structure in which no producer or consumer has the market power to influence prices. Economic theory suggests that perfectly competitive markets have a large number of buyers and sellers, goods/services are perfect substitutes, all firms and consumers have complete knowledge about the pricing/output decisions of others and all firms can freely enter or exit the relevant market.

In actuality though, these conditions are rarely found in any market or industry – even those in which competition between rival firms is relatively intense. It is certainly not a realistic threshold for fixed-line telecommunications markets, given that:

- many services are provided by a small number of providers, in a situation where the incumbent as owner of the only ubiquitous local loop remains the predominant provider of most (if not all) essential inputs;

- the industry is characterised by economies of scale, scope and density over large ranges of output;

- services are often differentiated from each other; and

- there is constantly evolving service types and network technologies.

The concept of ‘effective competition’ recognises the practical limitations of the theory of perfect competition. The concept of ‘effective competition’ is more properly characterised as a process of rivalry between firms that constrains market participants to supply goods and services to consumers of a given quality at efficient costs.

The Commission considers that, where it is efficient, facilities based competition is more likely to be ‘effective’ (and therefore promote the LTIE) because rivals are able to differentiate their services and compete more vigorously across greater elements of the network (and supply) chain. It is also more likely to produce enduring benefits because competitors that have invested in their own infrastructure are more likely to remain in the market (because of high sunk costs).

Factors which are relevant to a competition assessment

When assessing the effectiveness of competition in a particular market, the Commission will examine a range of both structural and behavioural characteristics. This includes (but is not limited to) factors such as:

- structural factors, including the level of concentration in the market;

- the potential for the development of competition in the market (including planned entry, the size of the addressable market and the existence and height of barriers to entry, expansion or exit in the relevant markets);

- the dynamic characteristics of markets, including growth, innovation and product differentiation, as well as changes in costs and prices over time; and

- the nature and extent of vertical integration in the market.

Some further detail on each of these factors is provided below.

Structural factors

'Structural factors' are an important consideration in assessing the nature and extend of competition in relevant markets. Structural factors of relevance include:

- the number of competing operators within a market, and their respective shares of the market (market concentration);
- the nature of competition, including the type of competitor (i.e. are competitors re-sale, quasi-facilities or full-facilities based competitors) and the technology they employ; and
- the underlying costs of service provision.

Market concentration

The level of market concentration is one often cited indicator of the (likely) degree of competition within a market. Other things equal, the more suppliers within a market, the less likely it is that any one has sufficient market share so as to influence the prices paid by consumers. That said, there may be markets that at first instance appear to be highly competitive due to the number of suppliers within each market. However, upon closer inspection, it may actually be that one or two of these suppliers control a large proportion of the market such that they are able to influence the prices paid by consumers in ways not expected in competitive markets

High concentration levels do not necessarily mean that competition is ineffective. Even if the number of participants in a market is low, their ability to extract above-normal economic profits from this market may be constrained by the threat of potential entry by new suppliers. Therefore, among other things, a careful consideration of the potential for competition developing (including an assessment of barriers to entry or expansion) is critical (see next sections).

Thus, while market concentration is an important element of any competition assessment, it is only a first step in competition analysis primarily because it does not necessarily reveal (in and of itself) that firms holding such market positions will be able to act to the detriment of the competitive process. The converse is also relevant. A focus on possible increases in market shares of smaller competitors does not necessarily suggest that they would be in a position to effectively constrain the pricing and output decisions of larger firms.

Nature of competition

As noted previously, the nature of competition may influence the extent to which a service can be differentiated, in both price and non-price terms, from an incumbent provider.

Other things equal, the Commission would expect that full-facilities based and quasi-facilities based competitors are more likely to be able to differentiate their services, compared to resale competitors. This may suggest that the competitive intensity in regions where Telstra faces some level of infrastructure competition is greater than in regions where it does not. Moreover, in this position paper, the Commission has stated its view that where it does not result in the economically inefficient duplication of infrastructure, facilities-based competition is more likely to promote the LTIE.

The Commission also notes that in certain cases, the type of technology employed may have an important bearing on a competition assessment. For example, if service providers in a market employ different technological delivery platforms that do not provide them with the same ability to offer levels of quality/prices to end-users at the downstream level, this will be an important factor to consider in the competition assessment.

The factors discussed above suggest that the nature of competition is an important consideration for any competition assessment.

Indeed, the Commission has explicitly considered and set out such factors in previous declaration decisions. For example, in its final decision in relation to the declared Transmission Capacity Service (2004), the Commission took the view that the declaration should be removed on transmission routes where there were at least *three* optical fibre providers, on the basis that this served as evidence of sufficient competition/contestability to warrant removal of that route from declaration. In this decision, the Commission reached the view that although there were suppliers in the market utilising alternative technologies such as microwave, satellite and submarine cable, transmission via these technologies was not an adequate substitute for optical fibre in all cases.[71]

Despite this, it should not be assumed that this type of structural threshold would necessarily be appropriate when reviewing other service declarations. For one thing, the use of prescriptive thresholds may in fact influence the investment decisions taken by existing or potential entrants in the relevant markets.

Perhaps more fundamentally, an examination of the structural factors cited above, such as market concentration and the nature of existing competition is based on *actual* entry. These factors do not explicitly take account of the *potential for* entry. In certain circumstances, it may be appropriate for the Commission to place weight on evidence of the potential for entry. This is discussed in more detail in the next two sections.

Potential for competition

A variety of other factors may guide an assessment of whether there is likely to be the *potential for* effective competition developing in particular areas. These include:

- planned entry;
- the size of addressable market (including population density, demographic factors and customer switching possibilities); and

[71] ACCC, Final Decision on Transmission Capacity Service, p. 27.

- the absence of significant barriers to entry or expansion.

Planned entry

Planned investment in infrastructure by competitors may be a relevant factor to account for in a competition assessment. For example, in the case of the ULLS and LSS, competitors are continuing to expand the reach of their quasi-infrastructure networks by installing DSLAMs in certain exchanges.

That said, prospective investment plans must be viewed somewhat cautiously given the potential for exogenous factors (i.e. merger activity, lack of finance, global downturn) to alter the likelihood of actual investment. The Commission will be more inclined to take account of prospective investment plans where they are supported by evidence of a firm timetable, or other evidence which provides a solid basis to form the view that the investment will take place in the short to medium term.

Size of the addressable market

Arguably, one of the most important factors in determining whether effective competition is likely to be a viable possibility is the size of the 'addressable market'.[72]

In fixed-line markets, the size of an addressable market would appear to be closely linked to measures of population or household density within a local exchange area. This is because the level of population density within a local exchange area will influence the economies of scale or density that could be realised by an infrastructure competitor. Other things being equal, in areas of relatively higher population density, it is likely to be more viable for competitors to invest in and develop their own infrastructure, because they could reasonably expect to recover their fixed costs over a broader number of end-users in these areas – thus lowering their per-unit costs as well as the *a priori* risks of investment.

It is widely accepted that Australia has a relatively low population density (persons per square kilometer) by world standards. It is also widely accepted that population density levels vary significantly in different parts of Australia – both between the states and territories, and between CBD, metropolitan and rural areas. The following table shows the difference in population density between states in Australia.

Table 4.1 – Population densities in Australian states and territories

REGION	PERSONS PER KM^2
ACT	137.9
VIC	21.8
NSW	8.4
TAS	7.1
QLD	2.2
SA	1.6
WA	0.8
NT	0.1

Source: Australian Bureau of Statistics, Regional Population Growth 2003-04

72 In this context, an addressable market is defined as the number of customers that can potentially be served by a competitor's business.

As shown, the ACT has the highest population density with 137.9 people per square kilometre, followed by Victoria with 21.8 people per square kilometre. At the other end of the scale, the NT has 0.1 people per square kilometre.

The following table compares population density in selected CBD, metropolitan and regional areas.

Table 4.2 – Population densities in CBD and (selected) metropolitan and regional centres

CBD AREAS	POP DEN PER KM^2	METRO AREAS	POP DEN PER KM^2	REGIONAL AREAS	POP DEN PER KM^2
Sydney-Central	8,279.1	Waverley (S)	6,661.2	Mount Gambier	884.2
Melbourne-Inner	4,622.2	Port Phillip – St Kilda (M)	5,605.7	Bundaberg	479.7
Sydney-South	4,473.1	Leichhardt (S)	4,846.9	Bunbury	386.6
Brisbane - Inner	3,304.4	Richmond (M)	3,993.9	Wollongong	251.6
Brisbane - Remainder	2,150.2	Brighton (M)	2,610.4	Wagga	241.8
Melbourne-S’bank/Dock	2,025.2	Bankstown (S)	2,283.5	Cairns	246.5
Sydney-Inner	2,024.1	Parramatta (S)	2,476.6	Bendigo	168.6
Melbourne-Remainder	1,462.9	Subiaco (P)	2,348.8	Newcastle	125.0
Darwin - Inner	968.7	Salisbury – Inner North (A)	2.307.3	Dubbo	107.8
Perth-Remainder	859.1	East Fremantle	2,192.0	Coober Pedy	28.5
Hobart-Inner	718.7	Claremont	1,857.0	Albury	26.1
Perth-Inner	639.1	Frankston City	918.4	Gippsland	15.0
Hobart-Remainder	623.3	Sunshine Coast (Q)	453.3	Darling Downs	2.4
Canberra	446.4	Geelong City	424.2	Mackay	1.6
		Gold Coast	170.6	Far North QLD	0.9
		Ballarat City	117.8		
		Mildura	97.4		

Source: Australian Bureau of Statistics, Regional Population Growth 2003-04

In fixed line markets there is empirical evidence that full-facilities or quasi-facilities based competition has emerged in areas with relatively higher levels of population density. This is likely to be because entry into these markets involves high fixed and sunk costs. For example, competing local access networks (i.e. full-facilities based competition) have emerged in the five main CBD areas in Australia, where population density is typically higher and corporate customers are more common. Another example is TransACT which has developed a cable network in the ACT (notably, the state with the highest population density).

While CBD areas are typically thought to have much higher population densities than metropolitan areas, certain metropolitan areas have very high levels of population density. There is, however, significant variation between population density levels across different metropolitan/regional areas.

Population density is likely to be an important factor in determining the size of the addressable market, although it is unlikely to be the only factor which will explain the emergence of infrastructure-based competition in particular areas.

For instance, the Commission notes that Neighbourhood Cable has deployed cable networks in Mildura, Ballarat and Geelong which is capable of providing end-to-end services to end-users. However, as shown in the table above, these areas do not necessarily have high levels of population density when compared to other metropolitan/regional areas.

