Australian
Competition &
Consumer
Commission

Fixed Services Review – Declaration Inquiry

Public inquiry into the fixed line services declarations

Draft Report

December 2013

Contents

List of abbreviations and acronyms

ACCC	Australian Competition and Consumer Commission
ACMA	Australian Communications and Media Authority
ADSL	asymmetric digital subscriber line
ATA	analogue telephone adapter
CAM	customer access module
CAN	customer access network
CBD	central business district
CCA	*Competition and Consumer Act 2010*
c-i-c	commercial in confidence
CSP	carriage service provider
DSL	digital subscriber line
DSLAM	digital subscriber line access multiplexer
DTCS	domestic transmission capacity service
ESA	exchange service area
FAD	final access determination
FOAS	fixed originating access service
FTAS	fixed terminating access service
HFC	hybrid fibre-coaxial
ISDN	integrated services digital network
LCS	local carriage service
LSS	line sharing service
LTIE	long-term interests of end-users
MSAN	multi-service access node
NBN	National Broadband Network

POI	point of interconnection
POTS	plain old telephone service
PSTN	public switched telephone network
PSTN OTA	PSTN originating and terminating access
SAU	special access undertaking
SIOs	services in operation
SSNIP	small but significant non-transitory increase in price
ULLS	unconditioned local loop service
VoIP	voice over internet protocol
WLR	wholesale line rental

Glossary

access seeker	Telecommunications companies that seek access to the declared service (that is, the right to use the declared service).
access provider	Telecommunications companies that provide access to a declared service.
ADSL	Asymmetric Digital Subscriber Line. A technology for transmitting digital information at high data rates on existing copper phone lines. It is called asymmetric because the download and upload speeds are not symmetrical (that is, download is faster than upload).
backhaul	The line carrying traffic from a transmission point (generally the telephone exchange) to a central point (in the IP core).
CAN	Customer Access Network. The portion of the copper network that connects each telephone end-user to the network switch at their local exchange.
declaration inquiry	The process by which the ACCC holds a public inquiry to determine whether a service should be declared.
declared service	A service that the ACCC regulates under Part XIC of the CCA. Once declared, a service provider must supply the service to other parties in accordance with the standard access obligations and the terms and conditions set in the final access determination.
downstream	Further along the supply chain. For example, mandating access to network services can promote competition in downstream retail broadband services.
DSLAM	Digital Subscriber Line Access Multiplexer. A device which makes use of the copper access lines to provide high data rate services, enabling broadband services to be provided over copper lines. It is located in a telephone exchange that links many customer DSL connections (copper wires) to a core IP network via a backhaul system.
DTCS	Domestic Transmission Capacity Service. The regulated transmission

	service.
end-user	Retail consumers of telecommunication services.
exchange	Place where various numbers and types of communication lines are switched so as to establish a connection between two telephones. The exchange also houses DSLAMs, allowing end-users to connect to the internet.
enduring bottleneck	A network element or facility that exhibits natural monopoly characteristics, and is essential in providing services to end-users in downstream markets.
FAD	Final Access Determination. The FAD is made by the ACCC and sets the terms and conditions (including prices) on which a service provider must supply a declared service.
FOAS	Fixed Originating Access Service. The proposed new name of the currently declared PSTN OA service.
FTAS	Fixed Terminating Access Service. The proposed new name for the currently declared PSTN TA service.
fixed line services	Telecommunications services provided over fixed networks, such as Telstra's copper network and HFC networks. The 'declared fixed line services' are the six fixed line services declared in 2009 – the ULLS, LSS, WLR, LCS, PSTN OA and PSTN TA.
HFC network	Hybrid Fibre-Coaxial Cable network. A combination of fibre optic and copper coaxial cables able to deliver large amounts of data. Typically used to deliver internet services and pay television services.
IP Core	Internet Protocol Core Contains routers and electronic equipment that send data traffic to its desired location (such as a webpage server).
LCS	The declared Local Carriage Service. For a 'per-usage' charge, allows access seekers to resell local calls to end-users without having to invest in their own network and switching equipment. The LCS is purchased in conjunction with the WLR service.

LSS	The declared Line Sharing Service. Allows access seekers to share the use of the copper line connecting consumers to the telephone exchange, allowing them to provide fixed internet services using their own equipment. An alternative provider provides the voice services.
MTAS	The declared Mobile Terminating Access Service. A wholesale service provided by a mobile network operator (MNO) to fixed line operators and other MNOs to connect – or 'terminate' – a call on its mobile network. It enables calls to be made to consumers on mobile phone networks.
Naked DSL Service	A reference to a telecommunications service where an end-user only receives an internet service (and no voice service) from a service provider. This can only offered by access seekers using the ULLS and their own exchange equipment.
PSTN	Public Switched Telephone Network. The telephone network that allows the public to make and receive telephone calls via switching and transmission facilities and utilising analogue and digital technologies.
PSTN OA	The declared PSTN Originating Access service. Allows a telephone call to be connected from the caller to a point of interconnection with another network.
PSTN OTA	PSTN Originating and Terminating Access services. Used to refer to the PSTN OA and PSTN TA services together.
PSTN TA	The declared PSTN terminating access service. Allows a telephone call to be carried from the point of interconnection to the party being called on another network.
retail service provider	Companies that offer telecommunications services to end-users.
SIO	Service In Operation. Refers to an active telecommunications service provided to an end-user.
spectrum	The range of frequencies available on a transmission medium (including the copper wire). Voice services are traditionally supplied

	over a low frequency spectrum while internet services are supplied over a high frequency spectrum.
telephone switch	Hardware located within telephone exchanges that allow one end-user to connect to the PSTN so they can make or receive telephone calls from other end-users.
transmission	The carriage of voice, data or other communications.
ULLS	The declared Unconditioned Local Loop Service. Allows access seekers to use the copper line connecting end-users to the local telephone exchange, allowing them provide both fixed internet (broadband) and voice services using their own DSLAMs and other exchange equipment.
VoIP	Voice over Internet Protocol (IP). A voice service provided over the internet (for example, Skype) using packets of data as opposed to the traditional PSTN.
Wholesale ADSL	The declared Wholesale ADSL service. Allows access seekers to purchase a Wholesale ADSL product from Telstra and resell internet services to end-users.
WLR	The declared Wholesale Line Rental service. For a monthly 'per-user' charge, it allows access seekers to purchase a line rental service from Telstra, which includes access to the copper line and associated services (including a dial tone and telephone number) supplied using Telstra's equipment.

Summary of this draft report

In July 2013, the Australian Competition and Consumer Commission's (ACCC) commenced a public inquiry under Part XIC of the *Competition and Consumer Act 2010* (CCA) into the declarations of six fixed line services that are due to expire on 31 July 2014. The inquiry is part of the Fixed Services Review, which is also considering the terms and conditions (including price) for access to the declared services.[1]

The fixed services declaration inquiry is considering the scope of regulation of access to services delivered over Telstra's copper-based fixed network, which is used to provide fixed voice and fixed broadband services to end-users. The ACCC is concurrently reviewing the scope of regulation for mobile termination and transmission services in its Mobile Terminating Access Service and Domestic Transmission Capacity Service declaration inquiries.

This draft report sets out the ACCC's proposed decision on the declarations for the fixed line services, the service descriptions and other matters raised during the ACCC's consultation with industry and other interested parties. The report explains the ACCC's assessment framework and reasoning for the proposed decision.

The ACCC invites submissions on the proposed decision. Submissions are due on 14 February 2014. The ACCC intends to publish its final report in early 2014.

The ACCC proposes to extend the declarations for network access services.

The ACCC considers that it is in the long-term interests of end-users (LTIE) for the unconditioned local loop service (ULLS) and line sharing service (LSS) to continue to be declared and notes that all parties submitted in favour of extending the declaration for these services.

The ACCC considers that Telstra's copper access network will remain an enduring bottleneck until the rollout of the National Broadband Network (NBN) is complete. As a vertically integrated firm, Telstra has an incentive to either deny access or charge above-cost prices for access in order to give a competitive advantage to its own retail operations. As Telstra's copper network is expected to remain a bottleneck for the supply for retail voice and broadband services until the NBN is rolled out, there are limited substitutes for the ULLS and LSS. Alternative networks, such as Optus' Hybrid Fibre-Coaxial Cable (HFC) network, have a limited geographical footprint.

The ACCC notes that there has been steady growth in the number of exchanges in which there is digital subscriber line access multiplexer (DSLAM) competition. There has been strong growth in the number of services in operation (SIOs) and end-users served by access seekers using the ULLS and LSS. In December 2012, ULLS and LSS SIOs comprised 20 per cent of SIOs on Telstra's copper network. Further, declaration of the ULLS and LSS has contributed to a drop in the average price of broadband services. Retail prices have decreased (in real terms) every year since the ACCC began recording the information in 2007. Data

[1] The inquiry to make access determinations will consider the terms and conditions for the fixed line services declared as a result of this declaration inquiry and for the wholesale ADSL service (which was declared in February 2012 for a period of five years).

allowances have also increased in recent years, resulting in the effective price per GB decreasing significantly (from approximately $30/GB in 2007 to less than $1/GB today).

By allowing access to Telstra's bottleneck infrastructure, continued declaration of these network access services will promote the LTIE by promoting competition in retail markets and by encouraging the efficient use of, and investment in, infrastructure.

The ACCC proposes to extend the declarations for resale services, except where they are supplied using NBN infrastructure.

The ACCC considers that the LTIE will be promoted by continued declaration of the resale services, that is, the wholesale line rental (WLR) service, local carriage service (LCS) and public switched telephone network originating access (PSTN OA) (pre-selection and override) services.

The ACCC considers that the declaration of resale services will allow access seekers to compete effectively in building or maintaining their customer bases on a national basis during the transition to the NBN.

The ACCC considers that the network access services, and services supplied over alternative networks, are limited substitutes for the resale services in supplying fixed voice services. The substitutability of the ULLS for the WLR service is limited by the limited geographical footprint of access seekers' exchange equipment and the substantial costs of investing in expanding their footprint. In addition, the NBN rollout will increasingly reduce the commercial viability of further access seeker investments in copper-based infrastructure. Alternative networks, such as Optus' HFC network, similarly have a limited geographical footprint.

The ACCC considers that continued declaration of resale services will promote the LTIE by promoting competition in retail markets where access seekers do not have their own exchange equipment or alternative network infrastructure. It will also encourage the efficient use of, and investment in, infrastructure by avoiding inefficient investments in infrastructure by access seekers and by promoting efficient use of Telstra's copper network.

The ACCC considers that it is appropriate to exclude resale services provided using NBN infrastructure from the scope of regulation. Telstra, AAPT, iiNet and Macquarie Telecom submitted that resale services provided using NBN infrastructure should not be regulated, and no party submitted in favour of regulating resale services provided using NBN infrastructure. The proposed WLR, LCS and PSTN OA service descriptions have been amended to reflect this.

NBN Co will provide basic access services on regulated terms pursuant to its Special Access Undertaking. In addition, NBN Co provides services on a wholesale only basis and is subject to non-discrimination provisions.

The ACCC received evidence that a competitive aggregation market is likely to develop in supplying resale services over the NBN. Small retail service providers are expected to be able to buy competitively priced resale services in this market.

Additionally, the ACCC considers that the declaration of the PSTN OA (pre-selection and override) service supplied using NBN infrastructure would require costly investments in equipment that would not be justified by the expected benefits to end-users.

The ACCC proposes to remove the CBD exemptions from the WLR and LCS service descriptions.

The service descriptions for the WLR and LCS currently exempt Telstra from having to supply these services in the CBD areas in Sydney, Melbourne, Brisbane, Adelaide and Perth. The ACCC considers that removing the CBD exemptions will provide end-users with greater choice of service provider, functionality and retail service dimensions, particularly for the corporate segment of the market. Removal of the exemptions will enable access seekers to compete more effectively with Telstra to offer competitive packages of services to end-users.

The ACCC has received evidence that Telstra is charging prices for the WLR service in the exempt CBD areas that are significantly higher than the regulated WLR price. Specifically Telstra's list price for a business WLR service (Basic Telephone Service with Business Access) is $31.77 per month compared to the regulated price of $22.84 per month. The ACCC considers this evidence supports a conclusion that Telstra has market power in the exempt areas and is using that market power to set above-cost WLR prices.

The ACCC notes that CBD areas have high levels of infrastructure investment, including access seeker exchange equipment and fibre networks. However, the ACCC considers that, for a segment of the retail market, these networks cannot provide an effective substitute for the WLR service. Economies of scale in access seeker exchange equipment mean that ULLS-based supply of voice-only services is not commercially viable while the costs of replacing customer premises equipment deters many end-users from switching to IP-based services supplied over fibre networks (such as Voice over Internet Protocol telephony).

Further, access seekers are limited in their ability to compete with Telstra in providing a 'whole of business' voice and broadband package to nationally-based corporate end-users by the high WLR price in CBD areas, which limits their capacity to offer innovative bundling options at competitive prices. This leads to less choice and higher prices for these end-users.

The ACCC's proposes to extend the declaration for interconnection services.

The ACCC considers that it is in the LTIE for interconnection services to continue to be declared and notes that all submissions supported the continued declaration of the PSTN TA service. AAPT, ACCAN, iiNet, Macquarie Telecom, Optus and Telstra submitted that regulated termination of voice calls should be available on all networks to ensure any-to-any connectivity.

Macquarie Telecom submitted that the ongoing declaration of the PSTN TA service will also promote competition and the efficient use of and investment in infrastructure. Optus added that the ongoing declaration of PSTN OTA services would benefit both fixed and mobile telecommunications markets. Telstra submitted that declaring the PSTN OA service for special numbers functionality facilitates any-to-any connectivity.

The ACCC considers that, in the absence of regulated access to interconnection services, a large network operator could exercise its market power to increase the price of interconnection. Higher termination and call origination prices for special numbers (such as 13/1800 numbers) would likely be passed on to end-users for calls made to or (for special numbers) from other networks, making it more attractive for end-users to switch to a larger network. The ACCC considers this would harm the ability of smaller network operators to compete in retail markets.

Declaration of these interconnection services is likely to promote competition in the wholesale and retail markets for fixed voice services, achieve any-to-any connectivity and encourage the economically efficient use of, and investment in, infrastructure.

The ACCC proposes to monitor the development of any alternative IP-based voice interconnection protocol. If an alternative method of interconnection were to become an industry standard, the ACCC would consider whether to commence an inquiry into varying the service descriptions for interconnection services to recognise the adoption of a new standard.