Other factors which may affect the size of the addressable market, and therefore the prospects of sustainable and efficient infrastructure competition emerging in particular areas, include:

- *demographic factors* – these may impact on the size of the market in 'revenue' terms. Quite obviously, geographic areas with anticipated higher 'average spend' per customer would be relatively more attractive than areas with low average spend; and

- *switching possibilities for existing customers* – when customers are locked into long-term fixed contracts which would prevent a competitor from effectively gaining these customers, other things equal, this is likely to reduce the size of the addressable market from an entrant's perspective.

Barriers to entry, expansion and exit

In essence, barriers to entry and expansion are asymmetries between incumbents and potential entrants.

Barriers to entry are disadvantages or impediments facing potential entrants to a market that enable incumbents to increase prices without attracting entry.

Barriers to expansion are disadvantages or impediments facing existing service providers already operating in particular market segments that enable incumbents to increase prices or degrade serviceability without attracting the expansion into that segment by those facing the disadvantage.

Barriers to exit may be characterised as costs or impediments which an existing entrant already operating in the market would incur if they decided to exit the market. For example, 'exit fees and charges' at the local exchange level, the write-off of productive assets or the loss of customer goodwill may represent barriers to exit. Barriers to exit may influence the extent to which an existing entrant would stay and compete in a particular market and also act as a disincentive to enter the market in the first place.

To be relevant for the purposes of a competition assessment, these types of barriers do not necessarily need to be insurmountable. That is, for example in the case of barriers to entry or expansion, they need not prohibit entry or expansion in all possible circumstances and/or over an indefinite period of time. Rather, to be a relevant consideration they simply need to represent an impediment for rivals (or potential rivals) which places rivals at a disadvantage. This disadvantage need only be for a limited period of time, to provide the incumbent with the opportunity to raise prices or degrade quality without attracting sufficient or fast enough entry or expansion from rivals to make the price increase unprofitable.

In telecommunications markets barriers to entry and/or expansion may exist for a wide variety of reasons. Some of these are listed below:

- technical supply-side constraints which may dull the viability of technically efficient duplication of infrastructure (such as long copper loops);
- sunk costs;
- economies of scale and scope;
- legal and regulatory barriers;
- product differentiation and brand loyalty;
- customer fixed term contracts;
- the threat of retaliatory action by incumbents; or
- other *non-price factors* such as the timeliness of installation, maintenance and fault rectification services provided by an access provider, or the ability for an entrant to market their product to a discreet community areas.

In examining the significance of barriers to entry, the Commission will generally consider the extent to which the barriers to entry will deter efficient effective quasi facilities based or facilities based entry. The Commission considers that effective entry is that which is likely to have a market impact by constraining the incumbent(s) to behave competitively.

Overall, this section highlights that evidence of *actual* competitor entry is not required in all circumstances to be satisfied that effective competition exists within a particular market, or market segment – particularly where it can be convincingly demonstrated that there are no effective barriers to entry or expansion in the relevant market. Nonetheless, evidence of actual entry will often be a useful starting point for any analysis.

Dynamic characteristics of markets

The Commission acknowledges that the structural features of relevant markets may change over time. Changing market dynamics may be due to factors such as market growth, technological development and the convergence of products and markets, and/or changes in prices and costs over time (sometimes these factors will be related).

The rapid technological innovation in telecommunications markets can lead to effective competition if the new technologies offer the prospect of commercially viable investments in infrastructure, which in turn can constrain the market power of the incumbent. Markets which are characterised by rapid technological innovation and growth are more likely to see new entry, the erosion of market power and greater competition over time. That said, the time period over which these developments will occur is a highlight relevant consideration.

The Commission may consider factors such as changes in the levels of growth and revenue, as well as 'average revenue per user' (ARPU) information over time. If such information suggests that a market is growing, new entry or expansion might be more feasible.

In principle, prices are said to be at competitive levels when they are close to or at cost, allowing for a normal rate of return. In a competitive market, where the number of units consumed increases over time, it is expected that providers will experience economies of scale. This reduced cost per unit is then expected to be reflected in a lower price per unit for the service supplied.

In examining price conduct of market participants, the Commission may look at changes in prices of services over time, the profitability of participants over time and also the degree of product differentiation within the particular market.

The nature and extent of vertical integration in the market

Vertical integration in telecommunications markets raises issues of price and non-price constraints on the ability of new entrants to compete effectively in specific downstream market segments.

The price issues arise from the ability of the incumbent to raise the prices of providing access its network which exceeds efficient costs.

The non-price issues arise from the incentive and technical ability of the incumbent to limit access to its facilities. This has been referred to as 'sabotage' in the relevant literature and is related to some of the non-price issues that were raised in the 'barriers to entry, expansion and exit' section.

Where relevant, the Commission will take account such factors in undertaking any competition assessment.

Conclusion

Overall, the Commission considers that in its forward-looking approach to the *ex ante* regulation of fixed-line services, it is appropriate to consider the appropriate geographic dimension of the relevant market(s) for consideration. The Commission has signalled that it intends to undertaker a more systematic collection of information on telecommunications infrastructure to assist its analysis in this regard.

The Commission reiterates that there is unlikely to be any single piece of information or test which will categorically determine whether it is appropriate to delineate markets more narrowly than on a 'national' basis, and if so, how they should be split.

As a result, the Commission intends to integrate a diverse set of information when undertaking its market definition exercise, and the related competition assessment that will ensue– including a rigorous assessment of not only the state of *actual* competition, but also the *potential for* effective competition developing over a period of time. In reviewing existing service declarations, such an approach will assist the Commission to determine whether ongoing declaration of particular services is required to promote the LTIE.

5. LSS Discussion Paper

The purpose of this chapter is to commence a review of the declared Line Sharing Services (LSS) which expires in October 2007.[73] The focus of this inquiry is whether re-declaration of the LSS is required to promote the LTIE. The inquiry will also consider the pricing principles, and any indicative prices, that should apply to the LSS in the event that it is re-declared. See the Executive Summary for the relevant details, including the proposed timetable for this inquiry.

Background

What is Line Sharing?

Line sharing is where two separate carriers provide separate services over a single metallic pair (or 'line'). A metallic pair can support a broad range of services by utilising the full spectrum of the line. Traditionally, only 3.1 kHz, a relatively small part of a metallic pair's useable spectrum, was used to provide voice services. Until recently, the rest of the spectrum remained unused. With the development of xDSL technology,[74] the remaining part of the spectrum can now be used to provide a variety of broadband services. This allows a combination of low-speed and high-speed services to be provided on a single line at the same time.

Under line sharing, the metallic line spectrum is normally split (or shared) so that one carrier or service provider provides the voice services over the line, while another carrier provides high-speed data services through the use of its own xDSL technology. For example, if Telstra is the access provider, it could deliver voice services to end-users, while a second carrier simultaneously provides high-speed data services (such as ADSL) over the same copper line.

This is also sometimes referred to as spectral unbundling, spectrum sharing or the shared local loop in overseas jurisdictions. Ofcom, the UK regulator, refers to the LSS as the shared local loop.

Previous LSS declaration inquiry (2001-02)

In 1999, during the Local Telecommunications Services Inquiry,[75] the Commission examined the concept of 'line sharing' when considering the case for declaration of the ULLS. At that time, however, the Commission expressed the view that declaration of the ULLS should be reviewed separately to the LSS. In the declaration inquiry Final Report the Commission stated:

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73 Under section 152ALA of the Act, the Commission is required to commence a declaration inquiry within 12 months prior to its expiry date.

74 xDSL refers to the 'family' of digital subscriber line services (e.g. ADSL=Asymmetric DSL, HDSL = High bit rate (or high-speed) DSL etc). For instance, ADSL uses a dedicated line from the customer premises to a network exchange to provide an 'always on' data service with downstream access speeds capable of over 1.5 Mbits per second and upstream speeds typically one quarter of the downstream rate. At the same time an independent public switched telecommunications network (PSTN) dial-up voice service is supported over the same line.

75 ACCC, *Local Telecommunications Services – Inquiry Report*, July 1999

> Access seekers may, however, choose to "split" particular services (eg. voice and data services) and contract with a carrier for the transmission of particular types of services (eg. voice services) over that carrier's network. The wholesale arrangements would be matters for resolution by means of commercial negotiations and are not specified in the service description for the unconditioned local loop.[76]

Following the declaration of the ULLS, there were requests from participants in the telecommunications industry for LSS to be declared.[77]

In September 2001, the Commission announced that it would conduct a public inquiry into whether or not a line sharing service should be declared under Part XIC of the Act. The Commission considered a particular form of line sharing which involved an access provider providing a voice-band PSTN service to an end-user, while providing access to another carrier (the access seeker) to simultaneously provide services to the same end-user over the high-frequency portion of the metallic wire.

In August 2002, the Commission 'declared' the LSS on the basis that such a declaration would be likely to be in the LTIE.[78] Appendix 3 contains the relevant LSS service description. A summary of the Commission's reasoning for deciding to declare the LSS is outlined below.

Promotion of competition – The Commission was not convinced that, as the sole supplier of the LSS, Telstra's commercially agreed prices were necessarily consistent (or in the absence of declaration would remain consistent) with those that would best promote the LTIE. It also noted the concerns of some access seekers with regard to the non-price terms and conditions associated with the provision of Telstra's LSS.

The Commission formed the view that to the extent that declaration can help ensure more competitive terms and conditions being set for the LSS, it has the potential to preserve competition in the downstream markets for 'high-speed data services' as it would enable access seekers to compete with Telstra in downstream markets on a more even footing. The Commission considered that declaration of the LSS would have little or no impact on local telephony markets in the market environment that existed at that time;

> … whilst declaring a LSS may engender a migration of access seekers from using the already declared ULLS to provide high-speed data services to end-users, this is unlikely to affect competition in voice telephony markets. This is because few, if any, access seekers are currently using the full ULLS to provide voice services to end-users.[79]

Any-to-any connectivity – the Commission considered that declaration of a LSS would have no direct impact on any-to-any connectivity of telecommunications services.

Efficient investment – the Commission considered that, to the extent that the relevant pricing principles would enable access providers to recover the full costs of the

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[76] Ibid, para 3.4.5, p.16

[77] On 19 April 2001 Cable and Wirless Optus Limited (Optus) sent a submission to the Commission outlining why the LSS should be declared and also sent a proposal to the TAF at the same time. On 4 September 2001, the TAF advised the Commission that it could not reach consensus on whether the LSS should be declared. The TAF referred the matter to the Commission.

[78] ACCC, *LSS – Final decision on whether or not a LSS should be declared under Part XIC of the Trade Practices Act 1974*, August 2002, p. vi.

[79] Ibid.

providing LSS (both LSS-specific and the line costs over which the LSS is provided), declaration would be likely to encourage efficient investment in telecommunications infrastructure by both Telstra and access seekers.

Overall, the Commission believed that declaration of the LSS would be likely to promote the LTIE.

Pricing Principles – The Commission noted that its pricing principles suggested that efficiency in use may be better promoted under a pricing principle where some allocation of line costs was included in the price of a LSS. However, the Commission also noted that Telstra already appeared to be fully recovering its line costs through revenues it acquired through other sources (including line rental charges, mark-ups on the price of other retail services provided over its PSTN network and the access deficit contribution included in the price of other interconnection sources). Since 2000, Telstra has significantly increased line rental prices paid by consumers and businesses (such as from $11.65 to $27.23 (GST exclusive) for the majority of its retail residential customers) to recover line costs from line rental revenues.

Developments since 2002

LSS take-up since 2002

Under the current regulatory framework, access seekers are able to combine the LSS with their own infrastructure (i.e. DSLAMs) to provide high-speed data services to end-users. In effect, they become quasi-infrastructure based competitors. The ULLS provides access seekers with a similar capability, although in addition to this they are able to utilise the voice-band frequency of the copper line. The Commission notes that the ULLS (July 1999) was declared almost three years prior to the LSS service (August 2002).

Further detail on the take-up of ULLS and LSS services and the extent of quasi-infrastructure competition was provided in Chapter 2.

Pricing of LSS services

A number of developments have taken place since the LSS was declared in 2002. These developments have largely centred on, and have implications for, the terms and conditions upon which access seekers are able to purchase the LSS from Telstra. These developments are first summarised in the table below, and then discussed in more detail.

Table 5.1: Chronological summary of developments

DATE	ISSUE
December 2004	Telstra lodges LSS undertaking
January 2005	Primus notifies the Commission of an access dispute
November 2005	Chime Communications (iiNet) notifies the Commission of an access dispute
December 2005	Commission rejects Telstra undertaking
January 2006	Telstra challenges the Commission's undertaking decision at the Australian Competition Tribunal
April 2006	Request Broadband notifies the Commission of an access dispute

June 2006	The Australian Competition Tribunal upholds the Commission's decision
November 2006	Amcom notifies the Commission of an access dispute
November 2006	Adam Internet notifies the Commission of an access dispute
November 2006	Agile Communications notifies the Commission of an access dispute
January-February 2007	The Commission publishes interim determinations in three LSS access disputes noting a monthly price of $3.20.
January 2007	Primus notifies the Commission of an access dispute
January 2007	Telstra lodges High Court challenge

Telstra's LSS undertakings

In December 2004, Telstra lodged an undertaking with the Commission on the terms and conditions under which it proposed to supply the ULLS and LSS services to access seekers. The LSS undertaking related to the 'connection and disconnection' charges and also 'monthly charges' proposed by Telstra.

In December 2005, the Commission released its final decision with respect to the 'monthly charges' proposed by Telstra for the ULLS and LSS. Telstra's proposed charges included LSS-specific costs which were unitised across only to LSS lines. Telstra's proposed monthly charge also included a network charge component.

The Commission rejected this undertaking for the following main reasons:

- the recovery of LSS specific costs over a broader range of services than proposed by Telstra was appropriate and consistent with the relevant statutory criteria;[80]

- even if it were found appropriate that LSS specific costs should continue, at least for the time being, to be recovered only from LSS lines, due to Telstra's revised demand estimates Telstra's proposed charges for this component were unreasonably high; and

- the recovery of line related costs in the LSS monthly charges was inconsistent with the relevant statutory criteria given current prices for other services provided by Telstra over the CAN.

In April 2006, the Commission released its final decision with respect to Telstra's proposed connection and disconnection charges for the LSS. The Commission's decision was to reject this undertaking on the basis that:

- Telstra's proposed LSS connection price was not reasonable; and

- there were limited circumstances where a separate disconnection charge would be warranted.

In January 2006, Telstra appealed the decision to reject the 'LSS monthly charges' undertakings to the Australian Competition Tribunal. The Tribunal re-affirmed the decision to reject this undertaking. In also finding that Telstra's proposed granular

[80] The Commission had not at that stage come to a definitive view on the relevant broadened base (though it should be pooled at least over all DSL lines), as on any reasonable definition of such a base the LSS specific cost component of the LSS monthly charge would be significantly below Telstra's claimed amount.

approach to cost allocation was not reasonable, the Tribunal adopted the pooling approach as the comparator. In discussing the likely effect on competition of these two approaches to cost allocation, the Tribunal stated that:

> . . . it is helpful in the present analysis to note that spreading the LSS-specific costs over a broader range of services would be more likely to promote competition between providers of those services, subject to those costs being pooled with other specific costs relevant to the provision of DSL services in downstream markets (eg Telstra's own internal costs of a nature similar to those of providing the LSS and ULLS-specific costs). This will ensure that all providers of DSL services using Telstra's CAN would face the same non-retailing costs of providing their services.[81]

The Tribunal went on to compare these two approaches to cost allocation against each of the other relevant criteria, and concluded that:

> On balance, we do not consider that allocating costs across only LSS lines is likely to give rise to a per unit cost estimate for providing the LSS (and a charge determined in reliance upon this cost estimate) that is reasonable. Allocation of costs on this basis is unlikely to:
>
> - be in the interests of access seekers that have a right to use the declared service;
> - promote competition between Telstra and other service providers that use access to the LSS to provide DSL services;
> - promote productive and dynamic efficiency; and
> - promote efficient investment in the infrastructure used to provide listed services.[82]

Is declaration of the LSS required to promote competition?

In determining whether a service should be declared, sub-section 152AB(2) of the Act requires the Commission to consider whether declaration is likely to promote competition in markets for carriage services and services supplied by means of carriage services.

In the 2002 inquiry, the logical analytical sequence applied was to consider:

- the 'state of competition' in the relevant markets in a scenario where the LSS was not declared; and

- whether declaration of the LSS would be likely promote competition in the relevant market(s) and the extent to which this is likely to occur.

The current context is somewhat different. The LSS has been declared since 2002. For this reason, the key question now facing the Commission is whether the LSS declaration is still required to promote competition in the relevant markets (including the relevant downstream markets). This involves comparing a situation where the LSS remains declared, to a situation where the LSS declaration is removed.

Currently, firms have at least four broad options available to them at the wholesale level in order to provide downstream data and/or voice services to end-users at the retail level.

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81 Re Telstra Corporation Ltd ACompT 4 [2006] at [150])
82 Re Telstra Corporation Ltd ACompT 4 [2006] at [162])

Table 5.2: Options for supplying retail data and/or voice services.

RETAIL SERVICES PROVIDED	VOICE	DATA	LINE RENTAL
Option 1	Telstra or another provider supplies voice calls to end-user. OR Access seeker obtains LCS and PSTN OTA services from Telstra to supply voice calls to end user.	Access seeker obtain LSS and supplies broadband to end-user.	Telstra or another provider supplies voice-capable line rental to end-user. OR Access seeker obtains WLR service from Telstra and re-sells line rental to the end-user.
Option 2	Access seeker obtains ULLS and supplies voice calls to end-user.	Access seeker obtains ULLS and supplies broadband to end-user.	Access seeker obtains ULLS and provides voice-capable line rental to end-user.
Option 3	Telstra or another provider supplies voice calls to end-user. OR Access seeker obtains LCS and PSTN OTA services from Telstra and re-sells voice calls to end user.	Access seeker obtains commercially priced xDSL wholesale service from Telstra (or another provider) and re-sells this to the end-user.	Telstra or another provider supplies voice-capable line rental to end-user. OR Access seeker obtains WLR service from Telstra and re-sells line rental to the end-user.
Option 4	Service provider installs end-to-end infrastructure to supply calls services to end-user.	Service provider installs end-to-end infrastructure to supply broadband services to end user.	Service provider installs end-to-end infrastructure to supply voice-capable line rental to end-user.

The Commission notes that access seekers may also choose to use the non-voiceband spectrum on a line via the LSS, combined with VoIP software and consumer hardware, to supply voice services to end-users. Such an approach could be used as a substitute to obtaining the full-spectrum ULLS line or resale products like WLR and LCS.

What are the relevant market(s)?

When considering whether declaration of the LSS is required to promote competition, the Commission commences its analysis by identifying the relevant market(s) likely to be affected by declaration of the eligible service. The relevant statutory provisions indicate that the Commission may consider *both*:

- the market in which the eligible service is or would be supplied; and
- other markets (such as downstream markets) in which competition may be promoted.

Once the relevant market(s) have been identified, the Commission will then determine whether declaration of the eligible service is required promote competition in those markets and, if so, to what extent. Further detail on the Commission's approach to market definition is in Chapter 4.

The market in which the eligible service is supplied and other upstream markets

The process of market definition for the eligible service (LSS) begins with the service in question (defined in Appendix 3). The Commission understands that Telstra remains the sole supplier of a LSS to access seekers. The Commission understands that it is currently not technically feasible for an access seeker to purchase a ULLS service, and to re-sell a LSS service to third parties.

That said, as noted in Table 5.2, a firm that wishes to supply downstream data services to end-users potentially has a range of alternative options at the wholesale level, in order to provide services at the downstream level. This includes the option of purchasing a wholesale service from an access seeker.

A key question for consideration in this inquiry is the extent to which different modes of access (and or wholesale products) are substitutable for each other in terms of price and the level of functionality/quality they allow carriage service providers (CSPs) to offer end-users.

In 2002, the Commission concluded that of these alternatives, only HFC networks were considered to be able to provide a potential constraint on the pricing of an LSS. Specifically, the Commission formed the view that:

- the ULLS provided a level of functionality over and above that of the LSS and therefore can not be considered as a direct substitute and further, ULLS was only attractive to access seekers if the access seeker provided both voice and data services;[83]

- it was not convinced that current wholesale ADSL products will serve to constrain the pricing of Telstra's LSS and therefore these two services are not in the same market;[84]

- while HFC and LSS can be considered as part of the same geographic market in some areas, the extent of substitutability is limited to a select number of geographic areas;[85]

- it would be inappropriate to include wireless services in any analysis of the state of competition at this time.[86]

However, it is possible that circumstances have changed since 2002. In this regard, however, the Commission notes that ADSL remains the overwhelmingly pre-dominant form of broadband in Australia (see Chapter 2).