The ACCC proposes to change the name of PSTN OA and PSTN TA to Fixed Originating Access Service (FOAS) and Fixed Terminating Access Service (FTAS) respectively, to reflect that the service declarations are technology-neutral. The ACCC is also proposing to remove from the service descriptions provisions relating to terms and conditions of supply that are usually included in final access determinations (FADs).

The ACCC will give further consideration to whether to commence a separate inquiry into declaring new services.

Some submissions proposed that the ACCC should declare new fixed line services. The ACCC would be required to commence a new inquiry into declaring any new services.

The ACCC is giving further consideration whether to commence an inquiry into the declaration of facilities access services. In doing so, the ACCC will take into account the existing regulatory regime established under the *Telecommunications Act 1997*. During its current inquiry into making FADs for the fixed line services, the ACCC will consider, and consult on, regulating facilities access services that are ancillary to declared services through the FADs. This process will inform any further decision regarding the commencement of a declaration inquiry for facilities access services.

The ACCC may consider the declaration of HFC services further, if necessary, following clarification of the role of HFC networks in supplying telecommunications services within the broader context of the NBN.

The ACCC may consider whether to commence an inquiry into declaring a wholesale business-grade (symmetrical) DSL service, should sufficient information become available to warrant such an inquiry.

The ACCC's current view is that an inquiry into declaring a fixed to mobile service is not warranted based on the evidence available to it at this stage.

The ACCC will also monitor the development of other potential emerging issues related to fixed line telecommunications services, including the provision of fibre access broadband services in local fibre networks and managed ADSL services in any fibre-to-the-basement developments. Should competition or efficiency concerns arise, the ACCC will consider how best to respond, including through processes under Parts XIB or XIC of the CCA as may be appropriate in the circumstances.

The ACCC proposes to extend the declarations for the fixed line services for another five years.

To ensure regulatory certainty in the transition to the NBN, the ACCC proposes that the current declarations be extended for another five years. The ACCC considers that during this period, it is likely that Telstra will retain control of the copper network and that this network

will remain an essential bottleneck facility. A five year regulatory period will provide a degree of certainty and facilitate business planning during the transition to the NBN, which will in turn promote efficient investment decisions by both Telstra and access seekers.

1 Introduction

The Australian Competition and Consumer Commission (ACCC) is holding a public inquiry into the declarations of the fixed line services. This declaration inquiry is part of the overall review of the fixed line services (Fixed Services Review), which also includes an inquiry into making Final Access Determinations (FADs) for the declared fixed line services.[2]

Under section 152(3) of the *Competition and Consumer Act 2010* (CCA), the ACCC may declare an eligible service following a public inquiry under Part 25 of the *Telecommunications Act 1997* (Telecommunications Act), provided it is satisfied that the making of the declaration will promote the long-term interests of end-users of carriage services or services provided by means of carriage services.

1.1 Background

In 2009 the ACCC extended the declaration of six fixed line services until 31 July 2014. The fixed line services are made up of the unconditioned local loop service (ULLS), line sharing service (LSS), local carriage service (LCS), wholesale line rental (WLR) service, domestic public switched telephone network originating access (PSTN OA) service and public switched telephone network terminating access (PSTN TA) service. A summary of the ACCC's reasons for making these declarations in 2009 can be found in chapter 4 of the July 2013 discussion paper.

During the 18 month period preceding the expiry of the declarations, the ACCC is required to conduct a public inquiry to determine whether the existing declarations should be extended, revoked, varied, allowed to expire or expire and a new declaration made. In accordance with these provisions the ACCC commenced a declaration inquiry into six fixed line telecommunication services on 11 July 2013.

1.2 Declaration inquiry process to date

On 11 July 2013 the ACCC released a discussion paper to assist interested parties in preparing submissions to the declaration inquiry. As part of its declaration inquiry, the ACCC invited submissions on whether stakeholders consider the currently declared services should be extended, the service descriptions for the existing declared services should be varied, and whether the ACCC should conduct further inquiries into declaring additional services. The ACCC received a number of submissions from ten parties in response to its discussion paper (see appendix G).

On 13 September 2013, the ACCC wrote to all parties who had made submissions to the July 2013 discussion paper, outlining its expectation that parties will agree on and establish arrangements for the disclosure of confidential information with appropriate protections. The ACCC considers that, by providing sufficient transparency over the basis for its decisions, it will ensure that there is an appropriate balance between protecting the genuinely confidential

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[2] The inquiry into making FADs for the fixed line services will also include the making of an FAD for the Wholesale ADSL service. As the ACCC declared the Wholesale ADSL service for a period of five years on 14 February 2012, the ACCC has not commence an inquiry into further extending the expiry date of this service. However, the FAD for the Wholesale ADSL service expires on 30 June 2014, consistent with the expiry date for the remaining fixed line services. Consequently, the ACCC has combined the FAD inquiries for the six fixed line services and Wholesale ADSL service.

information of parties and promoting confidence in the robustness of the its regulatory processes.

In response to the July 2013 discussion paper, the ACCC received a number of submissions in respect of whether CBD exemptions should be removed from the WLR and LCS service descriptions. The ACCC considered it needed additional information to enable it to make a well informed and robust decision on this issue. The ACCC issued an information request to a number of stakeholders on 9 October 2013. Responses were received from six parties.

1.3 Other related inquiries

On 11 July 2013 the ACCC also commenced an inquiry into making FADs for the six fixed line services and the wholesale ADSL service. The FADs set out the prices and non-price terms and conditions of access for these services and expire on 11 July 2014.

On 13 December 2013 the ACCC published a notice to extend the decision making period for these FADs to 11 July 2014. The notice is published on the public register maintained by the ACCC. The ACCC will require more time to complete its FAD inquiry so that it can assess the large amount of complex expenditure and demand forecast data provided by Telstra in late November 2013. In addition, the ACCC considers it appropriate to complete this declaration inquiry before making new FADs for these services to give industry certainty about the scope of the ACCC's regulation.

The ACCC can extend or further extend the period for the FAD inquiry by period of six months provided it publishes a notice on its website explaining the reasons for each extension. The ACCC may need to consider a further extension if necessary to fully consider submissions to the inquiry and the implications of potential technological, commercial and policy developments that may occur during the course of its FAD inquiry.

The ACCC is also conducting declaration inquiries into the Domestic Transmission Capacity Service (DTCS) and the Mobile Terminating Access Service (MTAS). Where appropriate, the ACCC has adopted a consistent approach to the issues raised in this inquiry to those considered by the declaration inquiries for the DTCS and MTAS.

1.4 Making a submission on the draft report

After considering submissions to the July 2013 discussion paper, responses to the ACCC's information request and undertaking its own analysis, the ACCC has determined its draft position about which fixed line services should be declared from 1 August 2014, and is proposing a number of changes to some existing service descriptions. The proposed service descriptions are set out in appendices A-F. The ACCC encourages industry participants and other interested parties to make submissions on this draft report.

To foster an informed and consultative process, all submissions will be considered as public submissions and will be posted on the ACCC's website. Interested parties wishing to submit commercial-in-confidence material to the ACCC should submit both a public and a commercial-in-confidence version of their submission. The public version of the submission should clearly identify the commercial-in-confidence material by bookending the confidential material with an appropriate symbol or 'c-i-c'.

The ACCC expects that claims for commercial-in-confidence status of information by parties will be limited in order to promote transparency and broad participation in the public inquiry.

The *ACCC-AER information policy: the collection, use and disclosure of information* sets out the general policy of the ACCC and the Australian Energy Regulator on the collection, use and disclosure of information. A copy of the guideline can be downloaded from the ACCC's website.

The ACCC prefers to receive submissions in electronic form, either in PDF or Microsoft Word format which allows the submission text to be searched. Please contact Jessica Wicks regarding any questions you have concerning the consultation process on (03) 9658 6461.

Submissions are due on 14 February 2014.

1.5 Structure of this report

The draft report is set out as follows

Chapter 2 sets out the criteria the ACCC must consider in making a decision to declare a service and the approach taken in this report.

Chapter 3 sets out the ACCC's draft view on the state of competition in relevant markets.

Chapter 4 outlines the ACCC's draft views in relation to whether the continued declaration of network access services, being the ULLS and LSS services, is in the long-term interests of end-users.

Chapter 5 outlines the ACCC's draft views in relation to whether the continued declaration of resale services, being the WLR, LCS and PSTN OA (pre-selection and override) is in the long-term interests of end-users.

Chapter 6 outlines the ACCC's draft views in relation to whether the continued declaration of interconnection services, being the PSTN OA (special numbers)[3] and PSTN TA services, is in the long-term interests of end-users.

Chapter 7 sets out the ACCC's preliminary position on other issues. This includes the duration of the declarations for the fixed line services and carrier-specific exemptions. This chapter also considers fixed line services that are not currently declared[4] and have been the subject of submissions to this inquiry.

Appendixes A-F provide the ACCC's proposed service descriptions for the fixed line services, with proposed changes to the existing service descriptions in mark-up.

Appendix G lists the submissions, received by the ACCC to date to this inquiry, and their short titles.

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[3] Being the origination of calls to special numbers including 13/1300 and 1800 numbers.

[4] These services include facilities access services, hybrid fibre-coaxial (HFC) based services, wholesale business DSL services and fixed-to-mobile services).

2 The ACCC's assessment approach

Key Points

- The ACCC has had regard to the extent to which declaration is likely to promote the long-term interests of end-users (LTIE) in terms of whether the declaration is likely to result in the achievement of:
    - promoting competition in markets for telecommunications services;
    - achieving any-to-any connectivity; and
    - encouraging efficient use of, and investment in, infrastructure by which the service is supplied.
- The ACCC has used a 'with or without' analysis when considering the extent to which declaration is likely to promote the LTIE.
- The ACCC has considered substitutes to the relevant services, both on the demand and supply side, and the extent to which any substitutes might constrain any exercise of market power in the supply of the relevant services.
- The ACCC has conducted its assessment with regard to key economic principles such as whether the relevant service is supplied over infrastructure that exhibits enduring bottleneck characteristics.

2.1 Assessment framework

This chapter explains the assessment framework the ACCC has adopted in deciding whether to extend, revoke or vary the current declarations or allow them to expire and make new declarations. The framework is summarised below and was discussed in detail in the July 2013 discussion paper.

The ACCC notes that submissions from iiNet, AAPT and Macquarie Telecom broadly agreed with the ACCC's proposed assessment framework.[5] Telstra emphasised the economic principles and noted its view that only 'essential' facilities should be regulated, that is where the service involves a natural monopoly technology and where the service is essential for downstream production and is not substitutable.[6]

2.1.1 Legislative framework

In deciding to declare a service, the ACCC must be satisfied that declaring a service will promote the long-term interests of end-users (LTIE) of telecommunications services. In deciding whether declaration is likely to promote the LTIE, the ACCC must have regard to the extent to which declaration is likely to result in the achievement of the following three objectives:

- promoting competition in markets for telecommunications services;

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5 iiNet, August 2013 submission, p. 3; AAPT, August 2013 submission, pp. 22-24; Macquarie Telecom, August 2013 submission, p. 2.

6 Telstra, September 2013 submission, p. 46.

- achieving any-to-any connectivity; and
- encouraging efficient use and investment in infrastructure by which the service is supplied.

2.1.2 Economic rationale for declaring services

In its July 2013 discussion paper, the ACCC set out the economic rationale for declaring services. The ACCC noted that it uses well-established economic principles to analyse the expected impacts of regulating particular services on achieving the three objectives relevant to the LTIE.

The economic principles most relevant to a decision on whether to declare fixed line services are:

- whether the relevant infrastructure exhibits enduring bottleneck characteristics that affect competition in related markets, any-to-any connectivity and efficiency in the use of, and investment in, telecommunications infrastructure, including both the infrastructure in question and related infrastructure;
- whether requiring access to services provided by telecommunications infrastructure will promote economic efficiency and competition; and
- whether infrastructure operators are vertically integrated and the likely effects of that vertical integration on competition in related markets, any-to-any connectivity and efficiency in the use of and investment in telecommunications infrastructure.

2.1.3 Approach to the LTIE test

The July 2013 discussion paper set out the ACCC's detailed approach to the LTIE test and its state of competition analysis. To determine whether the LTIE will be better promoted with declaration or without declaration, the ACCC is required to consider the effects of regulated access to particular services in each relevant market as well as make an overall assessment of the benefits expected to flow to end-users from declaration.

The ACCC notes that Part XIC of the *Competition and Consumer Act 2010* (CCA) does not require the ACCC to precisely define the scope of the relevant markets in a declaration inquiry. The ACCC's approach to market definition in the context of this declaration inquiry is discussed in chapter 3 of this draft report.

Once the relevant markets have been defined, the next step is to assess the state of competition in relevant markets. In assessing the state of competition, the ACCC considers 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. The state of competition in relevant markets is discussed in chapter 3 of this draft report.

Promoting competition in markets for telecommunications services

When conducting a declaration inquiry, the ACCC is required under subsection 152AB(2) of the CCA to consider whether declaration of a service is likely to promote competition in relevant markets. In assessing whether declaration will promote competition in markets for telecommunications services, the ACCC considers that it is useful to consider the likely state of competition in the future both with declaration and without declaration.

Achieving any-to-any connectivity

The objective of any-to-any connectivity is achieved when each end-user is able to communicate with other end-users, whether or not they are connected to the same telecommunications network.[7]

The ACCC notes that the relevance of any-to-any connectivity in achieving the LTIE is only relevant in the declaration context with respect to certain services. The Explanatory Memorandum the Trade Practices Amendment (Telecommunications) Bill 1996 stated that the objective of any-to-any connectivity will only be relevant when considering whether a particular service promotes the LTIE of a carriage service that involves communications between end-users.[8] When considering other types of services (such as carriage services which are inputs to an end-to-end service) this criterion will be given little, if any, weight.

The achievement of any-to-any connectivity is particularly relevant when considering services that require interconnection between different networks.

Efficient use of, and investment in, infrastructure

In determining the extent to which declaration is likely to encourage the economically efficient use of, and investment in, infrastructure, subsections 152AB(6) and (7) of the CCA provide that regard must be had (but is not limited) to the technical feasibility of providing and charging for the services, the legitimate commercial interests of the supplier(s) of the services, and the incentives for investment in infrastructure. These are discussed further below.

Economic efficiency has three components:

- Productive efficiency refers to the efficient use of resources within each firm to produce goods and services using the least cost combination of inputs.
- Allocative efficiency is the efficient allocation of resources across the economy to produce goods and services that are most valued by consumers.
- Dynamic efficiency refers to efficiencies flowing from innovation leading to the development of new services or improvements in production techniques. It also refers to the efficient deployment of resources between present and future uses so that the welfare of society is maximised over time.