83 ACCC LSS Final Decision on whether or not a LSS should be declared under Part XIC of the *Trade Practices Act* 1974 p 41

84 Ibid. p 43

85 Ibid p 44

86 Ibid p 45

Questions for interested parties

- To what extent are other services substitutable for the LSS? In particular, from an access seeker's perspective, what is the degree of substitutability between the LSS and ULLS?
- Are there other commercially available wholesale services that act as an effective substitute for the LSS? Would the degree of substitutability change in the absence of a declared LSS service?
- Does the LSS allow third parties to purchase a wholesale service from access seekers? How prevalent is this use of the LSS? How does this compare to the ULLS as an upstream service?
- Under what circumstances would it become technically or commercially feasible for an access seeker to purchase a ULLS service, and re-sell LSS services to a third party provider?
- What is the relevant market at the upstream level? Does this differ by geography?

Relevant downstream markets

An important focus for this inquiry is whether the LSS declaration is required to promote competition in the relevant downstream markets. In general, the Commission will be concerned to identify only those markets in which declaration of the eligible service is likely to have a material effect. Where there are several markets that could be affected by declaration, it may be sufficient for the Commission to focus its attention only on the main or major markets in which declaration may promote competition.

In 2002, the Commission identified the following downstream markets as being the most relevant to the LSS declaration inquiry:

- *the high bandwidth carriage service market* – a national market for the supply of high bandwidth carriage services by service providers to end-users; and
- *the local telephony market* – a national market for the supply of local telephony services (including fixed line calls and line rental) by service providers to end-users.

The Commission acknowledges the possibility that the relevant downstream markets for consideration (including the relevant product and geographical dimensions) may have changed since 2002. This may be due to developments in the wholesale or retail spheres of the market.

Intensified competition in the 'high bandwidth' sector has improved the speeds available to end-users and the prices at which they are supplied. That said, it is increasingly apparent that such developments have occurred unevenly in different geographic regions. This may have implications for the geographic dimension of the relevant market.

The Commission notes also that many end-users now purchase voice services as part of a broader bundle of voice and data service. This type of bundling activity may have implications for the appropriate product dimension of the relevant markets. From a temporal perspective, another relevant factor for consideration is the development of VoIP services, and the ability for this technology to allow providers to offer voice services over the high-bandwidth data component of the line.

Questions for interested parties:

- What are the relevant downstream markets for consideration? In particular, what is the relevant product, geographical and temporal dimensions of the relevant markets?
- Has the intensification of competition in the supply of high bandwidth carriage services changed the appropriate product or geographic dimension of any relevant market?
- Has the introduction of VoIP technology changed the nature/scope of the relevant markets for consideration?
- Has the existence of bundled service offerings at the retail level affected the nature/scope of the relevant markets for consideration?
- How, if at all, has the 2002 declaration of the LSS impacted on the relevant downstream markets for consideration?
- To what extent does the broader telecommunications-specific regulatory framework affect downstream market definitions?

Is declaration of the LSS required to promote competition?

As noted above, the key question now facing the Commission is whether the LSS declaration is still required to promote competition in the relevant markets (including the relevant downstream markets). This involves comparing a situation where the LSS remains declared, to a situation where the LSS declaration is removed (‘with-without’ test).

Competition is a process of rivalry. Accordingly it may be difficult to describe (in qualitative terms) the *extent* to which declaration is required to promote competition through simply examining its impact on that process. In many cases, it will be more instructive to examine the extent to which declaration is required to promote competition from the perspective of end-users (i.e. to have regard to the likely results from increased competition in terms of price, quality and service diversity), and the likely prospects for competition in the absence of declaration. Where declaration facilitates the development of new services and the provision of better quality services, it is likely to be required to promote competition to a greater extent.

The Commission’s approach to assessment of the state of competition is detailed in Chapter 4. The following preliminary assessment is divided into a consideration of the extent to which competition would be promoted by declaration in:

- the market within which the eligible service is supplied and
- the markets within which relevant downstream services are supplied.

Competition in the market for the eligible service

In 2002, the Commission concluded that it was satisfied that the LSS would be delivered with or without declaration. However, it considered that the terms and condition upon which it was provided was crucial to the development of competition in downstream markets, and therefore the LTIE. The Commission noted that declaration was a means by which incumbents are obligated to provide access on reasonable terms and conditions. The Commission considered that the provision of the service at the upstream level at terms and conditions consistent with those that would be seen in a competitive market, could in turn promote competition in downstream markets.

For the purposes of the current inquiry, a key question facing the Commission is whether the declaration of the LSS is required to ensure that this service will be provided on reasonable terms and conditions to access seekers. The Commission will consider the extent to which Telstra, or another provider, is likely to offer commercially attractive and competitive rates for the LSS in the absence of declaration.

Questions for interested parties:

- In the absence of declaration, are competitive rates for the LSS likely to be commercially negotiated?
- To what extent will the availability of other services, in particular the ULLS, constrain the pricing of the LSS in the absence of declaration? Has this changed since 2002?
- To what extent is the LSS expected to be a transitional service? If the LSS is a transitional service, at what point is it no longer necessary to regulate it?

Competition in relevant downstream markets

In its 2002 inquiry, the Commission concluded that declaration of the LSS would promote competition in the market within which high-bandwidth carriage services are supplied. It concluded that declaration of the LSS would have little to no impact on local telephony markets in the market environment at that time.

A key question is whether, and to what extent, declaration is required to promote competition in relevant downstream markets. In part, resolving this question can draw on the extent to which competition has been promoted in the relevant downstream markets since the LSS was declared in 2002.

LSS take-up has to some extent coincided with improved competitive conditions for end-users of high bandwidth carriage services in certain geographic areas in terms of lower prices and higher quality services.

ADSL remains the dominant type of broadband product at the retail level. Further, Telstra continues to be the dominant provider of these services at the retail and wholesale level.

The Commission acknowledges that the level of market concentration is not, on its own, necessarily reflective of a lack of effective competition in this market. Nonetheless, it raises the possibility that not only is competition in this downstream market still in its infancy, but that it still relies heavily on access seekers gaining access to the necessary inputs from Telstra.

The Commission has limited information on the extent to which declaration of the LSS has (or would be needed to) promote competition in the market within which local telephony services are provided. The Commission seeks views on the impact of declaration on the level of competition in the market for voice services.

Questions for interested parties:

- Is declaration of the LSS required to promote competition in the relevant downstream market(s)? If so, to what extent and why?
- Is declaration of the LSS likely to impact on the level of competition in the market within which wholesale ADSL is supplied?
- Is continued declaration of the LSS likely to lead to lower prices or improved quality for end-users of high-speed data services, compared to the case where the LSS is not re-declared? To what extent is the level of competition in high-speed data markets a result of the availability of a declared LSS improved the state of competition?
- Is continued declaration of the LSS likely to lead to lower prices or improved quality for end-users of traditional voice call services, compared to the case where the LSS is not re-declared?
- How does consumer demand for high speed data services compare to the relevant voice call markets? To what extent can a consumer obtain a line to their premises solely for the use of data services? To what extent does the current regulatory regime affect the ability of consumers to obtain a line for these purposes? How does this affect demand for the LSS and/or the ULLS?
- Would continued declaration of LSS affect barriers to entry to the downstream markets or the state of competition in the downstream markets?

Will declaration achieve any-to-any connectivity?

In the 2002 inquiry, the Commission did not consider that declaration, or non-declaration of the LSS would pose any threat to the objective of any-to-any connectivity.

Questions to assist those preparing submissions:

- Will removing declaration of the LSS affect any-to-any connectivity in any way?

Will declaration encourage efficient use of, and investment in, infrastructure?

The relevant statutory considerations to which the Commission must have regard are outlined in Appendix 1. This section is divided into the:

- efficient use of infrastructure; and
- efficient investment in infrastructure.

Efficient use of infrastructure

As outlined in Appendix 1, the Commission considers that efficiency has three major components – allocative, productive and dynamic.

In general, each of these forms of efficiency is enhanced when the prices of given services reflect the costs of providing these services. In more competitive markets, service providers have a greater incentive to lower prices in order to win market share. Accordingly, this incentive helps push prices towards their underlying cost, thereby improving allocative efficiency. In turn, this incentive is also likely to improve the efficient use of infrastructure via which listed services are supplied.

Where declaration is likely to promote competition in markets for carriage services or services provided by means of carriage services, the Commission's competition analysis will generally enable it to form a view about the impact of declaration on efficiency. For instance, in certain circumstances declaration is likely to lead to greater competition in downstream markets because it can help ensure prices for the eligible service better reflect their efficient costs of provision. In turn, this would be expected to improve productive and dynamic efficiency by enabling providers of downstream services to more effectively compete by offering lower prices, better quality and more innovative products and greater choice to consumers.

Further, the Commission would expect allocative efficiency to be improved as it would be more likely that the final prices paid for retail services by end-users will better reflect the efficient costs of provision of these services. In the language of subsection 152AB(2)(e), declaration will be expected to result in the more efficient use of infrastructure by which listed services are supplied.

A clear implication is that the level of costs is important in determining whether declaration will lead to an efficient *use of* infrastructure. The comparison of costs to prices, and the impact declaration will have on any difference between the two, is a key consideration in whether declaration of the LSS leads to a more efficient use of infrastructure, and is therefore in the LTIE.

In 2002, the Commission decided declaration of the LSS was important to ensure that the terms and conditions upon which access is provided were reasonable. The Commission considered that declaration could therefore help ensure that the final prices paid by end-users for downstream services reflected their overall costs of production more closely.

An important issue for consideration in the current inquiry is whether declaration of the LSS is required to encourage the efficient use of infrastructure by which listed services are supplied (or capable of being supplied). A relevant consideration is whether, and the extent to which, declaration of the LSS will affect the extent to which other services that utilise the same underlying infrastructure (i.e. ULLS, xDSL etc) are used.

A relevant consideration may also be whether the requirement that a line must be used to supply voice services in the current LSS definition promote greater efficiency in the use of infrastructure (ie. the line) than the ULLS definition, which imposes no requirement that the line be used to supply both voice services and high speed data services to end-users?

Questions for interested parties:

- Is continued declaration of the LSS required to ensure the efficient use of infrastructure used to supply listed services? If so, why and to what extent?
- What impact would continued declaration of the LSS have on the efficient use of infrastructure in terms of use of alternative products that utilise the underlying infrastructure such as ULLS and xDSL?
- Is section 152AB(2)(e)(ii) directly relevant to a consideration of the efficient use of infrastructure used to provide carriage services, or services supplied by means of carriage services?

Efficient investment in infrastructure

Infrastructure by which listed services are supplied

Efficient investment in infrastructure makes an important contribution to the promotion of the LTIE. It can lead to more efficient methods of production, foster increased competition and lower prices, and enhance the level of diversity in the goods and services available to end-users.