Facilitating access plays an important role in ensuring that existing infrastructure is used efficiently where it is inefficient to duplicate the existing networks or network elements. This is likely to be where infrastructure has natural monopoly characteristics and is a bottleneck for the supply of downstream services. An access regime must not discourage investment in networks or network elements where such investment is efficient.

Technical feasibility

In assessing the technical feasibility of supplying and charging for a service, the ACCC considers:

- the technology that is in use, available or likely to become available;

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7 Subsection 152AB(8) of the CCA.

8 Explanatory Memorandum, Trade Practices Amendment (Telecommunications) Bill, 1996, pp. 40-41.

- whether the costs that would be involved are reasonable or likely to become reasonable; and
- the effects or likely effects of supplying and charging for the service on the operation or performance of telecommunications networks.

The ACCC assesses the technical feasibility of supplying the relevant service by examining the access provider's ability to provide the service and considering experiences in other jurisdictions.

The legitimate commercial interests of the infrastructure operator

An infrastructure operator's legitimate commercial interests relate to its obligations to the owners of the firm, including the need to recover the costs of providing services and to earn a normal commercial return on the investment in infrastructure. Allowing for a normal commercial return on investment provides an appropriate incentive for the access provider to maintain, improve and invest in the efficient provision of the service.

Paragraph 152AB(6)(b) of the CCA also requires the ACCC to have regard to whether providing access may affect the infrastructure operator's ability to exploit economies of scale and scope. Economies of scale arise from a production process in which the average (or per unit) cost of production decreases as the firm's output increases. Economies of scope arise where it is less costly for one firm to produce two (or more) products than it is for two (or more) firms to each separately produce the relevant products. The ACCC assesses the effects on an infrastructure operator's ability to exploit both economies of scale and scope on a case-by-case basis.

Incentives for efficient investment

Infrastructure operators should have the incentive to invest efficiently in the infrastructure by which the services are supplied (or are capable, or likely to become capable, of being supplied). In assessing incentives for investment, regard must be had (but is not limited) to the risks involved in making the investment.[9]

Access regulation may promote efficient investment in infrastructure by avoiding the need for access seekers to duplicate existing infrastructure where duplication would be inefficient. It reduces the barriers to entry for competing providers of services to end-users and promotes efficient investments by these service providers in related equipment required to provide services to end-users.

2.2 ACCC's assessment against the LTIE

In making its assessment as to whether the declaration of fixed line services will promote the LTIE, the ACCC has adopted the above assessment framework. This section discusses the matters the ACCC took into account with respect to each of the fixed line services.

It is important to recognise that not all of the matters listed in the framework for assessment have been relevant to the assessment approach for each service. For example, the ACCC considers that the objective of promoting any-to-any connectivity (to which the ACCC must

9 Subsections 152AB(7A) and (7B) of the CCA.

have regard for the purposes of determining whether the declaration promotes the LTIE), is not relevant to issues raised with respect to network access services or resale services.

It is also important to recognise that the ACCC considers that the assessment approach taken with respect to each of the fixed line services is appropriate in the circumstances of this declaration inquiry. However, the ACCC may reconsider its assessment approach in light of different circumstances in any future consideration of these services.

This section is to be read together with the ACCC's specific analysis in chapters 4-6 for each of the fixed line services.

2.2.1 Network access services—ULLS and LSS

In determining whether declaration of network access services will promote the LTIE, the ACCC has considered the following key issues:

- the likely effect on competition from extending the declaration of network access services including consideration of the effect that the current declarations have had on the relevant markets, the increased provision of services using network access services and the resultant effect on competition in the retail and wholesale supply of fixed voice and broadband services;
- in the absence of declaration, the likely effect on the productive, allocative and dynamic efficiencies that are promoted by competition and the availability of close substitutes in the relevant markets;
- the likely effect of declaration on removing barriers to entry and competition in supplying retail services and the extent to which regulated network access encourages efficient use of, and investment in, infrastructure, including the effect on the use of Telstra's copper network and of access seekers' exchange equipment;
- the likely effect of declaration on Telstra's ability to exploit economies of scale and scope, its ability to earn a commercial return and, in the effect on its legitimate commercial interests.

2.2.2 Resale services—WLR, LCS and PSTN OA (pre-selection and override)

In determining whether declaration of resale services will promote the LTIE, the ACCC has considered the following key issues:

- the likely level of competition in the absence of declaration, including the extent to which both supply-side and demand-side substitutes are capable of constraining any market power in relation to the provision of resale services;
- the limitations of substitutes at the wholesale level that would reduce access seekers' ability to invest switch to other source of supply in the event of a significant and sustained increase in the price of resale services. The ACCC also considered the extent to which constraints on wholesale substitutes may hinder the development of a wholesale market for alternative supply of fixed voice services;
- the likely effect on the efficient use of, and investment in, infrastructure of an absence of declared resale services. This includes an assessment of whether, without declaration, an increase in the prices of resale service may lead access seekers to

make inefficient investments in copper-based exchange equipment in order to self-supply or offer resale services to other access seekers; and

- the likely effect of declaration on the ability of access seekers to efficiently build customer scale or maintain their established customer base in the transition to the NBN and the corresponding incentives of access seekers to invest in infrastructure required to connect to the National Broadband Network (NBN).

The ACCC has additionally considered the scope of declaration of resale services in the context of the current CBD exemptions. The ACCC's consideration of the CBD exemptions takes into account many of the factors outlined above, as well as:

- the likely effect on retail competition for voice-only and bundled voice and broadband end-users if the exemption provisions are retained;
- the likely effect of above-cost prices for resale services in CBD areas on access seekers' ability to compete in the provision of bundled services or in the provision of services to corporate customers on a 'whole of business' basis;
- limitations of substitutes for both self-supply and in the wholesale market for resale services, including economies of scale in supplying voice-only services; and
- limitations on retail substitution including the preferences of corporate end-users with a national base to be served by a single provider and the costs to end-users of changing customer premises equipment to use VoIP-based voice services and special services.

The ACCC also considered whether resale services provided using NBN infrastructure should be declared. In considering whether declaration would be in the LTIE, the ACCC has primarily considered:

- the likely effect on retail competition in the provision of fixed voice services supplied using NBN infrastructure, including the likely availability to NBN-based retail service providers of resale services in a competitive aggregation market; and
- the likely level of investments and economies of scale required by access seekers to self-supply Layer 3 services using NBN infrastructure as a substitute for resale services.

2.2.3 Interconnection services

In determining whether declaration of interconnection services will promote the LTIE, the ACCC has considered the following key issues:

- how market power arises in the provision of interconnection services, including whether the nature of interconnection services allows for substitution for termination and special numbers origination;
- the likely impact of the exercise of such market power on any-to-any connectivity;
- the effect on retail competition of any exercise of market power by network operators, including the ability to inefficiently raise prices in markets for fixed voice service and mobile voice service termination on fixed networks and for special numbers origination; and

- the effect of declaration on encouraging efficient investments in new networks and network capacity and in the use of existing networks and network capacity.

3 State of competition in relevant markets

Key Points

- The ACCC considers the relevant markets for the six currently declared fixed line services are the national markets for:
  - fixed voice services;
  - fixed broadband services;
  - bundled fixed voice and fixed broadband services.
- The ACCC considers that, absent regulated access to services provided using Telstra's ubiquitous copper network, the wholesale and retail markets for the provision of fixed voice services, fixed broadband services and bundled fixed voice and fixed broadband services would not display the characteristics of effectively competitive markets.

In deciding whether to declare a service the ACCC must consider whether declaration would promote the long-term interests of end-users (LTIE). The ACCC's approach to assessing whether continued declaration of the six currently declared fixed line services would be in the LTIE is set out in chapter 2.

To determine whether declaration is in the LTIE, the ACCC must consider, amongst other things, whether declaration will promote competition in the relevant markets. Since the ACCC's focus is end-users, the ACCC must consider whether competition will be promoted in the markets for services used by end-users; these are retail markets. To deliver retail services, retail service providers require wholesale services that allow them to supply these retail products. The question for this declaration inquiry is which wholesale services should be declared in order to promote competition in the related retail markets and thereby promote the LTIE.

In identifying the relevant markets in section 3.1, the ACCC has considered the (wholesale) markets for the declared services and the related downstream (retail) markets. The ACCC has then assessed the current state of competition within those markets (section 3.2). Understanding the current state of competition in these markets is a necessary first step in assessing the likely future state of competition with declaration and without declaration.

The 'future with and without' assessment is set out in the analysis in chapters 4, 5 and 6, and is a useful tool for assessing whether declaration will promote the LTIE objectives.

3.1 Relevant markets

3.1.1 Approach to defining the relevant markets

For the purposes of this declaration inquiry, identification of the relevant markets provides the ACCC with a field within which it can meaningfully analyse the effectiveness of competition. It is important to note that Part XIC of the *Competition and Consumer Act 2010* (CCA) does not require the ACCC to precisely define the scope of relevant markets for the

purpose of a declaration inquiry.[10] It may be sufficient to broadly identify the scope of the markets likely to be affected by the relevant declared service. Accordingly, a market definition analysis under Part XIC of the CCA should be seen in the context of determining whether declaration would promote competition.[11]

To define the relevant markets, the ACCC begins with the services in question and any goods or services that are substitutable for, or otherwise competitive with, the goods and services under analysis.[12] Typically, the ACCC considers the product, geographic and temporal dimensions of a market. When considering whether a product is substitutable, the ACCC may consider customer attitudes, the function or end-use of the technology, past behaviours of buyers, relative price levels, and physical and technical characteristics of a product.[13]

Substitution is key to market definition. Substitution involves switching from one product to another in response to a change in the relative price, service or quality of the product that is the subject of the inquiry. There are two types of substitution:

- substitution at the retail level, which involves customer-switching; and
- substitution at the wholesale level, which involves supplier-switching.

There may be associated switching costs or difficulties which, if significant, can impede the substitutability of products.

A method to determine if a product or service is a 'close' substitute for the purposes of market definition is to use the hypothetical monopolist or 'SSNIP' test. This test establishes an area of product and geographic space over which a hypothetical monopolist would likely impose a 'small but significant non-transitory increase in price' (SSNIP). A SSNIP in the context of the hypothetical monopolist test usually consists of a price rise for the foreseeable future of 5 to 10 per cent above the price level that would prevail under competitive market conditions.

3.1.2 Product dimension

As noted above, the LTIE test (discussed in detail in section 2.1.3 of chapter 2) directs the ACCC's attention to the markets in which competition is likely to be promoted. This will generally be the markets for downstream services (retail markets) rather than the market in which the eligible service is supplied (wholesale markets).

For the purposes of considering the declarations, the ACCC has considered both the wholesale and retail markets . Demand for wholesale services (the declared services) is a derived demand as these services as used to supply demand at the retail level.

The unconditional local loop service (ULLS) and line sharing service (LSS) can be used by access seekers to supply products:

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10 See ACCC, *Telecommunications services – Declaration provisions – a guide to the declaration provisions of Part XIC of the Trade Practices Act*, July 1999, pp. 41-42; *Foxtel Management Pty Ltd v Australian Competition and Consumer Commission* [2000] FCA 589 at [172] per Wilcox J.

11 See ACCC, *Telecommunications services- Declaration provisions – a guide to the declaration provisions of Part XIC of the TPA*, 1999.

12 Section 4E of the *Competition and Consumer Act 2010*.

13 See ACCC, *Merger Guidelines*, November 2008, p.19 for a useful list of information the ACCC may consider when identifying close substitutes to the relevant product.

- to other access seekers at the wholesale level (such as wholesale fixed voice services or wholesale fixed broadband services); or
- directly to end-users at the retail level—the LSS can be used to supply fixed broadband and the ULLS can be used to supply fixed voice, fixed broadband or bundled fixed voice and fixed broadband services.

The wholesale line rental (WLR), local carriage service (LCS) and public switched telephone network originating access (PSTN OA) (pre-selection and override) are wholesale inputs used in combination to supply traditional fixed voice services (or Plain Old Telephone Services (POTS)) at the retail level.

The PSTN OA (special numbers) and public switched telephone network terminating access (PSTN TA) services are used to allow the interconnection of fixed voice calls between end-users on different networks. These services support any-to-any connectivity between end-users.

All of these wholesale services are supplied using Telstra's copper network. Similar services may potentially be supplied using other networks, such as fibre and cable networks.

The ACCC has previously considered that there are three main types of markets supplied by these regulated services, that is, the markets for:

- fixed voice services;
- fixed broadband services; and/or
- bundles of fixed voice and broadband services.

These markets, and the degree of substitutability between these three types of services, do not need to be defined precisely. To deliver retail voice, broadband and bundled voice/broadband services, retail service providers require wholesale services that allow them to supply these retail products. Therefore, as stated above, the question for this declaration inquiry is which wholesale services should be declared in order to promote the LTIE.

Fixed voice-only services

Retail level substitutability

Defining the relevant markets for fixed voice services involves considering alternative ways in which retail customers can purchase voice services. From an end-user's perspective, there are four alternative ways to obtain voice services:

- by purchasing a suite of traditional (POTS) voice-only services on a fixed line network;[14]
- by purchasing voice services as part of a bundle of voice and broadband services provided on a fixed line network;
- by purchasing a Voice over Internet Protocol (VoIP) service as part of a broadband service, such as a Naked DSL product; or

[14] The ACCC considers it is appropriate to include basic access, local calls, national and international long distance calls and fixed to mobile calls within the suite of fixed voice services.

- by purchasing voice services provided over a wireless network, such as a mobile voice or bundled mobile voice and data service.

The degree of substitutability of a suite of traditional voice-only services with the three alternative means of purchasing voice services is discussed below.

POTS fixed voice to bundled voice/broadband substitution

Recent trends indicate both increasing demand for data services by retail customers and an increasing adoption of bundled voice and broadband services, especially by residential customers. These trends are discussed further below (see the section on *Bundling (retail level)*).

There is potential for end-users to substitute bundled services for traditional voice-only services. However, whether a particular voice-only end-user will switch would depend on the relative prices of traditional voice-only and bundled products, end-users' awareness of bundled products, their interest in using the data service provided as part of the bundled product, and their willingness to commit to a contract and to bear any upfront costs associated with acquiring the bundle (such as purchasing and setting up a modem).

The ACCC's *Snapshot of Telstra's Customer Access Network*, as at September 2013, shows that 4.8 million services in operation on Telstra's copper network were voice-only, out of a total of 9.4 million services in operation on its network. While some proportion of these end-users may be obtaining broadband services on other networks, such as Telstra's Hybrid Fibre-Coaxial (HFC) network, or via mobile broadband, there remains a significant number of voice-only end-users.

Any substitution between fixed voice and bundled voice/broadband products is expected to be largely one-sided. A voice-only customer could potentially substitute to a bundled voice and broadband product, in response to a SSNIP for voice-only services, and simply not use the data service. However, a bundled customer would be less likely to move to a voice-only product in the event of a SSNIP for bundled products because these customers are likely to still want a data service and it is often cheaper to buy a bundled retail product than to buy the various components separately (particularly for end-users signing up to a contract).

POTS fixed voice to VoIP substitution

Since 2009, there has been a significant increase in the provision and take-up of VoIP services in various forms. VoIP commonly refers to technologies that allow for transmitting voice communications over a packet switched network such as the internet. VoIP can be accessed through different devices, such as a computer, an internet phone or modems with a handset adapter. VoIP services may range from 'best efforts' services provided over the internet to fully managed services with higher quality of service assurances. Broadly speaking, there are three different kinds of VoIP services available to end-users:

- POTS emulation[15] via soft-switching and the ULLS—The access seeker uses the normal voice band of the copper line to connect a standard (POTS) telephone to a

[15] POTS emulation is a form of carrier-grade VoIP with one distinction; it does not require the purchase and installation of VoIP specific customer premises equipment. Carrier grade VoIP is a voice services with a quality of service assurance.

Multi-Service Access Node (MSAN) installed in Telstra exchanges that can terminate both DSL and voice-band traffic.

- Carrier-grade VoIP via an internet access device and the ULLS/LSS—The end-user connects to an internet access device (such as internet phone or modem with handset adapter) that converts the voice call to VoIP at the end-user premises. The call is transferred to the exchange and the access seeker's equipment over the broadband connection.
- Application layer VoIP via the ULLS/LSS—The access seeker provides a voice service through a full IP solution over the broadband connection, using either a VoIP handset or software on a computer to emulate a telephone, for example, Skype or other non-prioritised VoIP service.

The ACCC considers that VoIP services provided via POTS emulation are substitutable for a traditional voice service because the experience from the end-user's perspective is identical. Furthermore, the costs to end-users of using a POTS emulation voice service are unlikely to vary significantly from the costs of using fixed line voice services, as the same customer premises equipment can be used. This view reflects previous ACCC decisions.[16]

In respect of carrier-grade VoIP services, end-users must acquire either a VoIP-enabled phone or modem. This equipment may involve upfront costs to end-users, which may limit the substitutability of these services. However, the ACCC understand that, for residential end-users most service providers will supply this equipment at no cost to the customer if the customer signs up to a service contract for a fixed period, typically 12 or 24 months.

Carrier-grade and application layer VoIP services have a number of technical limitations that reduce their substitutability in terms of functionality and product dimension with traditional (POTS) fixed voice services and VoIP services provided via POTS emulation. Carrier-grade and application layer VoIP services are not available during power outages. They also do not facilitate the connection to emergency services or other special point of sale services such as EFTPOS. In contrast to carrier-grade VoIP services, application layer VoIP services are also subject to inherent quality issues associated with the 'best efforts' nature of such services, which causes quality to drop when there is internet congestion.

Optus' submission reiterates its previous views that carrier-grade VoIP services are not a significant substitute for fixed line voice services. Optus states that these VoIP services cannot provide an effective competitive constraint on Telstra's pricing in the fixed line market due to technical limitations, such as quality of service, call routing, terminal location and interoperability.[17]

Major carriers, such as iiNet, TPG and Internode, offer carrier-grade VoIP solutions using a range of analogue telephone adaptor (ATA) solutions and/or VoIP-enabled phones, usually sold as part of a bundle with broadband services. Many of these bundled services are priced within a range that an end user, particularly those with medium and high usage of voice services, could switch from a voice-only service to a VoIP service for little or no change in cost, in the event of a SSNIP.

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16 ACCC, *Fixed services review declaration inquiry for the ULLS, LSS, PSTN OA, PSTN TA and WLR,* Final decision, July 2009, p.19 and the ACCC, *Inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services,* Final report, December 2011, p. 26.

17 Optus submission, August 2013, p. 15.

Table 3.1: Monthly bill for residential voice-only customers—fixed voice and bundled VoIP and broadband services

Fixed voice only				Bundled VoIP + broadband			
User type[a]	Ranking[b]	Service provider	Monthly bill[c]	Ranking[b]	Service provider	Monthly bill[c]	Data allowance
Low	Lowest	Optus	$41.94	Lowest	iiNet	$77.47	100 GB Total allowance
	Highest	iPrimus	$56.17	Highest	iPrimus	$84.93	20GB peak + 20 GB off peak
	Average		$51.21	Average		$81.20	
Medium	Lowest	Optus	$52.75	Lowest	iiNet	$82.58	100 GB Total allowance
	Highest	Telstra	$76.76	Highest	iPrimus	$100.54	50GB peak + 50GB off-peak
	Average		$61.19	Average		$91.56	
High	Lowest	Dodo	$57.86	Lowest	iiNet	$102.79	50GB
	Highest	Telstra	$115.06	Highest	iPrimus	$121.78	50GB peak + 50GB off-peak
	Average		$79.34	Average		$112.29	

Source*:* Websites of selected retail service providers, June quarter 2013.

Notes: [a] Defined as low, medium and high on the basis of assumptions about the number of voice calls made and, in the case of bundled broadband, data allowance requirements. Low users are assumed to make 31 calls and require the smallest data allowance available per month; medium user 62 calls and greater than 50GB per month; and high users 123 calls and greater than 150GB per month. These calculations also include some number of fixed-to-mobile, long distance and international calls. [b] Based on total bill spend per month. [c] Bundled plan prices include equipment and set-up costs (including switching costs), amortised over 24 months. Equipment costs are as specified by the service provider. These costs may be reduced by sourcing the equipment from alternative providers.

Table 3.1 shows three different types of users and monthly bill range available for fixed voice only and bundled carrier-grade VoIP and DSL broadband (that is, a broadband service without a POTS fixed voice service). Based on data packages available for low to medium users, a 5-10 per cent increase in the price of fixed voice services may not necessarily induce end-users to switch to a bundled fixed voice and broadband service. In contrast to low to medium users, end-users who make a large number of calls especially long distance and international calls may find it financially beneficial to switch from a voice-only service to a VoIP/broadband bundled service.

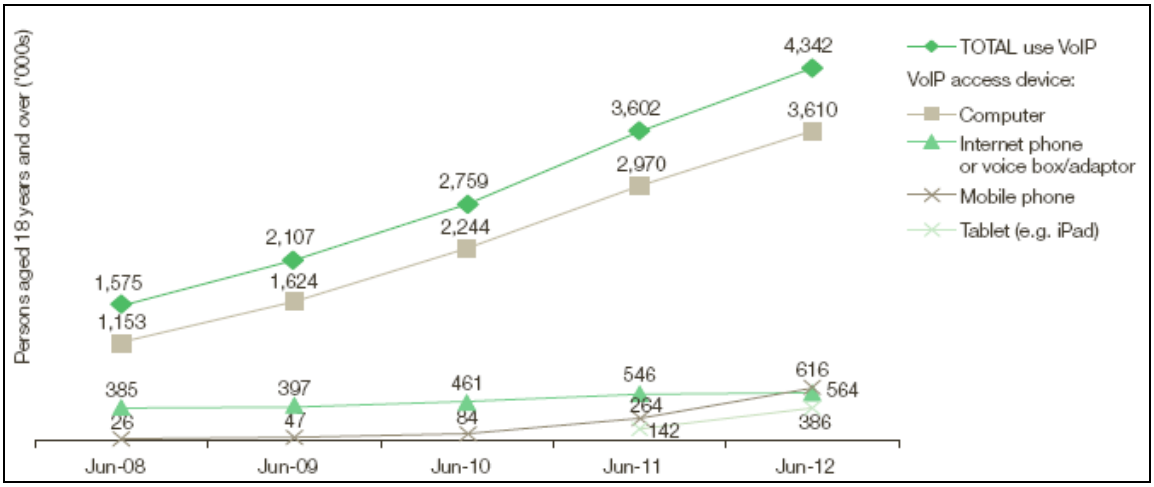
The ACCC considers that carrier-grade VoIP services are likely to be substitutable for traditional voice-only services for some end-users.

The Australian Communications and Media Authority's (ACMA) *Communication Report 2011-12* noted an increase in the number of VoIP providers as of June 2012 to 212 providers from 176 providers at June 2011[18], and noted that the number of VoIP users increased by nearly 21 per cent to 4.3 million users aged 18 years and over at June 2012. However, as shown in figure 3.1 the majority of growth has occurred in the use of computer/tablet-based VoIP (or application layer VoIP). The ACMA report concluded that application layer VoIP services are largely used as a complement to either a mobile phone or a traditional fixed line

[18] ACMA, *Communication report 2011-12,* p. 29.

telephone or both, with 99 per cent of computer/tablet VoIP users also using a mobile phone and 78 per cent also using a fixed line home telephone at June 2012.[19]

Figure 3.1 Take-up of VoIP services by household consumers



Note: Multiple responses allowed, so components do not add to total. Computer VoIP refers to use of a PC/laptop computer and excludes tablet devices.

Source: Roy Morgan Single Source, June 2012 as cited in the ACMA Communications report 2011-12 p. 31.

In relation to application layer VoIP, the ACCC notes that while there has been a rapid uptake of these services, growth has started from a very low base. Because of the lower quality of service it offers, the ACCC considers that application layer VoIP remains a weak substitute for fixed line voice services.

Fixed voice to mobile substitution

As noted in the July 2013 discussion paper, the growth in mobile voice services appears to be associated with end-users switching from fixed line services to mobile services to make voice calls. ACMA estimated that in 2011–12, the number of Australian adults with a mobile phone but no fixed line telephone grew by 24 per cent to 3.1 million.[20] The intensity with which mobile telephones are used to make calls has also increased, with the total number of call minutes from mobile telephones increasing by 16 per cent in 2011–12.[21] The rapid growth in call minutes from mobile telephones has been associated with significant falls in call minutes from fixed line telephone calls.[22]

The total number of fixed line voice services in operation (SIOs) has declined over the past few years, falling from 10.7 million in June 2009 to 10.4 million in June 2012.[23] In contrast,

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19 ACMA, *Communication report 2011-12*, p. 31.

20 ACMA, *Communications report 2011-12*, November 2012, p. 30, available at www.acma.gov.au/theACMA/Library/researchacma/Digital-society-research/communications-report-201112-library-landing-page.

21 ACCC, *ACCC Telecommunications reports 2011-12*, February 2013, p. 17, available at transition.accc.gov.au/content/index.phtml/itemId/1060713 .

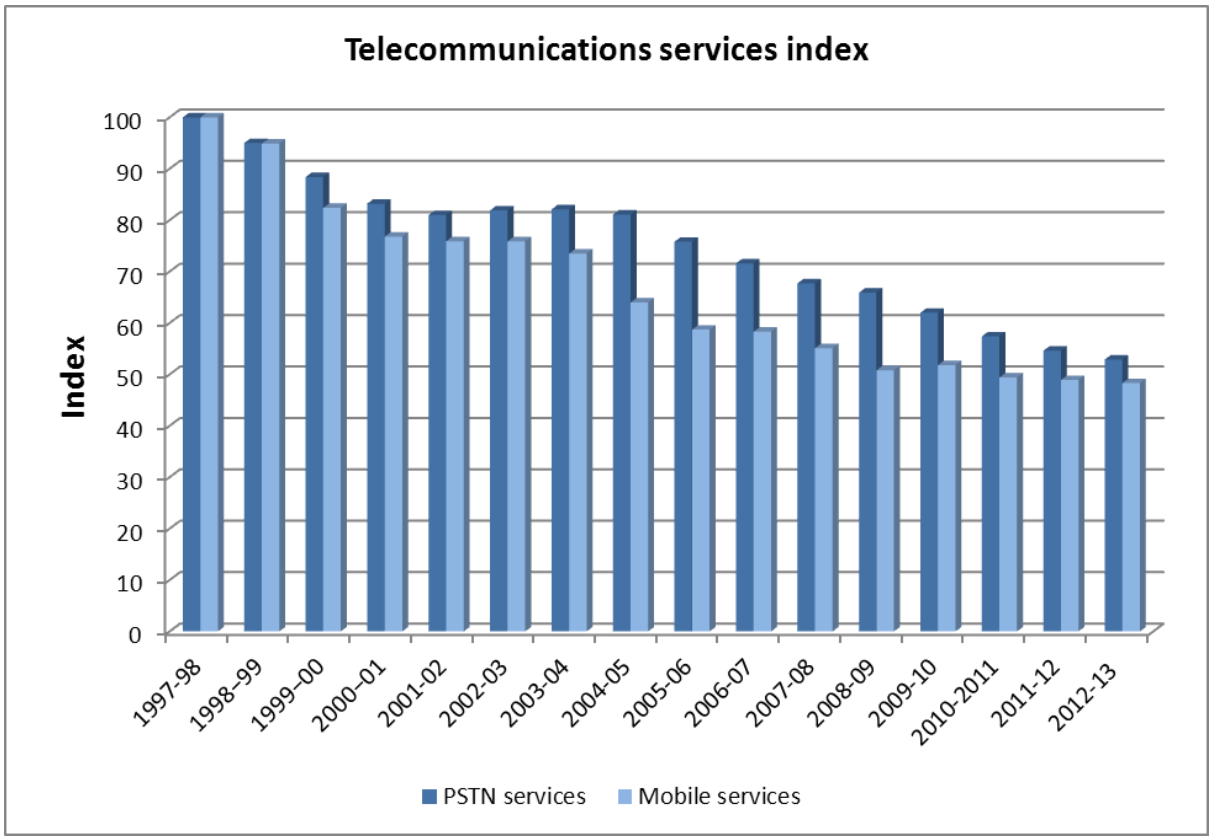
22 ACCC, *ACCC Telecommunications reports 2010-11*, May 2012, pp. 9-10, available at transition.accc.gov.au/content/index.phtml/itemId/1060713.