In examining the likely impacts of declaration on economically efficient investment, and the extent of such investment, the Commission will look at the likely impact on economically efficient investment in infrastructure for the supply of carriage services and services supplied by means of carriage services and infrastructure by which these services are likely to become capable of being supplied.[87]

Central to the consideration of the incentives declaration gives to service providers is the impact on their 'build/buy' decisions. That is, carriers operating in downstream markets will have a choice as to whether they should invest in their own upstream infrastructure (ie. build) in order to provide services to end-users, or to seek access from an existing upstream provider of the listed service (ie. buy).

87 Section 152AB(2)(d) of the Act.

The Commission is particularly concerned to ensure declaration would not prevent efficient investment (such as efficient investment in upstream markets by potential service providers) or encourage inefficient investment (such as additional inefficient investment in downstream markets or the technically inefficient duplication of upstream network infrastructure). To a large extent, creating the right incentive for service providers to make an efficient build/buy choice is a matter of determining appropriate pricing principles for a declared service.

2002 decision

In 2002, the Commission noted that a key consideration in determining the impact of declaration on investment (both in relevant upstream and downstream markets) is the price for the service that will prevail in the market following declaration.

Ultimately, the Commission was not satisfied that Telstra would not have an incentive to set prices for the LSS that were consistent with those one would expect in a competitive market (due to, among other things, the prevailing market structure at that time). Therefore, the Commission considered that this would be likely to distort signals provided to market participants with regard to whether it would be more appropriate to roll-out their own infrastructure or buy existing infrastructure capacity from access providers.[88]

The Commission noted that new entrants may use access to the LSS as a transitional step towards the development of their own alternative infrastructure using ULLS. Alternatively, the Commission noted that new entrants may use access to the declared wholesale services such as wholesale ADSL, WLR and LCS as a substitute for construction of their own networks. Either situation may be efficient depending on the cost structure of the local network.

The Commission concluded that declaration would help redress market power and unequal bargaining positions when parties negotiate the terms and conditions of access, and in turn ensure access prices better reflect costs – thus providing appropriate signals for access seekers' build/buy decisions and more efficient investment in infrastructure.

Relevant considerations in this inquiry

A central issue for consideration is whether declaration of the LSS is required to promote efficient investment in existing (or new infrastructure) used to provide listed services, in light of the other options that are provided to access seekers. (See Table 5.2). A related consideration is whether declaration of the LSS inhibits efficient investment in the infrastructure by which listed services are supplied (or capable of being supplied).

In this context, an important issue is the potential dynamic that operates between an access seeker's decision to invest in the LSS, versus other services which are capable of providing commensurate downstream services. For example, one potential issue

[88] In particular, the Commission noted that if prices for the LSS were set excessively high, access seekers may have had an incentive to invest in their own network infrastructure rather than seek access to Telstra's LSS.

for consideration is whether, and to what extent, the current declaration of the LSS distorts an access seeker's decision to purchase the ULLS and invest in the required DSLAM technology to become capable of supplying both voice and data services to end-users.

It is difficult to disentangle these considerations from the issue of 'what price' is set for respective services. Arguably, if the price of each service was set at its equivalent underlying cost based on the same pricing principle, the declaration of both an LSS and ULLS may be in the LTIE, and access seekers would be free to choose which access product (and retail offerings) suits them based on their relative efficiencies and preferred business model. To the extent that the price for each service does not necessarily reflect its underlying cost (or are based on different underlying principles) there may be a case that investment signals are distorted.

On the other hand, it is important to note the possibility that even if an access seeker wished to provide voice services to end-users, it may face inherent disadvantages in attempting to enter the markets within which these products are sold. For example, the significant economies of scale and scope enjoyed by the incumbent, the existence of customer inertia and fixed-term contracts and the declining importance of fixed-voice services more generally, may limit the potential for access seekers to expand into 'voice' markets.

A number of issues appear to be relevant to a consideration of whether the LSS is required to promote the efficient investment in infrastructure?

Questions for interested parties:

- What impact has declaration of the LSS had on investment in new (upgraded) technologies provided over the high-bandwidth data portion of Telstra's local access network?
- Is continued declaration of the LSS required to promote efficient investment in infrastructure? Would the removal of declaration encourage more efficient investment in new or existing infrastructure?
- Would the continued declaration of the LSS distort investment incentives by inhibiting efficient investment in the ULLS, or in other inter-modal delivery platforms currently used to provide high-speed data services to end-users?
- What impediments do access seekers face in migrating from LSS to ULLS services?
- How would declaration of the LSS affect the plans of the access provider to invest in maintenance, improvement and expansion of its local loop infrastructure?
- If the LSS declaration is removed, what options does an access seeker that elects to take the ULLS service have in terms of the provision of voice services?
- In the event that the LSS was not re-declared, would it be commercially feasible for an access seeker to purchase a ULLS line and re-sell a voice service to a third party provider should it not wish to provide voice services? Would this require an access seeker to purchase some form of 'inter-connect cable' service from Telstra, and if so would this likely be a bottleneck service?
- What costs would be involved in an access seeker provisioning a ULLS line to provide voice services over the 'voice-band' frequency component of the line? What costs would be involved in an access seeker provisioning a ULLS line to provide voice services over the high-bandwidth data component of the line?
- What are the technological and price differences (if any) between DSLAMs that use the LSS to supply downstream services and DSLAMs that use the ULLS to supply downstream services?
- In the absence of a LSS declaration, how commercially or legally feasible would it be for access seekers to purchase a ULLS and not provide a voice service? Is the feasibility of this option likely to change over time?
- To what extent (if any) do access seekers that have purchased a ULLS line, re-sell voice services on this line via a third party?

Infrastructure by which listed services are capable of being supplied

The Commission is also required under the Act to consider the impact of declaration on investment in any other infrastructure by which listed services are supplied, or are likely to become capable of being supplied.

The Commission notes that there are intermodal platforms based on fixed-wireless, mobile-wireless and satellite services which may be used to provide broadband services to end users. In very simple stylised terms, if access to the LSS was set at an excessively high price (or was not mandated at all which led to excessively high prices) it is possible that this would encourage investment in alternative forms of infrastructure which was not necessarily efficient. On the other hand, to the extent that access to the LSS was set at an excessively low price, it is possible that this would discourage efficient investment in alternative forms of infrastructure.

Questions for interested parties:

- How would continued declaration of the LSS affect the plans of new or existing entrants to invest in alternative infrastructure, such as that utilising alternative delivery platforms (eg. wireless), to provide high-speed data services to end-users?

Legitimate commercial interests of the access provider supplying LSS

The Act requires the Commission to consider the legitimate interests of potential access providers. This includes an access provider's ability to exploit economies of scale and scope. In this context, the Commission is interested in reviewing whether mandated access to the LSS can be provided while maintaining the legitimate commercial interests of Telstra (and other potential providers). Where it is found that this is not possible, declaration is likely to have an adverse impact on incentives for economically efficient investment in infrastructure.

The consideration of the legitimate commercial interests of access providers in this context is closely related or influenced by the price and non-price terms upon which access is granted.

In relation to *price terms*, the legitimate commercial interests of an access provider supplying the LSS would extend to the ability of carriers to make a normal economic return on an investment, taking into account commensurate risk and returns that would be expected in a competitive market. In this sense, the Commission considers that the Act clearly provides for access providers to receive commercial returns on their investments. The Commission's *Access Undertakings – A guide to Part IIIA of the Trade Practices Act* (the Access Undertakings Guide) states that:

> The Commission's analysis of legitimate business interests of the service provider will focus on commercial considerations of the service provider. The Commission will take into account the provider's obligations to shareholders and other stakeholders, including the need to earn a commercial return on the facility. It will also aim to ensure that any undertaking provides appropriate incentives for the provider to maintain, improve and invest in the efficient provision of the service.[89]

It does not, however, extend to the ability of an access provider to maintain higher than normal commercial returns which would not be expected in a competitive market. In this regard, the Access Undertakings Guide also states that:

> The Commission will take an interest in the extent to which competition arising from access to a service generates real benefits to intermediate and final consumers and the community in general. It

[89] ACCC, *Access Undertakings – A Guide to Part IIIA of the Trade Practices Act*, 30 September 1999, pp. 4-5.

> will not assess business interests as legitimate if they have the purpose or effect of preventing the objectives of the Trade Practices Act being realised, in particular the objective of enhancing the welfare of Australians through the promotion of competition and efficiency. In addition, and in line with the stated intentions of the access regime, the Commission will not allow for reimbursements of forgone monopoly profits which the provider may incur as a result of increased competition in an upstream or downstream market, except insofar as they affect the ability of the firm to discharge CSOs.[90]

In relation to *non-price terms*, the Commission views this criterion as requiring an assessment of the broader commercial interests of the access provider in conducting its own business affairs. An access provider, as an owner or controller of particular facilities, should not, simply because it is under an obligation to provide access to its service, be unduly compromised in the conduct of its own legitimate business interests. For instance, an access provider must have the right to make reasonable decisions about modifications and upgrades to its network or the right to set reasonable requirements for billing and the payment of accounts. Generally speaking, an access provider is entitled to have some legitimate control over its relationship with an access seeker to the extent reasonably required to protect its business concerns.

Questions for interested parties:

- Would continued declaration of the LSS compromise Telstra's legitimate commercial interests with respect to the price or non-price terms of access?

Pricing principles

Under section 152AQA of the Act, in the event that the Commission determines to declare a service, it is also required as soon as practicable to determine in writing pricing principles for the declared service.

The terms and conditions upon which access is provided (particularly the price) are important in determining the degree to which the LTIE is promoted by the declaration of an eligible service. The pricing approach adopted by the Commission can have a significant effect on the promotion of competition and incentives for efficient investment and use of infrastructure. The Commission is seeking comment on issues relating to what form pricing principles should take for a LSS, were it to be re-declared.

Existing pricing principles

In 2002, the Commission considered the appropriate pricing principles that should apply to the LSS. At a general level, the Commission indicated that a TSLRIC+ pricing methodology was most appropriate for the pricing of LSS.

However, the Commission noted that choosing the general type of pricing principle was only the first stage in developing pricing principles for a declared service. It was noted that there can be many variations of a general type of pricing principle

90 ACCC, *Access Undertakings – A Guide to Part IIIA of the Trade Practices Act*, 30 September 1999, p. 6.

depending on the specific features of the declared service, and that it is not always clear exactly which costs should be included in determining the TSLRIC+ of providing a service.

The Commission considered that there were two main cost elements involved in the provision of a LSS:

- the incremental (or LSS-specific) costs of providing a LSS; and
- the cost of a line over which a LSS is provided.