23 ACCC, *ACCC Telecommunications reports 2010-11*, May 2012, p. 12, available at transition.accc.gov.au/content/index.phtml/itemId/1060713.

the number of mobile handsets in operation[24] grew from 22.5 million in June 2009[25] to 24.3 million in June 2012.[26] There are now signs that the number of mobile handsets has plateaued.[27]

From a price perspective, the ACCC's telecommunications services index shows that since 1997-98 the price of mobile services has declined at a greater rate than fixed line service prices as shown in figure 3.2..[28] However, since 2009-10 total fixed voice services have declined more than mobiles, at 14.7 percentage points and 6.8 percentage points respectively.

Figure 3.2: Telecommunications services index, 1997–98 to 2012–13



Source: Data from Telstra, SingTel Optus, AAPT, Primus, Vodafone, Hutchison, Vodafone Hutchison Australia (VHA), and Virgin Mobile; pricing plans and other published information.

Some pricing features of the fixed line services are unlikely to be replicated by mobile service providers and this is likely to limit the extent of fixed to mobile substitution. In particular, the untimed local call feature of fixed line networks is likely continue to be an attractive feature for end-users for making long local calls. As noted in an ACMA report, the

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24 The ACCC is using 'handsets in operation' rather than 'services in operation' because the latter category includes non-voice services such as dongles, datacards and USB modems.

25 ACCC, *ACCC Telecommunications reports 2010-11*, May 2012, p. 14, available at transition.accc.gov.au/content/index.phtml/itemId/1060713.

26 ACCC, *Telecommunications reports 2011-12*, February 2013, p. 17, available at transition.accc.gov.au/content/index.phtml/itemId/1100331.

27 ACCC, *Telecommunications reports 2011-12*, February 2013, p. 17, available at transition.accc.gov.au/content/index.phtml/itemId/1100331.

28 Australian Competition and Consumer Commission (ACCC), *Telecommunications competitive safeguards for 2011-2012*, Table 7.1

mobile price premium or perceived premium has made many end-users hesitant to go 'mobile-only'.[29] Additionally, while mobile networks in Australia now cover 98.8 per cent of the population, a perception remains that mobile networks offer inferior reliability, and that coverage is patchy, particularly in rural areas.[30]

While there is increasing substitution between fixed voice services and mobile voice services, this substitution tends to be only for a segment of the market. While just over 18 per cent of the adult population in Australia were without a fixed line telephone service in their home, the majority of these end-users were between the ages of 18 and 34; the number of mobile-only users was significantly lower for people over 35.[31] The ACMA's findings suggest that the majority of Australians use various communications devices to suit their specific needs and circumstances rather than relying on one individual communication device.

Business end-users may be less likely than residential end-users to make a complete substitution from fixed to mobile. Some businesses prefer to offer customers a fixed line voice contact number over a mobile number, reflecting the lower cost of untimed local calls on the fixed line network compared to the cost of timed calls to mobile numbers.

It is also worth noting that some businesses may require voice-only lines for complex services, such as alarms, metering equipment and point of sale equipment like EFTPOS. The ACCC notes that some of these services are not available on a mobile network or the level of quality is not comparable. Where a mobile alternative is available, these alternatives may require the end-user to incur equipment and other costs in switching from a copper-based product to a mobile based product.

The ACCC concludes that for the majority of end-users mobile services are used as a complement to the fixed line voice services.

Wholesale level substitutability

Retail fixed voice-only services have traditionally been supplied via the resale services (WLR, LCS and PSTN OA (pre-selection and override)). These services are typically used together to provide local, long distance and international calls as well as fixed to mobile calls. These services are either provided as a full voice-only service to end-users or as part of a broader bundle of fixed voice plus broadband, mobile or pay TV services. (Wholesale and retail bundled broadband and voice services are considered in the section on *Bundling*.)

Potential alternatives to the LCS, WLR and PSTN OA (pre-selection and override) services from a retail service provider perspective include:

- self-supply of fixed voice services via the ULLS
- self-supply of fixed voice services over an alternative end-to-end network such as HFC or fibre optic (network level)
- resale voice services supplied either via ULLS or over an alternative network.

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29 ACMA *Fixed-mobile Convergence and fixed-mobile substitution in Australia,* July 2008, p. 2.

30 ACMA *Convergence and Communication Report Australian household consumers' take-up and use of voice communication services,* November 2013, p. 22.

31 ACMA, *Communication report,* 2011-12, p 30.

This section analyses the substitutability of these sources of supply for Telstra's resale voice services.

Resale and self-supply of fixed voice services using the ULLS

In terms of quality, the ULLS can provide equivalent fixed voice services to those provided by Telstra and resellers of Telstra's fixed voice services (including POTS emulation services). The ACCC considers therefore that resale fixed voice services supplied by a ULLS-based access seeker to another access seeker are technically a suitable substitute for the resale fixed voice services supplied by Telstra.

In order to provide equivalent fixed voice services via ULLS, access seekers must acquire the ULLS and install a digital subscriber line access multiplexer (DSLAM) or MSAN into a Telstra exchange. Whether a DSLAM or MSAN is used, the access seeker must have a soft switch installed somewhere in their network.

Therefore, although the ULLS can be used by access seekers as a substitute for resale services, the extent of the substitutability depends upon the level of investment required by access seekers to move from acquiring Telstra's resale voice services to self-supplying ULLS based fixed voice services. Barriers to entry in the acquisition of ULLS and the provision of ULLS-based fixed voice services can include:

- the costs of investing in exchange equipment (DSLAMs/MSANs and switching equipment), which may vary depending on the exchange service area and the ability to exploit any economies of scale and scope that exist in particular regions; and
- other constraints such as the existence of pair gains and the ability to access exchange space in a timely manner.

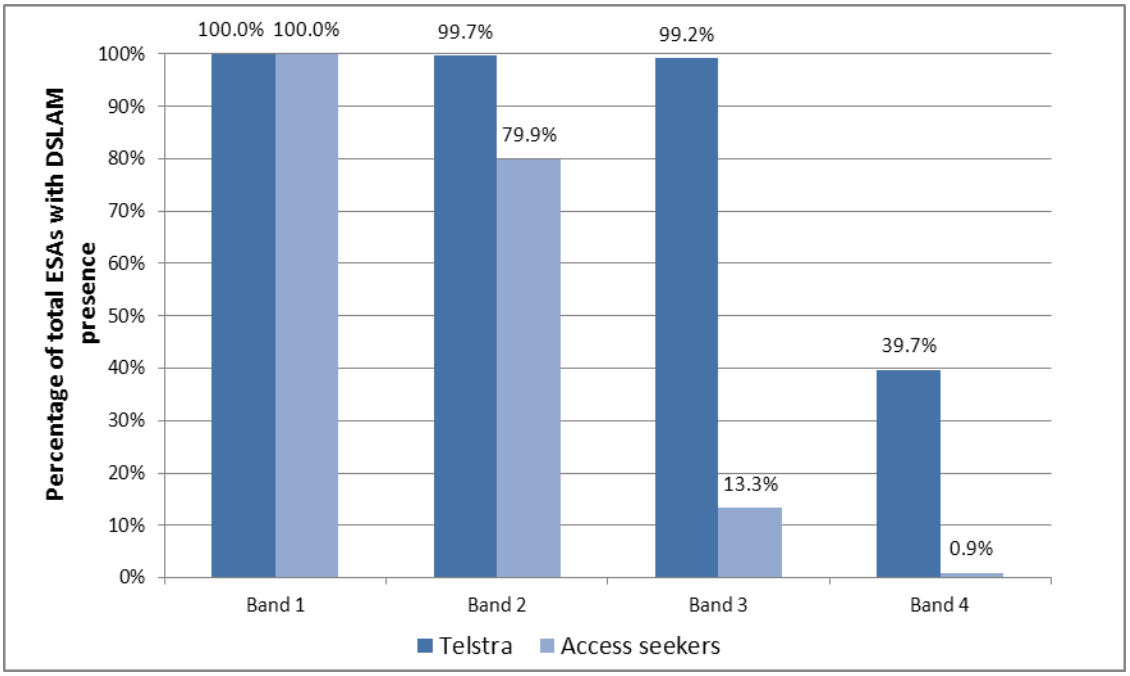
The ACCC notes that the National Broadband Network (NBN) rollout is likely to have dampened access seekers incentives to make new investments in copper-based exchange equipment, as there is a risk that such investments may become stranded before the payback period for the investment is reached.

For the reasons outlined above, the ACCC does not consider that the self-supply of fixed voice services via the ULLS is likely to be a close substitute for access seekers that are currently resellers of Telstra's resale services in the event that Telstra were to raise its prices for the WLR, LCS and PSTN OA by 5-10 per cent.

In the event of such a price increase for Telstra's resale services, access seekers that resell these services may be able to buy comparable resale services supplied by ULLS-based access seekers. An access seeker that has already invested in its own exchange equipment may want to exploit some of its spare capacity by on-selling fixed voice services to other access seekers. However, the ACCC notes that the substitutability of resale fixed voice services via ULLS using already existing capacity is limited due to the geographical scope of this investment (that is, an access seeker's DSLAM footprint).

As shown in figure 3.3 below, access seekers have tended to invest in exchanges with large customer bases to increase the likelihood that they will recoup their investments. Access seeker investments in exchange equipment is most common in Band 1 and Band 2 exchange service areas, which are in CBD and metropolitan areas respectively. Access seekers are less likely to invest in Band 3 (regional and rural areas) and Band 4 areas (remote areas) because of the smaller number of potential customers and subsequent higher per end-user costs associated with these investments.

Figure 3.3: Telstra and access seeker DSLAM coverage



Source: ACCC Telstra Customer Access Network RKR

Resale and self-supply of fixed voice services using alternative networks

Another potential substitute for Telstra's resale services may be voice services supplied using alternative fixed line networks, such as:

- the HFC networks operated by Telstra, Optus and TransAct (Neighbourhood Cable)
- local fibre networks serving certain business customers and/or business parks or discrete residential areas.

HFC is a combination of optical fibre and coaxial cable which can be used to provide fixed line voice services as well as high speed broadband services and television services. There are two major HFC networks in Australia owned by Telstra and Optus, predominantly covering east coast metropolitan areas. Optus' HFC network passes 2.4 million premises, of which 1.4 million premises are serviceable.[32] While Telstra's HFC network passes 2.5 million premises.[33] The geographic reach of these alternative networks remains limited. Optus' and Telstra's networks are located in densely populated metropolitan areas and 75 per cent of their geographical footprint overlaps.[34] TransACT's (iiNet) fibre network presence only encompasses the ACT region.

The ACCC considers that the existence of alternative networks does not necessarily provide access seekers a good substitute for Telstra's resale voice services. These networks are often geographically limited and, particularly in the case of the HFC networks, are not configured to provide wholesale access services. Further, Telstra's HFC network is not currently configured to provide traditional voice services. While these networks may be a competitive

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32 Optus, August 2013, submission, p. 10.
33 Optus, August 2013, submission, p. 10.
34 Telstra's and Optus' network are both available for approximately 2.2 million of the total 2.9 million premises passed by the two networks combined. NBN Co, *Corporate Plan 2010-2013*, p. 42.

alternative for the owners of the networks, they are limited in the extent to which they provide a suitable substitute for other access seekers.

Additionally, given the rollout of the NBN and the substantial sunk costs involved in building an alternative network, it is unlikely that any provider would consider establishing its own alternative network to provide fixed line voice services in response to a 5-10 per cent price increase by Telstra for WLR, LCS and PSTN OA services.

The ACCC concludes that alternative networks are not in the relevant market definition for the purposes of the declaration inquiry.

Fixed broadband services and bundled fixed voice and fixed broadband services

Retail level substitutability

A fixed broadband service can be defined as a high bandwidth carriage service that can be characterised as an 'always on' connection that generally (but not always) involves the carriage of communications at through-put speeds equal to or greater than 256 Kbps. It is important to note that the actual speeds experienced by consumers can be affected by many factors including how many users are accessing a network at one time. In the case of copper based fixed line broadband, speed may be affected by the end-user's distance from the exchange.

End-users can acquire fixed broadband services as part of a bundle with voice services from the same service provider. Alternatively, they can acquire voice and broadband services from different providers or choose to acquire a broadband service and not acquire a traditional voice service (e.g. a naked DSL service).

From an end-user's perspective, there are two alternatives to acquiring a copper-based broadband service:

- broadband provided over an alternative fixed network (HFC or optical fibre)
- broadband provided over fixed and mobile wireless networks (mobile broadband).

The ACCC has considered the level of substitutability of these services for copper-based broadband services below.

Alternative fixed networks

The ACCC has previously considered that, from an end-users' perspective, whether broadband services are provided over HFC, fibre or copper is unlikely to be a material factor in their decision making process.[35] A survey conducted by the ACMA into consumer attitudes indicates that consumers generally do not distinguish between different types of broadband.[36]

From a functional or end-user perspective, the services supplied over HFC technologies support similar downstream applications to ADSL.[37] In terms of relative price levels, broadband plans are marketed based on speed, not on whether the underlying input is HFC or

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35 ACCC, *Telstra's local carriage service and wholesale line rental exemption applications, Final Decision and Class Exemption*, August 2008, p. 48.

36 ACMA, *Telecommunications Today – Consumer attitudes to take-up and use*, September 2007, p. 18.

37 ACCAN, *NBN: Guide for Consumers – The basics: The internet and broadband*, April 2011, p. 4.

copper. For example, Optus advertises its broadband plans by price and data allowance but does not specify the broadband technology on which the plan is based.[38] Telstra also markets its broadband plans based on speed, price and data allowance, with no differentiation in price between copper and cable for services supplied at the same speed.[39]

Optical fibre delivers broadband internet services by transmitting information as light pulses, and is capable of carrying information at greater data rates than copper wire. This technology is currently not in wide use for residential purposes but is being used in the NBN rollout.

End-user attitudes and the functional or end-use of the optical fibre technology suggest that fibre-based broadband services are a substitute for DSL broadband services provided over Telstra's CAN.

The ACCC concludes that retail broadband services delivered using HFC and optical fibre technologies are substitutable for retail broadband services provided over the copper network.

Mobile broadband

The quality of mobile broadband services is generally dependent on the degree to which the spectrum (used for delivery within a cell-based service area) is shared by other users in that service area.

From a functional or end-user perspective, the degree of substitutability between fixed and wireless broadband may depend on the particular downstream application. For example, mobile networks may not support data intensive applications such as video streaming as well as fixed line broadband services. There is also a substantial disparity in data allowances and per gigabyte pricing between mobile and fixed line broadband services.

As noted in the July 2013 discussion paper, significant changes in consumer behaviour have been driven, in part, by the introduction of new technologies, such as mobile devices including mobile telephones and tablets. Mobile broadband is now the most common form of broadband connection in Australia (in terms of number of users).[40]

Mobile network operators have continued to make upgrades to their 3G mobile networks over the past few years, extending network coverage and expanding network capacity. Telstra launched its 4G services in September 2011[41] in a number of capital cities and Optus followed in September 2012.[42] Vodafone commenced the rollout of its 4G network in June 2013.[43] These developments have enabled significant improvements in mobile data rates, which are reflected in the increase in mobile broadband usage. The number of mobile

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38 Optus broadband plans and pricing, https://www.optus.com.au/shop/broadband/topbroadbandplans. viewed on 15 October 2013.

39 Telstra, Our Customer Terms - Part C - ADSL and Part B – Cable of the Standard Form of Agreement. http://www.telstra.com.au/customer-terms/download/document/bp-part-c.pdf, viewed on 15 October 2013.

40 Australian Bureau of Statistics, *Internet Activity Australia*, June 2013 (8153.0).

41 Telstra, *A new era of telecommunications – Telstra lights up 4G mobile services in Australia*, media release, September 2011 available at www.telstra.com.au/abouttelstra/media-centre/announcements/telstra-lights-up-4g-mobile-services-in-australia.xml.

42 Optus, *Optus flies in world's fastest for 4G Network lift off*, media release 4 September 2011, available at www.optus.com.au/aboutoptus/About+Optus/Media+Centre/Media+Releases/2012/Optus+flies+in+world%E2%80%99s+fastest+for+4G+Network+lift+off.

43 Vodafone, Vodafone turns up the heat with Australia's fastest 4G network, media release 12 June 2013, available at: www.vodafone.com.au/doc/VodafoneSwitchesOn4G.pdf

broadband subscribers connecting using a mobile telephone increased by around 22 per cent over 2011-12. The number of mobile broadband subscribers connecting their devices via other means (including via dongles, datacards and USB modems) also increased by around 23 per cent.[44]

Trends in data usage suggest, however, that end-users are not simply substituting their fixed line service in favour of a mobile connection. Fixed line broadband connections have continued to grow and account for an increasing share of download volumes.[45] From June 2011 to June 2012, the number of ADSL subscribers increased by 3 per cent while subscribers to mobile wireless grew by 22.5 per cent over the same period.[46] An ACMA report shows that while 3.3 million Australian adults replaced their fixed voice telephone with a mobile telephone, only around 480,000 were without any fixed internet connection and relied solely on mobile for voice and internet access.[47] These trends suggest that many people are using a mobile broadband service as a complement to a fixed line broadband service, rather than as a direct substitute.

This is further demonstrated when examining data downloaded by mobile devices and fixed line services. Consumers still preferred to use fixed broadband networks when downloading bandwidth intensive content such as video. Data downloaded by fixed line broadband accounted for 96 per cent of total internet downloads during the year, or 93 per cent when mobile handsets are also considered.[48] Figure 3.4 shows the volume of data downloaded by fixed line broadband compared to mobile broadband and mobile handsets.

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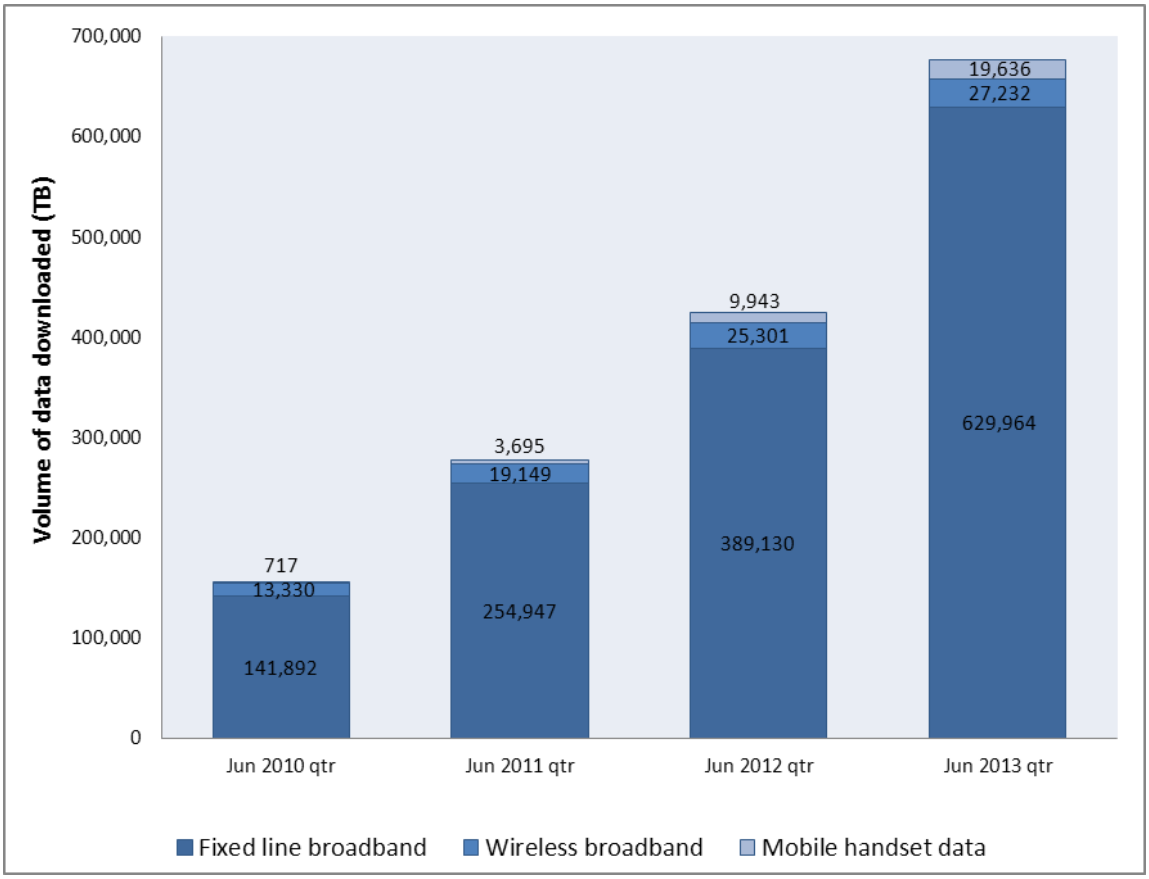
44 ACMA, *Communications report 2011-12*, p. 33.
45 ACMA, *Communications report 2011-12*, November 2012, p. 36.
46 ACMA, *Communications report 2011-12*, November 2012, p. 36.)
47 ACMA, 2013, Research Bulletin: *Australians on the move – becoming mobile-only*.
48 Australian Bureau of Statistics, *Internet Activity Australia* (8153.0), 30 June 2013.

Figure 3.4: Volume of data downloaded by access connection type



Source: ABS, *Internet Activity Australia*, June 2013 (8153.0).

Despite the rapid growth of mobile broadband subscribers, fixed line broadband services are still being utilised by end-users and have also grown significantly in terms of data downloads. Accordingly, the ACCC considers that mobile broadband is largely being adopted as a complement to a fixed line broadband connection by households, particularly by residential end-users that already had a fixed line broadband connection.

Bundling (retail level)

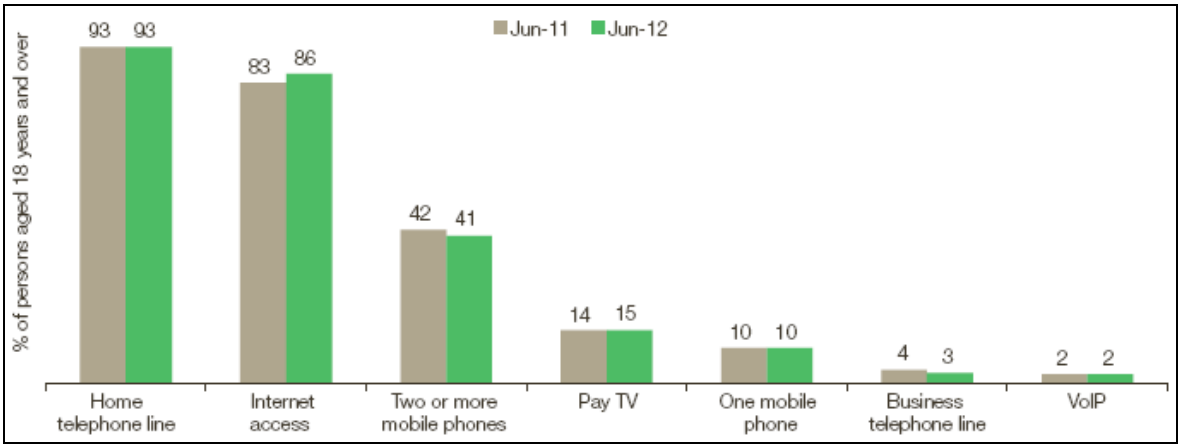
Bundling of services is common in the telecommunications industry, as evidenced by the current offerings of retail internet service providers. The 2011-12 ACMA report highlighted that the majority of internet service providers typically bundle voice services with internet access to their subscribers. Approximately 67 per cent of internet service providers in Australia provided a voice service to their customers at December 2011, compared to 61 per cent at June 2011.[49]

As shown in figure 3.5 the proportion of households with a bundled product has remained relatively unchanged over the past two years. Approximately 42 per cent of the population aged 18 years and over bundled two or more of their communication and media services with a single service provider, compared to 43 per cent at June 2011. Typical services bundled as at June 2012 were a home fixed telephone line (93 per cent), internet access (86 per cent) and

[49] ABS, 8153.0–Internet Activity, Australia, June 2012, www.abs.gov.au/ausstats/abs@.nsf/mf/8153.0/

mobile phones (51 per cent). Pay TV services were included in 15 per cent of bundling arrangements.

Figure 3.5 Services included in bundling arrangements, June 2012



Base: Persons with a bundling arrangement.

Source: Roy Morgan Single Source, June 2012, as cited in ACMA *Communication report 2011-12*, p. 39.

End-users are likely to be attracted to a bundled product by its price. The price of acquiring fixed voice and broadband services in a bundle is usually less than the total price of acquiring the two services separately. Consumers may also prefer to deal with a single service provider and receive only one bill for voice and broadband services, which is a standard feature of a bundled product.[50]

Furthermore, retail service providers often offer 'whole of business' discounts to corporate and government end-users if they purchase all of their communications needs from the same supplier. Indeed, corporate and government end-users often prefer the convenience of dealing with a single supplier. Optus has re-submitted that it is an important factor for retailers to be able to offer 'whole of business' deals for large business and government customers.[51]

The ACCC notes however, that the willingness of a particular customer to switch to a bundle will depend on their awareness/acceptance of the bundled product as well as their willingness to commit to a contract and to bear any upfront costs associated with acquiring the bundle.

Wholesale level substitutability

Access seekers can supply retail fixed line broadband services using either Telstra's copper network (the CAN) or using an alternative fixed network such as HFC or fibre.

Copper-based self-supply or purchase of resale broadband services

Access seekers can supply end-users with fixed broadband services using Telstra's CAN in two ways:

50 ACCC, *Inquiry into varying the exemption provisions in the final access determination for the WLR, LCS and PSTN OA services*, Final Report, December 2011, p. 25.

51 Optus October 2011 submission to the ACCC *Inquiry into varying the exemption provisions in the final access determination for the WLR, LCS and PSTN OA services*, p. 16. Optus resubmitted this submission in response to the ACCC's request for market information of 9 October 2012.

- self-supplying broadband services by installing exchange equipment in Telstra exchanges and buying the ULLS or LSS; or
- purchasing resale broadband services in the wholesale market either from Telstra or another access seeker.

Self-supplying broadband services using its own equipment and the ULLS or LSS gives an access seeker greater control over the quality of their product offerings and greater scope to provide innovative products to the end-user. There are barriers to entry in self-supplying broadband services which include the costs of investing in exchange equipment and access to exchanges. These barriers are not present when access seekers resell wholesale broadband services purchased from Telstra or another access seeker. Therefore self-supply and purchase of resale services from Telstra, for the purposes of supplying retail broadband services, are not fully substitutable, from an access seeker's perspective.

Telstra's wholesale ADSL service is a regulated product which is available nationally. In contrast, resale broadband services are only available from other access seekers within the access seeker DSLAM footprint. Access seekers' inability to provide their wholesale customers with the national coverage that they often require (to supply corporate and government end-users with national operations), due to their smaller DSLAM footprints, reduces the substitutability of their resale services for Telstra's resale services. The significant incremental costs of sourcing wholesale ADSL services from multiple suppliers further reduces the substitutability of resale services supplied by access seekers in respect of supplying the segment of the retail market that requires national coverage.[52]

The ACCC concludes that while there are limitations to the substitutability of the different supply alternatives available using Telstra's copper network, these supply options are within the broad wholesale market for the provision of fixed broadband services.

Alternative fixed networks

Optus' and Telstra's HFC networks do not provide national coverage and are not configured to provide wholesale access services. The two major HFC networks have limited coverage in selected capital cities: Telstra's and Optus' networks are able to supply retail broadband services to approximately 2.2 million of the total 2.9 million premises passed by the networks combined.[53]

Likewise wholesale broadband and voice services provided over local fibre network also have limited reach and do not provide an effective national alternative to Telstra's copper network. While NBN services will be good substitutes for network access services supplied using Telstra's copper network, the NBN rollout is still in its early stages.

Additionally, given the rollout of the NBN and the substantial sunk costs involved in building an alternative network, the ACCC considers it is unlikely that any provider would consider establishing its own alternative network to provide fixed line voice services in response to a 5-10 per cent price increase by Telstra for ULLS, LSS and resale services. Large and lumpy sunk costs combined with considerable lead times would prevent most access seekers seeing this as a viable alternative. The ACCC notes AAPT's submission that

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52 ACCC, *Public inquiry to make a final access determination for the Wholesale ADSL service: Final Report*, May 2013, p. 68.

53 NBN Co, *Corporate Plan 2010-2013*, p. 42.

the rollout of the NBN appears to have effectively removed any possibility of a carrier investing in large scale fixed networks to compete with Telstra's CAN.[54]

The ACCC notes that fixed-wireless networks may potentially be a substitute for fixed line networks for providing broadband services. Fixed-wireless networks are being built by the NBN, and others, in rural and regional Australia. They can provide a better quality of service than mobile networks as the network operator can provide a steady stream of bandwidth to maintain a good connection (in comparison to mobile networks which are subject to 'drop-out' as the signal moves between mobile towers). The ACCC notes that Optus recently announced it would conduct trials in Sydney, Melbourne, Adelaide and Brisbane, using 4G technologies to provide fixed broadband connections in urban areas.[55] However, as the geographic reach of these networks will be limited at least over the next five years, the ACCC considers they cannot provide a good substitute to wholesale and retail broadband services supplied using Telstra's ubiquitous copper network.