The Commission considered that it was appropriate that some form of 'LSS-specific' cost should be included in the price of a LSS.[91] The Commission considered that it may have been preferable from an efficiency-in-use perspective for there to be some allocation of the 'line cost' to be included in the price of a LSS. However, the Commission noted that this would have been dependent on changes to the price of other services, given that Telstra was already recovering the full costs of a line through other services. The Commission further noted that because it was in no position to determine changes to such prices in either assessing an undertaking or determining an arbitration, it could only have regard to the prices an access provider sets for these other services.

Hence, the Commission concluded that to the extent that an access provider was recovering all of its line-related costs from other revenue sources, it would be inappropriate for the access provider to recover an additional amount of its line costs in the price of a LSS. Notwithstanding this, the Commission noted that if Telstra were to show it was not fully recovering its line costs through various other sources of revenue, it may be appropriate to consider including some allocation of the cost of the line over which an LSS it is provided in the price of this service. In that instance, the Commission indicated that a practical cost allocation rule could simply be the difference between the geographically de-averaged cost of a line over which a LSS is provided and the line rental revenue recovered from services provided over the remaining low-frequency portion of the line.

The Commission also considered whether the LSS price should be geographically averaged or de-averaged. The Commission expressed its view that if the cost of a line over which a LSS was provided *was* allocated to the price of a LSS, this should be done on a geographically de-averaged basis. That said, because the Commission considered it inappropriate to allocate any portion of line costs in the price of LSS based on (then) current pricing structures, it determined that the LSS price should only equal LSS-specific costs, and that these costs should not vary according to different geographic regions.

Current LSS access disputes

At present, the Commission is arbitrating nine access disputes between access seekers and Telstra in respect of the LSS. The Commission had made and published interim determinations in three of these disputes.

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91 The incremental costs associated with providing the LSS are costs related to IT systems, front-house costs, back-house costs, connection costs and related overheads.

On 19 January 2007, the Commission issued the reasons supporting interim determinations made in December 2006 for telecommunications disputes regarding annual charges for the supply of the Line Sharing Service (LSS) by Telstra to Chime Communications Pty Ltd and Request Broadband Pty Ltd. The interim determinations provide that the LSS Annual Charges payable by a party to Telstra for the LSS are $38.40 per LSS per annum ($3.20 per LSS per month).

In making the interim determinations, the Commission applied the current LSS pricing principles (2002), and also the previous rulings that have been made by the Commission (2005) and the Tribunal (June 2006) concerning a reasonable approach to setting LSS annual charges.

Consistent with the LSS Pricing Principles, a contribution to the costs of providing a telephone line was not been included in LSS annual charges at that stage, as line costs were being (and continue to be) fully recovered in other charges. The Commission noted that since 2000, Telstra has significantly increased line rental prices paid by consumers and businesses (such as from $11.65 to $27.23 (GST exclusive) for the majority of its retail residential customers) to recover line costs from line rental revenues.

Allowing a contribution to line costs in LSS charges would have permitted Telstra to double-dip from revenues earned on fixed-voice and ADSL services in over-recovering line-related costs.

While Telstra has to date chosen to set line rental charges at a level that fully recovers line costs, following consultation on a draft interim determination in these disputes (October 2006), Telstra proposed an alternative approach to the recovery of its line-related costs, that could have consequences for the pricing of the LSS and for the wholesale line rental (WLR) service.

Under Telstra's proposal, a contribution to the recovery of line-related costs would be included within LSS annual charges, with a reduction in charges for the WLR service.

While Telstra's willingness to reconsider its approach to the recovery of line costs is welcome, the initial suggestion of Telstra as how to implement this initiative was not acceptable, as:

- it results in charges across LSS and WLR that are too high; and
- an immediate introduction of a new price structure could unduly harm competition, due to the consequences for competitors who have relied on Telstra's previous price structures in making investment decisions.

The Commission considered it was not appropriate for access seekers to continue to pay LSS annual charges at a rate rejected as unreasonable by the Tribunal while alternative price structures were considered by the parties. It noted that Telstra has long been able to implement a rebalancing of LSS and WLR charges but had not sought to do so prior to the circulation of the draft interim determinations.

The Commission encouraged Telstra to take this opportunity to put forward a reasonable rebalancing of the pricing of LSS and WLR. The Commission remains open to considering alternative approaches to setting LSS annual charges that are consistent with the objective of promoting the LTIE. Further details of the Commission's reasons for making these interim determinations are published on the Commission website.

Relevant issues for consideration in this inquiry

A number of issues appear relevant for this inquiry, including:

- the appropriate pricing principle that should be applied in the future;
- the appropriate costs to be considered (and methodology used to determine a reasonable allocation) for estimating the incremental costs of providing the LSS;
- whether a portion of line costs should be allocated to LSS (and if so via what methodology should this be applied); and
- whether the Commission should release indicative prices for the LSS to inform commercial negotiations and assist the arbitration process, should disputes proceed down this path.

In the event that the LSS is not re-declared, a related issue for consideration is the extent to which the pricing principles for other services need to be amended (if at all) to ensure an outcome that is consistent with the LTIE.

Questions for interested parties:

- In the event that the LSS was re-declared, what impact would including a portion of line costs in the LSS price have on the components of the LTIE test?
- In the event that the LSS is re-declared, should an allocation of line costs be made to the LSS? Specifically:
  - which services should be included in the re-balancing (including their relevant 'functional' level;
  - should the resulting LSS charges be geographically de-averaged;
  - what type of transition path from the current pricing structure would be reasonable (if any)?
- If there is an allocation of line costs is made to the LSS price, what (if any adjustments) should be made to the pricing principles governing the supply of other regulated services? How should these adjustments be implemented?
- In the event that the LSS was not re-declared, what (if any adjustments) should be made to the pricing principles governing the supply of other regulated services??
- Has the take-up of VoIP services had a material impact on Telstra's ability to recover costs of providing a line? If not, over what realistic time period is this likely to have an impact on Telstra's ability to recover line costs?

Appendix 1: Legislative Framework

Part XIC access regime

Part XIC of the Act sets out a telecommunications access regime. The Commission may determine that particular carriage services and related services are declared services. This would be where declaration is in the long-term interests of end-users (LTIE). Once a service is declared, CSPs are required to comply with standard access obligations in relation to any such service that they supply. The standard access obligations facilitate the provision of access to declared services by service providers in order that service providers can provide carriage services and/or content services. In addition to its standard access obligations, a carrier, CSP or related body must not prevent or hinder access to a declared service.

In addition, the LTIE criterion is also applicable to any decision by the Commission to provide an exemption from existing access obligations to a service that is either currently declared (s.152AT) or an anticipatory exemption to a future service or a service that is not currently declared (s.152ATA).

The Commission's approach to the LTIE test

The Commission must decide whether declaring a service would promote the LTIE of carriage services, or of services supplied using carriage services ('listed services').

Section 152AB of the Act provides that, in determining whether declaration promotes the LTIE, regard must be had to the extent to which declaration is likely to result in the achievement of the following objectives:

- promoting competition in a market for listed services;
- achieving any-to-any connectivity in relation to carriage services that involve communications between end-users; and
- encouraging economically efficient use of, and the economically efficient investment in, the infrastructure by which telecommunications services are supplied and the economically efficient use of and investment in other types of infrastructure by which services are capable or likely to be supplied.

Conversely, in determining whether an exemption should be provided, the Commission would instead look at whether, the removal of regulation or exemption from specified obligations would be in accordance with the above LTIE objectives. That is, what the impact of the exemption would be on competition, connectivity and efficiency and investment goals. For example, to the extent that regulation of a particular service would not materially promote these goals, then an exemption from regulation may be seen as appropriate.

The following discussion of the LTIE criteria is mainly in terms of how it may be used to determine whether declaration should be made. However, the basic principles underlying the relevant market and efficiency analysis also apply to decisions about exemptions from declarations.

Promoting competition

Subsections 152AB(4) and (5) provide that, in interpreting this objective, regard must be had to, but is not limited to, the extent to which the arrangements will remove obstacles to end-users gaining access to listed services. The Explanatory Memorandum to Part XIC of the Act states that:

> ...it is intended that particular regard be had to the extent to which the ... [declaration]... would enable end-users to gain access to an increased range or choice of services.[92]

The first criterion requires the Commission to make an assessment of whether or not declaration would be likely to promote competition in the markets for listed services.

The concept of competition is of fundamental importance to the Act and has been discussed many times in connection with the operation of Part IIIA, Part IV, Part XIB and Part XIC of the Act.

In general terms, 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. The Trade Practices Tribunal (now the Australian Competition Tribunal) stated that:

> In our view effective competition requires both that prices should be flexible, reflecting the forces of demand and supply, and that there should be independent rivalry in all dimensions of the price-product-service packages offered to consumers and customers. [93]

Competition is a process rather than a situation. Nevertheless, whether firms compete is very much a matter of the structure of the markets in which they operate.

Competition can provide benefits to end-users including lower prices, better quality and a better range of services over time. Competition may be inhibited where the structure of the market gives rise to market power. Market power is the ability of a firm or firms to profitably constrain or manipulate the supply of products from the levels and quality that would be observed in a competitive market for a significant period of time.

The establishment of a right for third parties to negotiate access to certain services on reasonable terms and conditions can operate to constrain the use of market power that could be derived from the control of these services. Accordingly, an access regime such as Part IIIA or Part XIC addresses the *structure* of a market, to limit or reduce the sources of market power and consequent anti-competitive conduct, rather than directly regulating conduct which may flow from its use, which is the role of Parts IV and XIB of the Act. Nonetheless, in any given challenge to competition, both Parts XIB (or IV) and XIC may be necessary to address anti-competitive behaviour.

To assist in determining the impact of potential declaration on downstream markets, the Commission will first need to identify the relevant market(s) and assess the likely effect of declaration on competition in each market.

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92 *Trade Practices Amendment (Telecommunications) Act 1997* (Cth) explanatory memorandum.

93 *Re Queensland Co-operative Milling Association Ltd; Re Defiance Holdings Ltd* (1976) ATPR 40-012, 17,245.

Section 4E of the Act provides that the term ‘market’ includes a market for the goods or services under consideration and any other goods or services that are substitutable for, or otherwise competitive with, those goods or services. The Commission’s approach to market definition is discussed in its *Merger Guidelines*, June 1999 and is also canvassed in its information paper, *Anti-competitive conduct in telecommunications markets*, August 1999.

The second step is to assess the likely effect of declaration on competition in each relevant market. As noted above, subsection 152AB(4) requires that regard must be had to the extent to which declaration will remove obstacles to end-users gaining access to listed services.