The ACCC concludes that the substitutability of wholesale broadband services potentially available on alternative networks (apart from the NBN) is limited and that alternative networks are not in the relevant market definition for the purposes of this declaration inquiry.

Bundling (wholesale level)

There are a number of alternatives available to access seekers for delivering bundled fixed voice and broadband services to their end-users:

- self-supply of voice and broadband services using their own infrastructure and the ULLS;
- combination of self-supply of broadband services using their own infrastructure and the LSS with purchase of wholesale voice services from Telstra (WLR and LCS) or another access seeker offering resale voice services, and either self-supplying long-distance calls or purchasing a long distance call service from another provider; and
- purchase of wholesale voice and broadband services, from either Telstra (WLR, LCS and wholesale ADSL) or another access seeker offering resale voice and broadband services.

As discussed above, the availability of resale fixed voice and broadband services supplied by another access seeker on the wholesale market is limited to particular geographical areas and is constrained by the availability of any excess capacity the access seeker may have on their infrastructure. Also as discussed above, the costs of the investment in exchange equipment and access to exchanges are barriers to entry in self-supplying broadband services , which do not have to be made by access seekers that only purchase resale services.

The ACCC concludes that while there are limitations to the substitutability of the alternatives available to access seekers for using Telstra's copper network to supply bundled voice and broadband services, these supply options are within the wholesale market for the provision of fixed broadband services. In contrast, for the reasons set out above, the ACCC considers that alternative networks do not provide a supply option that is within the relevant wholesale market for the purposes of this declaration inquiry.

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54 AAPT, Submission, August 2013, p. 10.

55 Mitchell Bingemann, 'Optus to start 4G mobile trials', *The Australian*, 21 November 2013, p. 21.

3.1.3 Geographical dimension

Delineation of the relevant geographic markets involves the identification of the area or areas over which a carrier or carriage service provider and its rivals currently supply, or could supply, the relevant product. As for the product dimension, the geographic dimension of the relevant markets is defined for the purposes of a particular inquiry.

In assessing the relevant geographic markets, the ACCC may examine the relative price levels and price movements of different geographic sources of supply, competitive conditions within different geographic areas, and the cost to customers of obtaining supply from alternative regions.[56]

In 2008, the ACCC determined that it was appropriate to use Exchange Service Areas (ESAs) as the basic geographic unit for its assessment of competition at the wholesale and retail levels for the purposes of determining whether to grant geographic exemptions.[57]

In its 2011 exemptions inquiry, the ACCC again determined to use ESAs as the geographic unit for its assessment of the effect of the exemption provisions. However, the ACCC highlighted that this decision did 'not imply that each ESA is considered a discrete geographic market'.[58] The ACCC noted that the economies of scale involved in the provision of fixed line services suggest that a ULLS-based competitor would not enter the retail market in one ESA alone. Additionally, the ACCC noted that implications for competition resulting from the exemption provisions may extend beyond the boundaries of individual ESAs, particularly in the case of competition for integrated service provision to corporate and government end-users (with national operations).[59]

Similarly, in its 2012 inquiry into making final access determinations for the wholesale ADSL service, the ACCC concluded that, for the purposes of deciding whether to grant geographic exemptions, the assessment of the impact on competition must take a national perspective in addition to considering the level of competition in a particular ESA or group of ESAs. The ACCC noted that Telstra had submitted that it markets its retail ADSL offers on a national basis.[60]

In its 2009 declaration inquiry for the fixed line services, the ACCC adopted a national market definition, noting that the ACCC 'must take a more holistic view when assessing whether to retain a declaration than it has when assessing an exemption application'.[61]

In its 2012 inquiry into declaring the wholesale ADSL service, the ACCC also considered it appropriate to assess the potential effect of declaration on a national basis. The ACCC noted the variance in competitive conditions between different geographic areas and variations in

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56 See ACCC, *Merger Guidelines*, November 2008, p. 19, for a useful list of the types of information the ACCC may consider to identify close substitutes in relation to defining the relevant geographic regions.

57 ACCC, *Telstra's local carriage service and wholesale line rental exemption applications: Final decision and class exemption*, August 2008, pp. 57-58.

58 ACCC, *Inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services: Final Report*, December 2011, p. 40.

59 ACCC, *Inquiry into varying the* exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services: Final Report, December 2011, pp. 39-40.

60 ACCC, *Public inquiry to make a final access determination for the Wholesale ADSL service: Final Report*, May 2013, p. 69.

61 ACCC, *Fixed Services Review Declaration Inquiry for the ULLS, LSS, PSTN OA, PSTN TA, LCS and WLR: Final Decision*, July 2009, p. 36.

the availability of effective alternatives to Telstra's wholesale ADSL services between exchange service areas, with competing ADSL networks in metropolitan ESAs and little deployment in rural and regional ESAs. However, the ACCC adopted a national market definition for the following reasons: Telstra's continued market dominance even on a less aggregated basis; national concerns about Telstra's commercial terms for providing access to the wholesale ADSL service and its conduct overall as a supplier of wholesale ADSL services; and broad support by the large majority of submitters, including from Telstra, for a national market definition.

In respect of this declaration inquiry, all submitters providing comments on the relevant markets, including Telstra, supported adopting a national market definition. Optus noted that until the completion of the NBN rollout, that Telstra CAN is the only ubiquitous national access network.

The ACCC proposes to adopt a national market definition for the purposes of this declaration inquiry for the following reasons:

- At the retail level, residential end-users typically only require fixed line services at their premises within an ESA and there would be costs and difficulties to those end-users in relocating a service supplied outside the ESA. However, the ACCC notes that Telstra adopts a national approach to setting retail prices and other retail service providers generally also set prices that are uniform across large parts of Australia.
- Business end-users often have premises in more than one ESA and the larger corporate and government end-users typically operate nationally. Corporate/government customers prefer integrated service provision, where all of their communication needs are provided by the same supplier. Integrated supply provides the advantages of convenience, reduced administration costs and often 'whole-of-business' discounts, which are typically offered by Telstra and other retail service providers to capture all of the retail customer's business.
- At the wholesale level, economies of scale and scope in operating networks and in providing integrated services mean that a national level is the appropriate geographic dimension.

3.1.4 Conclusion

Accordingly, the ACCC consider the relevant markets to be the national markets for:

- fixed voice services
- fixed broadband services
- bundled fixed voice and fixed broadband services.

While the interconnection services (PSTN OA (special numbers) and PSTN TA) have not been discussed in any detail in this section, the ACCC considers that the relevant markets are the national markets for the fixed voice services and of bundled fixed voice and fixed broadband services.

3.2 State of competition in relevant markets

This section of the chapter sets out the ACCC's approach to assessing the state of competition and outlines the ACCC's assessment of the current state of competition in the relevant markets.

3.2.1 The ACCC's approach to assessing the state of competition in the relevant markets

Once the relevant markets are defined, the next step is to assess the state of competition in those markets. The assessment of the state of competition should not be limited to a static analysis entailing a description of current conditions and behaviour. In the ACCC's view, the assessment should also account for 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.

The concept of effective competition

In assessing the state of competition, the ACCC applies the test of how effective competition is rather than the theoretical concept of 'perfect competition'.

In reality, the theoretical conditions for 'perfect competition' 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 supplied 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 outputs.
- Services are often differentiated from each other.
- There are constantly evolving service types and network technologies.

The concept of 'effective competition' recognises the practical limitations of the theory of perfect competition. Effective competition:[62]

- is more than the mere threat of competition—it requires that competitors be active in the market, holding a reasonably sustainable market position;
- requires that, over the long run, prices are determined by underlying costs rather than the existence of market power;
- requires that barriers to entry are sufficiently low and that any degree of market power will be competed away in the long run, so that any degree of market power is only transitory;
- requires that there be independent rivalry in all dimensions of price, product and service; and

[62] This is not intended to be an exhaustive characterisation of effective competition.

- does not preclude one party holding a degree of market power from time to time, but that power should pose no significant risk to present and future competition.

These five factors are indicators of the extent to which competition constrains market participants to supply products and services of a given quality at prices that are based on efficient costs.

The OECD has referred to effective competition in telecommunications in the following way:

> Effective competition is concerned not only with the ability to control prices and costs for products and/or services, but also with consumer benefits such as quality of service, a range of services available to consumers, efficient operation of firms in a market and innovative service provision as well.[63]

3.2.2 The state of competition in the relevant markets

The level of competition in the retail and wholesale fixed voice market

As noted above, the ACCC concluded that the relevant market for retail fixed voice services includes traditional fixed voice services as well as POTS emulation VoIP services. The ACCC concluded that POTS emulation services are substitutable for a traditional voice services because the experience from the end-user's perspective is identical and the costs to end-users are unlikely to vary significantly.

As shown in table 3.2, there were 10.44 million fixed line voice SIOs at June 2012, compared to 10.54 million services at June 2011, a net decline of around one per cent. Telstra's fixed line voice SIOs continued to decline, with 8.06 million services in June 2012. This is a decline of 3.7 per cent (around 310,000) for 2011–12, compared with 3.3 per cent during 2010–11. (These SIOs include voice lines where other services are also provided on the same line, such as broadband services.)

Table 3.2 Number of fixed line voice services in operation

All Service Providers	Jun-08	Jun-09	Jun-10	Jun-11	Jun-12	% change from Jun-11 to Jun-12
Retail	9.40 m	9.17 m	9.12 m	9.15 m	9.01 m	–1.5%
Wholesale	1.60 m	1.50 m	1.47 m	1.39 m	1.43 m	+2.9%
Total	**11.00 m**	**10.67 m**	**10.59 m**	**10.54 m**	**10.44 m**	**–0.9%**

m=million.

Telstra services only	Jun-08	Jun-09	Jun-10	Jun-11	Jun-12	% change from Jun-11 to Jun-12
Retail	7.87 m	7.73 m	7.41 m	7.16 m	6.88 m	–3.9%
Wholesale	1.50 m	1.29 m	1.25 m	1.21 m	1.18 m	–2.5%
Total	**9.36 m**	**9.02 m**	**8.66 m**	**8.37 m**	**8.06 m**	**–3.7%**

Note: Retail refers to residential and business services provided on own network. From ACMA annual industry data request covering Telstra, Optus, iiNet group, TPG, AAPT, Primus

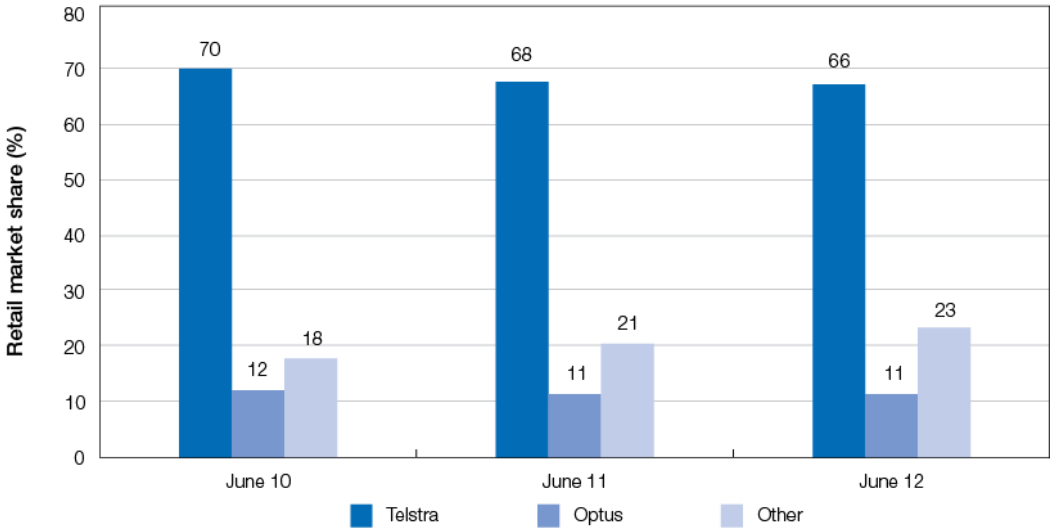
Source: The ACMA, Communication Report, 2011-12, p. 29.

63 OECD, Indicators for the Assessment of Telecommunications Competition DSTI/ICCP/TISP, 2001, p. 6.

While the total number of fixed line voice service in operations is declining, the number of providers offering these services increased during 2011−12 by 18 per cent (from 179 to 212 providers).[64]

However, the fixed line voice market still remains highly concentrated. As shown in figure 3.6, Telstra remains the dominant player in the provision of retail fixed voice with a market share of 66 per cent, despite losing a small share of the market to its non-Optus competitors. Subscriber numbers in the 'other' category include fixed VoIP services, with iiNet the most significant provider.

Figure 3.6: Retail fixed voice service shares by subscriber numbers from 2009−10 to 2011−12



Note: Carriers in the 'other' category include TPG, iiNet, Primus, AAPT, Macquarie Telecommunications and Verizon.

Sources: Data obtained from the ACCC Division 12 RKR for Telstra and Optus and data obtained from ACMA *Communications Report* 2011−12 for the 'other' category.

These figures suggest that there are barriers to effective competition in the retail markets for fixed voice services. These include the costs to end-users of switching between retail suppliers, and information asymmetries about the range and prices of competitors' products; giving Telstra a competitive advantage in maintaining its retail market share. Economies of scale give Telstra a further competitive advantage. Switching costs, information asymmetries and economies of scale present an obstacle to access seekers gaining greater market share.

The ACCC considers that Telstra's vertical integration and ownership of the ubiquitous copper network is likely to confer a competitive advantage on it until the NBN rollout is further progressed.

In terms of the wholesale market for fixed voice services, the ACCC found in its 2011 exemptions inquiry[65] that a small number of access seekers offer wholesale voice services using their own infrastructure. These voice services are typically bundled with data services or have conditions that effectively reduce the competitiveness of those services compared to

64 ACMA, *Communications Report 2011-12*, p. 29.

65 ACCC, *Inquiry into varying the exemption provisions in the finale access determination for WLR, LCS and PSTN OA services: Final report*, December 2011.