The Commission considers that denial to service providers of access to necessary upstream services on reasonable terms is a significant obstacle to end-users gaining access to services. Declaration can remove such obstacles by facilitating entry by competitive service providers, thereby providing end-users with additional services from which to choose

Where existing market conditions already provide for the competitive supply of services, the access regime should not impose regulated access.[94] This recognises the costs of providing access, such as administration and compliance, as well as potential disincentives to investment. Regulation will only be desirable where it leads to benefits that outweigh any costs of regulation in terms of lower prices, better services or improved service quality for end-users.

In the context of considering whether declaration will promote competition, it is therefore appropriate to examine the impact of the described service on each relevant market, and compare the state of competition in that market before and after the proposed declaration. In examining the market structure, the Commission considers that competition is promoted when market structures are altered such that the exercise of market power becomes more difficult; for example, because barriers to entry have been lowered (permitting more efficient competitors to enter a market and thereby constrain the pricing behaviour of the incumbents) or because the ability of firms to raise rivals’ costs is restricted.

Any-to-any connectivity

Subsection 152AB(8) provides that the objective of any-to-any connectivity is achieved if, and only if, each end-user who is supplied with a carriage service that involves communication between end-users is able to communicate, by means of that service, or a similar service, with other end-users whether or not they are connected to the same network.

The reference to ‘similar’ services in the Act enables this objective to apply to services with analogous, but not identical, functional characteristics, such as fixed and mobile voice telephony services or Internet services which may have differing characteristics.

[94] *Trade Practices Amendment (Telecommunications) Act 1997* (Cth) explanatory memorandum.

The any-to-any connectivity requirement is particularly relevant when considering services that involve communications between end-users.[95] When considering other types of services (e.g. carriage services that are inputs to an end-to-end service or distribution services such as pay television carriage), the Commission considers that this criterion will be given less weight compared to the other two criteria. However in relation to some services, this criterion can be particularly significant. For example, in relation to some uses of the PSTN OTA services.

Efficient use of, and investment in, infrastructure

Economic efficiency has three components:

- ***productive efficiency*** refers to the efficient use of resources within each firm such that all goods and services are produced using the least cost combination of inputs;

- ***allocative efficiency*** refers to the efficient allocation of resources across the economy such that the goods and services that are produced in the economy are the ones most valued by consumers. It also refers to the distribution of production costs amongst firms within an industry to minimise industry-wide costs; and

- ***dynamic efficiency*** refers to the efficient deployment of resources between present and future uses such that the welfare of society is maximised over time. Dynamic efficiency incorporates efficiencies flowing from innovation leading to the development of new services, or improvements in production techniques and is predicated on there being appropriate incentives for investment.

The Commission needs to ensure that the access regime does not discourage investment in networks or network elements where such investment is efficient. However, where it is inefficient to duplicate investment in existing networks or network elements, the access regime may play an important role in ensuring that existing infrastructure is used efficiently.

These matters are interrelated. In many cases, the LTIE may be promoted through the achievement of two or all of these criteria simultaneously. In other cases, the achievement of one of these criteria may involve some trade-off in terms of another of the criterion, and the Commission will need to weigh up the different effects to determine whether declaration promotes the LTIE. In this regard, the Commission will interpret long-term to mean the period of time necessary for the substantive effects of declaration to unfold.

Subsection 152AB(2)(e) states that the Commission must have regard to the objective of encouraging the economically efficient use of, and the economically efficient investment in:

i. the infrastructure by which listed services are supplied; and

ii. any other infrastructure by which listed services are or are more likely to become, capable of being supplied.

[95] Commonwealth of Australia, *Trade Practices (Telecommunications) Amendment Act 1997* (Cth), explanatory memorandum.

In determining the extent to which this objective is met, the Commission must have regard to:

- whether it is technically feasible for the services to be supplied and charged for, having regard to:
  - the technology that is in use or likely to become available
  - whether the costs that would be involved in supplying, and charging for, the services are reasonable or likely to become reasonable
  - the effects, or likely effects, that supplying, and charging for, the services would have on the operation or performance of telecommunications networks
- the legitimate commercial interests of the supplier or suppliers of the service, including the ability of the supplier or suppliers to exploit economies of scale and scope; and
- the incentives for investment in:
  - the infrastructure by which the services are supplied; and
  - any other infrastructure by which the services are, or are likely to become, capable of being supplied:

Part XIB conduct provisions

Part XIB of the Act is a telecommunications specific regime which aims primarily to prevent carriers and CSPs from engaging in anti-competitive conduct. Part XIB applies in addition to the general prohibitions on anti-competitive conduct set out in Part IV of the Act.

Under Part XIB, the Commission has supplementary powers enabling it to respond quickly to instances of anti-competitive conduct in the telecommunications industry. The 1997 amendments to the Act that brought Part XIB into existence were introduced after deregulation of the telecommunications industry at a time when new entry was expected to take place. As the Second Reading Speech of the Bill in the Senate stated:

> Total reliance on Part IV to constrain anti-competitive conduct might, in some cases, prove ineffective given the still developing state of competition in the telecommunications industry. The fast pace of change and complex nature of horizontal and vertical arrangements of firms operating in this industry mean that any anti-competitive behaviour could cause rapid damage to the competition that has already developed and severely hamper new entry.[96]

Part XIB establishes the competition rule which proscribes a carrier or carriage service provider from engaging in anti-competitive conduct. The Commission's

[96] Commonwealth of Australia, House of Representatives, Second Reading Speech - Trade Practices Amendment (Telecommunications) Bill 1996

primary tool to ensure a quick response to an alleged contravention of the competition rule is to issue a competition notice.

A competition notice is a written notice stating that a specified carrier or carriage service provider has contravened, or is contravening, the competition rule. It effectively calls on the recipient of the notice to cease the alleged anti-competitive conduct or else face the prospect of proceedings for pecuniary penalties and/or damages.

Part A competition notices provide a 'gatekeeper' role to actions under the competition rule, as court proceedings under Part XIB (other than for an injunction) can only be instituted in relation to conduct that occurred at a time that a Part A competition notice was in force.

In addition to the competition notice regime, Part XIB provides the Commission with a number of information-gathering powers relating to the telecommunications industry. For example, the Commission may direct carriers and CSPs with a substantial degree of power in the industry, to file tariff information. The Commission is also empowered to make record keeping rules and can specify which carriers or CSPs are required to comply with these rules.

An outline of the key provisions of the competition notice regime

Under the 'competition rule' set out in section 151AK of Part XIB of the Act, a carrier or carriage service provider must not engage in anti-competitive conduct.

What is anti-competitive conduct?

Section 151AJ of the Act defines anti-competitive conduct in the telecommunications industry as:

- taking advantage of a substantial degree of power in a telecommunications market with the effect or likely effect of substantially lessening competition in that or any other telecommunications market;[97] or

- contravening sections 45, 45B, 46, 47 or 48 of the Act where that conduct relates to a telecommunications market.[98]

While section 46 and subsection 151AJ(2) of the Act both require a substantial degree of market power and a taking advantage of that power, in contrast to section 46 which requires a proscribed purpose, subsection 151AJ(2) has an effects-based test requiring an assessment of the effect, or likely effect, of the conduct on competition.

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97 Subsection 151AJ(2) provides: A carrier or carriage service provider engages in anti-competitive conduct if the carrier or carriage service provider: (a) has a substantial degree of power in a telecommunications market; and (b) either (i) takes advantage of that power with the effect, or likely effect, of substantially lessening competition in that or any other telecommunications market, or (ii) takes advantage of that power, and engages in other conduct on one or more occasions, with the combined effect, or likely combined effect, of substantially lessening competition in that or any other telecommunications market.

98 Subsection 151AJ(3) provides: A carrier or carriage service provider engages in anti-competitive conduct if the carrier or carriage service provider: (a) engages in conduct in contravention of section 45, 45B, 46, 47 or 48; and (b) the conduct relates to a telecommunications market.

The operation of Part XIB is limited to contraventions occurring in a telecommunications market. Section 151AF of the Act defines a telecommunications market as a market in which any of the following goods or services are supplied or acquired:

- carriage services;
- goods or services for use in connection with a carriage service; and
- access to facilities.

Section 151AQ provides that if the Commission has ‘reason to suspect’ that a carrier or carriage service provider under investigation has contravened, or is contravening, the competition rule, the Commission must act expeditiously in deciding whether to issue a competition notice.

The Commission may issue a competition notice to a carrier or carriage service provider if the Commission has ‘reason to believe’ that the carrier or carriage service provider has engaged or is engaging in conduct in breach of the competition rule. The Commission decides whether it has such a reason in good faith and on reasonable grounds, after having considered all relevant matters. In particular, the Commission must have regard to any guidelines formulated pursuant to section 151AP of the Act. The current guidelines, issued in February 2004, set out the matters the Commission will consider when deciding whether to issue a competition notice.

There are two types of notices that the Commission may issue - Part A notices and Part B notices. The Commission has a discretion to issue either.

Part A competition notices

Section 151AKA of the Act provides for the issuing of a Part A competition notice.

Pursuant to subsection 151AKA(1), the Commission may issue a written notice stating that a specified carrier or carriage service provider has engaged, or is engaging, in *a specified instance of anti-competitive conduct* if the Commission has reason to believe that this has occurred. In such a case, the competition notice must specify the instance of anti-competitive conduct; or

Pursuant to subsection 151AKA(2), the Commission may issue a written notice stating that a specified carrier or carriage service provider has engaged, or is engaging, in *at least one instance of anti-competitive conduct of a kind described in the notice*, where the Commission has reason to believe that such conduct has occurred.

The Commission is required to consult with the relevant carrier or carriage service provider before issuing a Part A competition notice, by issuing a written notice describing, in summary form, the alleged anti-competitive conduct that is proposed to be specified in the Part A competition notice. The consultation process must invite the carrier or carriage service provider to make a submission to the Commission by a specified time limit regarding the proposed issuing of the Part A competition notice. The Commission must consider any submission received within the specified time limit before issuing a Part A competition notice.

Section 151AO provides that a Part A competition notice remains in force for the period specified in the notice, which must not be longer than 12 months. The Commission can issue a subsequent Part A competition notice for the same conduct after the first notice has expired.

Part B competition notices

Section 151AL of the Act provides that:

- where the Commission has reason to believe that a carrier or carriage service provider has committed, or is committing, a contravention of the competition rule, the Commission may issue a written notice;
    - stating that a specified carrier or carriage service provider has contravened, or is contravening, the competition rule; and
    - setting out particulars of that contravention
- a Part B competition notice may be issued even after enforcement proceedings have been initiated.

Section 151AN of the Act provides that in any proceedings under, or arising out of, Part XIB, a Part B competition notice is *prima facie* evidence of the matters set out in that notice. What this means is that, in any proceedings relating to an alleged contravention of the competition rule, the onus will be on the carrier or carriage service provider which is the subject of the Part B competition notice to refute the existence of the allegations contained in the notice. In this sense, the burden of proof is reversed. The question about whether a contravention has occurred is, of course, ultimately to be decided by a court.

Advisory notices

In investigating an alleged contravention of the competition rule, in addition, or as an alternative to issuing a competition notice, the Commission may decide to issue a written notice advising the carrier or carriage service provider under investigation of the action it should take, or consider taking, to ensure that it does not engage, or continue to engage, in anti-competitive conduct.

An advisory notice is not legally binding – the Commission is only offering guidance to the recipient of the notice on how it may change its conduct to avoid contravening the competition rule.

Appendix 2 – Background and responses to FSR1

Key recommendations in June 2006 position paper

In its June 2006 position paper, the Commission identified areas of interest for further consideration and comment by interested parties. These included the broader regulatory issues of:

- the merits of conducting an audit of infrastructure to further inform the Commission's analysis of access bottlenecks;
- the appropriateness of maintaining geographic market definitions on a national basis for the market identified in the June 2006 position paper, and any other markets considered relevant. Parties were invited to comment on the timing in which market definitions were likely to change;
- the factors that the Commission must take into account in considering whether to roll back regulation of various fixed network services; and
- the most appropriate mechanism for the removal of regulation. For example, the Commission noted that parties may wish to comment on whether the Act's exemption process (under section 152AT of the Act) is more appropriate or preferable to an ongoing review process.

Responses to specific issues raised in June 2006 position paper

Telstra submission (September 2006)

Stepping stone approach to regulation

Telstra submits that the 2006 position paper 'makes it clear that the Commission continues to endorse the stepping-stone or ladder-of-investment model of telecommunications regulation…'[99]

Telstra submits that the stepping stone model is a 'failed policy' principally because it has dampened investment incentives and delayed the development of sustainable facilities based competition. To support this argument, Telstra provides a number of examples from overseas jurisdictions such as the US, Canada and Europe, which it argues supports the contention that the Commission's continued 'endorsement of the stepping stone model is out of kilter with international regulatory thinking'.[100] Moreover, Telstra claims that:

> By reverting to its support of the stepping stone model the Commission seems intent on continuing to provide access seeks [sic] with every flavour of access imaginable – even though this approach is not required to meet the long-term interests of end users'.[101]

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[99] Telstra submission, p. 3.
[100] Telstra submission, p. 5.
[101] Telstra submission, p. 6.

Telstra reiterates its view (from its February 2006 submission) that the Commission should only be regulating 'bottleneck' hotspots – and in those hotspots, it should only regulate the bottleneck service.

Telstra also submits that the Commission's starting point for assessing 'effective facilities based competition or contestability' before winding back regulation is not the correct test under the Act. Rather, Telstra submits that the correct test is to consider whether continued declaration is in the LTIE. Telstra accepts that 'one limb' of the LTIE test refers to the objective of promoting competition, although it argues that this must be balanced with the objectives of achieving any-to-any connectivity and encouraging efficient use of and investment in infrastructure.[102] Further, Telstra submits that the concept of 'effective competition' is conceptually incorrect and that pre-existing conduct regulation in Parts IV and XIB of the Act is already designed to achieve workably competitive outcomes in circumstances where a firm has market power.[103]

Suggested approach to withdrawal of regulation

Telstra submits that a European public consultation paper provides clear guidance as to how the Commission should approach the issue of access regulation. Telstra suggests that a clear 'market based' and 'practical' approach when considering the LTIE criterion would involve conducting a market definition analysis, determining where there is significant market power and seeking the appropriate remedy.

Telstra states that to do this properly, the Commission should follow these principles:

- start at the top of the vertical supply chain and work down (Telstra argues that the Commission to date has worked in the opposite direction);
- utilise fact based information (in this regard, Telstra argues that the Commission's proposed infrastructure audit is a 'good start' but should be augmented with the collection of other information);
- ensure fact based information is up to date (information from 2002, 2003 and 2004 does not provide illumination on current and emerging competition and technologies);
- ensure the information is forward looking and reflects the realities of what is going to happen in telecommunications in the future;
- properly contextualise any analysis within the broader regulatory framework (i.e. Accounting Separation, Operational Separation and public policy objectives of retail pricing parity); and
- deregulate markets that are becoming competitive on a forward-looking basis.

[102] Telstra submission, p. 7.
[103] Telstra submission, p. 7.

Optus submission (September 2006)

The 'stepping stone' approach

Optus agrees with the Commission's comments on the stepping stone policy expressed in the position paper. Optus states that it could not have rolled out its national DSL infrastructure without declaration of the PSTN OTA service.

Optus rejects the claim by Telstra that its resale customer numbers have increased whilst the utilisation of its HFC has decreased. Further, Optus concurs with the Commission that the time taken for the utilisation of ULL-based DSL to take off has reflected competitor concerns about access prices, market uncertainties and barriers from economies of scale associated with the copper CAN.

Audit of infrastructure

Optus does not support the proposal by the Commission to conduct an infrastructure audit. It believes this project would:

- impose unreasonable cost burdens on individual respondents and the telecommunications industry;
- not deliver meaningful or actionable information because the information would become outdated and need to be collected regularly; and
- not reflect that the existence of an alternative piece of infrastructure may not be determinative in itself of the nature of competition.

Optus submits that Telstra should use existing regulatory mechanisms to seek the reduction of regulation in areas where it believes that regulation is no longer warranted. Optus is also curious that Telstra proposed this new regulatory reporting requirement given its public campaign against over-regulation of the telecommunications industry.

Geographic market definitions on a national basis

Optus agrees with the Commission's approach to identifying relevant markets for declaration and believes that market definitions should be determined on a case-by-case basis. Optus also agree with the Commission comments regarding the wholesale market for the supply of business grade data services, including BDSL, to retail customers.[104]

Optus also agrees with the list of issues outlined by the Commission in its position paper. Optus considers that there is no 'silver bullet' mechanism(s) and that the current exemption processes in the Act provide reasonable means to have regulation rolled back or removed.

[104] Refer to pages 91-92 of the Commission's June 2006 Position Paper

Appendix 3 Line Sharing Service (LSS) description

The High Frequency Unconditioned Local Loop Service is the use of the non-voiceband frequency spectrum of unconditioned communications wire (over which wire an underlying voiceband PSTN service is operating) between the boundary of a telecommunications network at an end-user's premises and a point on a telecommunications network that is a potential point of interconnection located at, or associated with, a customer access module and located on the end-user side of the customer access module.

Definitions

Where words or phrases used in this declaration are defined in the *Trade Practices Act 1974* or the *Telecommunications Act 1997*, they have the same meaning given in the relevant Act.

In this Appendix:

boundary of a telecommunications network is the point ascertained in accordance with section 22 of the *Telecommunications Act 1999;*

communications wire is a copper or aluminium wire forming part of a public switched telephone network;

customer access module is a device that provides ring tone, ring current and battery feed to customers' equipment. Examples are Remote Subscriber Stages, Remote Subscriber Units, Integrated Remote Integrated Multiplexers, Non-integrated Remote Integrated Multiplexers and the customer line module of a Local Switch;

public switched telephone network is a telephone network accessible by the public providing switching and transmission facilities utilising analogue and digital technologies.

voiceband PSTN service is a service provided by use of public switched telephone network and delivered by means of the voiceband portion of the frequency spectrum of a metallic line.

Appendix 4 – The potential use of pricing information to inform geographic boundaries of markets

Evidence of price discrimination

If a telecommunications provider adopts different pricing strategies across different regions, this may indicate its belief that different competitive dynamics exist. The different competitive dynamics may result from factors such as the level and nature of competition, or the perceived elasticities of demands of the customers.

That said, it should be noted that if a provider prices its products on a 'national' basis, this may not necessarily indicate that different competitive environments do not exist. For example, Telstra may raise prices nationally, but may still consider that a more intense competitive constraint exists in a certain region due to that region's differing competitive dynamics. It may simply be that the benefits of instituting a national price outweigh any potential costs of raising prices in that region. The benefits of a national pricing strategy may include seeking to achieve cost savings in advertising, decreased potential confusion for customers or create greater ease in training sales staff. Conversely, a firm may engage in price discrimination, even where competitive conditions do not vary between regions.

Price correlation testing

Price correlation testing essentially involves comparing prices in two different geographic regions. The principle of such analysis in this context is that if fixed services supplied in different geographic regions are in the same geographic market, their prices should move together over time.

While this type of analysis is simple and potentially powerful, it has well known weaknesses. In the first instance, it is possible that both price series might be subject to a common price shock (i.e. input cost) which results two price series moving together, even though they may not be in the same market. Other potential weaknesses include the possibility that one price series may respond to another with a significant lag (which may be overlooked in the analysis) or that there is no obvious answer as to what level of correlation is 'high enough' to warrant two geographic regions being in the same market.

More advanced statistical methods have emerged to overcome some of these weaknesses. One such method is the use of 'stationary testing'.[105] In applying this technique to the geographic dimension of market definition, the variables of interest are 'relative prices' (the ratio of one price to another). The intuition is that if two sets of prices arise from transactions in the same geographic market, then other things equal, one should expect their ratio to be stationary. The basis for this is similar to the idea underlying price correlation analysis: there is a limit to how far prices within a

[105] A time series is said to be stationary if it tends to revert to a constant long-run value and if the effects of shocks are only temporary. A time-series is said to be non-stationary if the effects of shocks are permanent, or it the time series evolves along a trend.

single market can move out of line with one another before one price or the other is forced to realign as a result of competitive pressure.[106]

The Commission considers that while statistical testing may be a useful tool to consider in conjunction with other information, the Commission considers that it will often be data-intensive, and certain weaknesses associated with these techniques need to be borne in mind, and any results utilised accordingly.[107] In particular, the Commission notes the possibility that an over-reliance on these type of techniques may encourage an incumbent to adjust its pricing structures with the intention of influencing the regulatory regime.

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[106] On the usefulness of stationarity testing to inform market analysis, CRA International has noted that 'Stationarity tests provide a rigorous means of testing whether there is a statistically significant tendency for relative prices to revert to a constant value. This kind of test sheds light on market definition by making it possible to conclude whether relative price movements follow patterns we would expect within a single relevant market'. *Market Definition: How Stationarity Tests Can Improve Accuracy*, CRA International, Competition Memo: June 2001

[107] For one, a focus on price data may not be sufficiently forward-looking to capture geographic variations in competitive conditions that could be expected over the relevant period. Further, an overly strong reliance on these techniques may encourage an access provider to set the market boundary or to 'game the regulatory structure'.