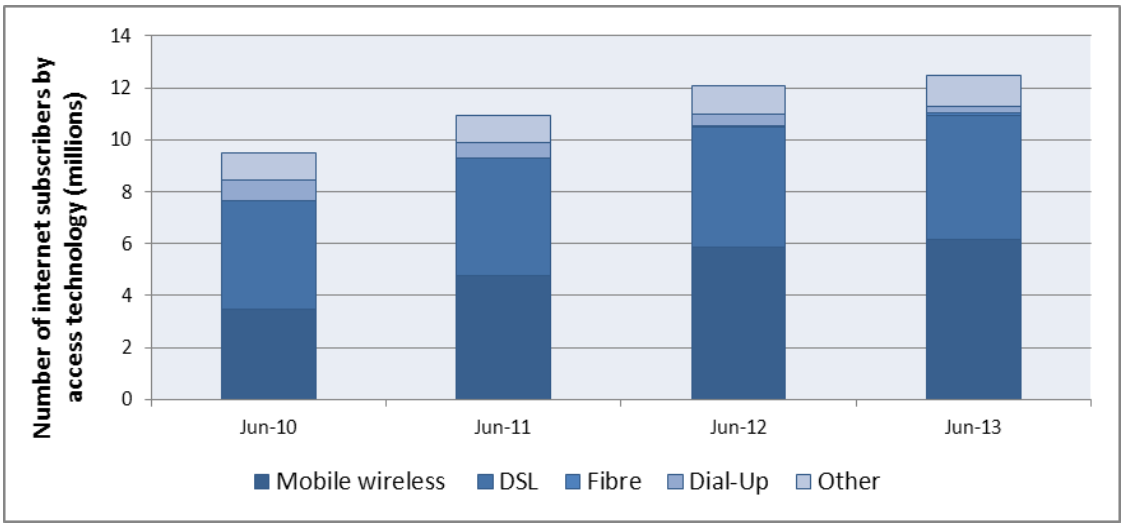
Telstra's prices for its resale fixed voice services. Similar evidence has been submitted to this declaration inquiry in response to the ACCC's request for market information.[66]

Access seekers' ability to compete in the wholesale market for voice services is reduced by their limited geographic DSLAM footprints and the costs to their wholesale customers of purchasing resale services form multiple suppliers. The NBN rollout is likely to have reduced access seekers' incentives to significantly expand their DSLAM footprints. Consequently, the ACCC has concluded that the wholesale market for fixed voice services supplied using Telstra's CAN is not, and is not likely to be in the future, characterised by effective competition.

The level of competition in wholesale and retail fixed broadband services

Retail demand for broadband services can be measured by the number of internet subscribers. Figure 3.7 shows the number of internet subscribers by network technology, including mobile wireless,[67] DSL, fibre, dial-up and other technologies. While mobile wireless was the most prevalent internet technology used in Australia in 2012-13,[68] DSL remained the next most commonly used internet access technology.

Figure 3.7: Internet subscribers by access technology



Source: ABS, *Internet Activity Australia*, June 2013 (8153.0).

Notes: 'Other' category includes cable, satellite and fixed wireless. Fixed wireless (for example, WiMAX) uses an air interface to connect an internet service. An antenna installed at the customer's premises receives signals from the service provider's base station.

There are five major internet service providers operating in the retail market for fixed broadband services in Australia—Telstra, Optus, iiNet, TPG and Primus (now owned by the M2 Group). Together, these five providers accounted for about 86 per cent of fixed broadband subscribers in 2012-13. They have been gaining market share from the smaller providers in recent years, by attracting new customers and through industry consolidation. However, this appears to have slowed in 2012-13, with less consolidation activity occurring

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66 AAPT, Response to the ACCC's request for market information of 9 October 2013, pp.5-6.

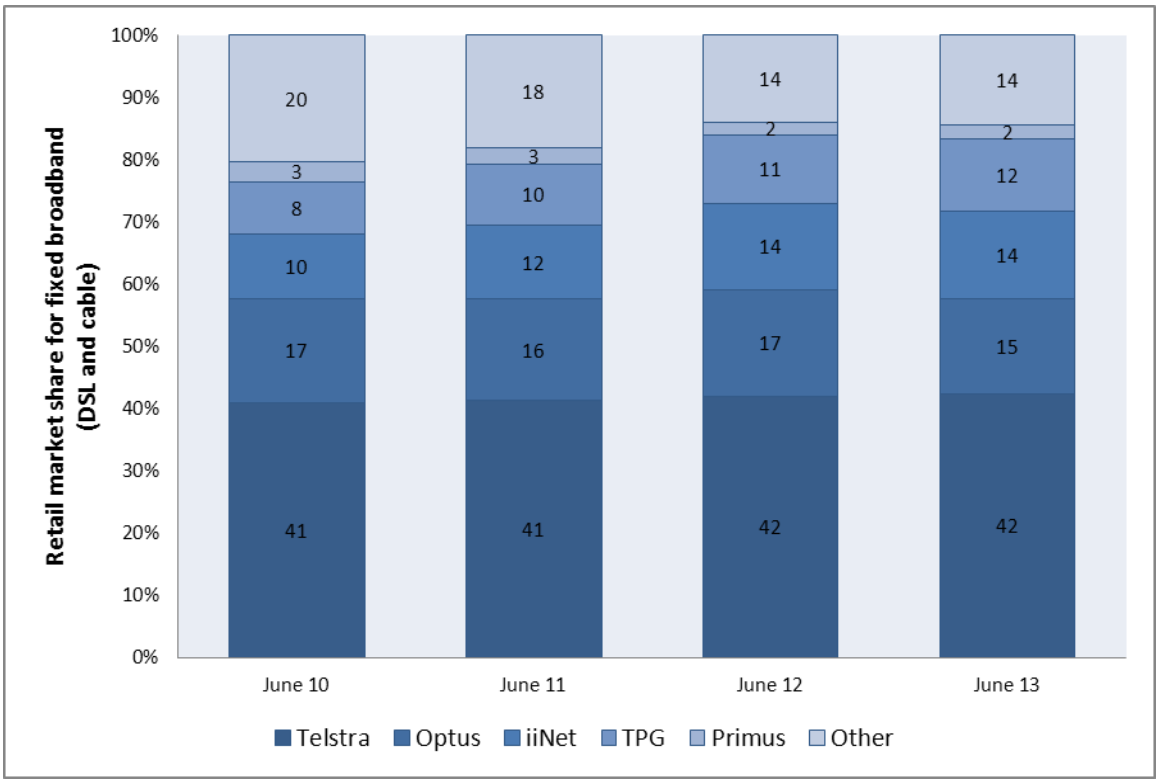
67 Mobile wireless services refer to services provided via data-card, dongle, USB modem or tablet SIM card. Unless otherwise specified, references to wireless services exclude data services provided via mobile handsets such as smart phones.

68 Australian Bureau of Statistics, *Internet Activity Australia*, June 2013 (8153.0).

during the year. The M2 Group (which owns Primus) undertook the only major acquisitions during the 2012-13 reporting period, acquiring both Dodo and Eftel in May 2013.[69] iiNet also continued its acquisition strategy, with the acquisition of Adam Internet in August 2013.[70]

The number of fixed broadband subscribers continued to grow, increasing by 3 per cent over the year.[71] Figure 3.8 shows the retail broadband market shares for the fixed broadband (DSL and HFC) services for the five largest providers. Telstra retained its position as the largest provider of fixed broadband in Australia, with a 42 per cent market share in 2012-13. Most market shares remained relatively stable over the year, with Optus experiencing a slight decline and TPG gaining market share.

Figure 3.8: Retail fixed broadband market shares



Source: ACCC Division 12 RKR Reports & ABS, *Internet Activity Australia*, June 2013 (8153.0)

Notes: Market share calculations are based on the number of subscribers. Totals do not add to 100 per cent in all years due to rounding.

The ACCC considers that costs to end-users of switching between retail suppliers and information asymmetries about the range and prices of competitors' products give Telstra (as the single largest retail broadband service provider) a competitive advantage in maintaining its retail market share. The costs of new customer premises equipment in moving to IP-based telephony, particularly for business end-users, are likely to intensify customer inertia.

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69 M2 Telecommunications, *ASX Media Release: M2 Completes acquisition of Dodo*, 1 May 2013. http://m2.com.au/GetPdf.axd?id=406589

70 iiNet, *Media Release: iiNet to acquire Adam Internet*, 5 August 2013. http://www.iinet.net.au/about/mediacentre/releases/05-08-2013-iinet-to-acquire-adam-internet.pdf

71 ACCC, *Division 12 RKR Reports*, June 2013.

The supply of DSL services over Telstra's CAN remained highly concentrated in 2012-13, with Telstra continuing to be the most significant provider. Approximately 62 per cent of all DSL SIOs in June 2013 were supplied from Telstra DSLAMs.[72] However, figure 3.9 shows that competition varies between geographic areas. CBD and metropolitan areas are more competitive, with access seekers able to secure a high share of total DSL services in the areas where they have invested in DSLAMs.

Figure 3.9: Access seekers' DSL SIOs as a percentage of total DSL SIOs

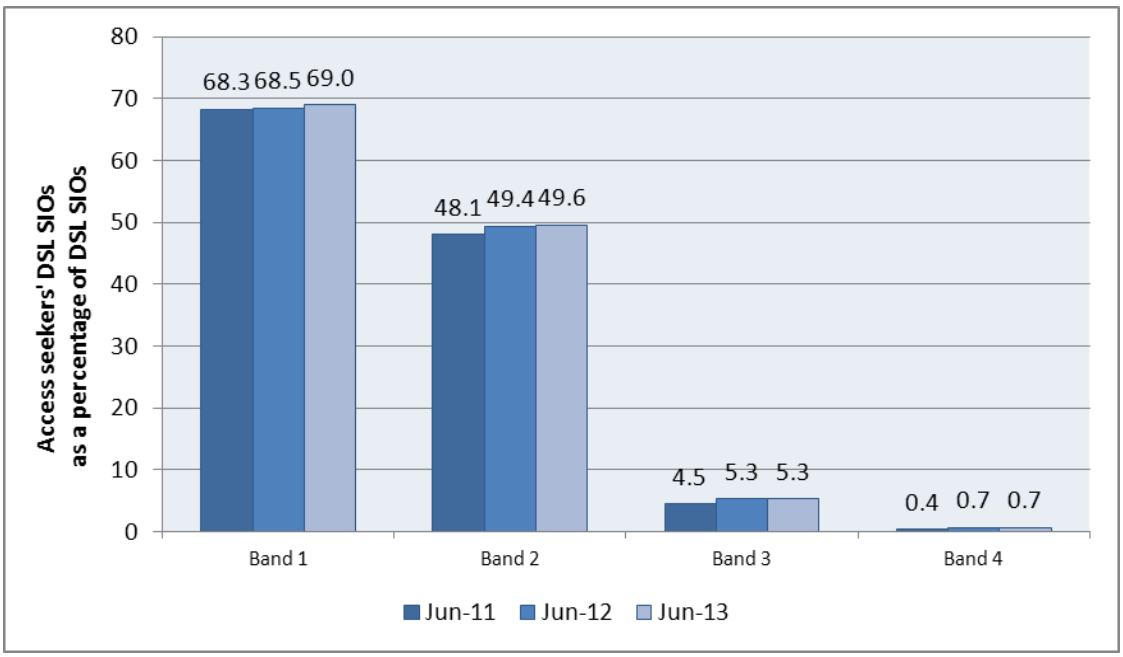
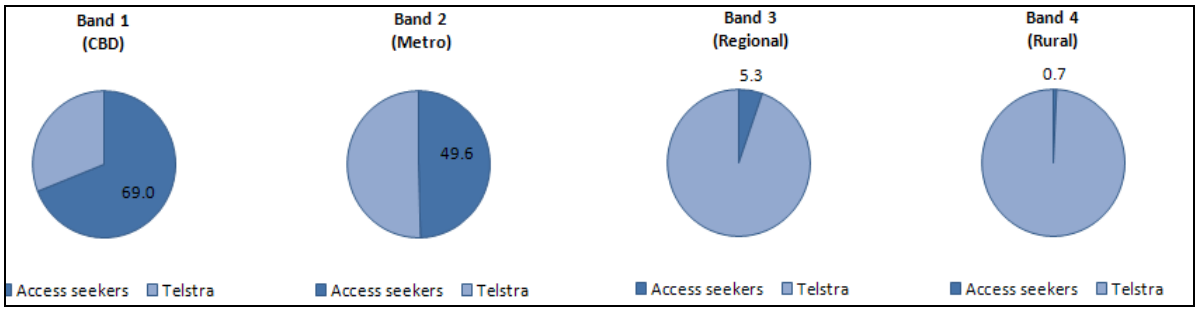


Figure 3.10 below shows that around 69 per cent of total DSL services in Band 1 and nearly 50 per cent in Band 2 are provided by access seekers using ULLS or LSS. However, Telstra continues to be the main supplier of DSL services in regional and rural areas because it has greater DSLAM coverage in those areas.

Figure 3.10: Access seekers' DSL SIOs as a percentage of total DSL SIOs



Source: ACCC CAN RKR Reports

[72] ACCC, *Telstra CAN RKR quarterly snapshots*, June 2013.

Access seekers that have installed their own exchange equipment are able to self-supply broadband services and on-sell wholesale broadband services. However, the extent of competition in the wholesale fixed broadband market is limited by access seekers' limited DSLAM footprint and the costs to wholesale customers of sourcing resale broadband services from multiple suppliers. As a result Telstra remains the dominant supplier of wholesale broadband services on a national basis.

It is the ACCC's view that the retail and wholesale fixed broadband markets are becoming increasingly competitive, particularly in metropolitan areas where access seekers have installed their own exchange equipment. However, ongoing access to the ULLS and LSS is critical to enabling access seekers to continue to make efficient use of their investment in DSL infrastructure and offer competitive DSL services. Regulated access to the ULLS and LSS is promoting greater competition in the retail and wholesale markets for broadband services. However, Telstra remains in a strong position given that it controls access to the ubiquitous copper network.

Accordingly, it is the ACCC's view that the national wholesale market for fixed broadband services does not display the characteristics of an effectively competitive market and that there are limitations on the effectiveness of competition in the retail market for fixed broadband services.

The level of competition in retail and wholesale bundled fixed voice and broadband services

As discussed in section 3.2, the bundling of services is common in the telecommunications industry, as evidenced by the current offerings of retail internet service providers. End-users are likely to be attracted to a bundled product by its price and may prefer to deal with a single service provider and receive one bill for their fixed voice and broadband services. Retail service providers also often offer 'whole of business' discounts to corporate and government end-users if they purchase all of their communications needs from the same supplier. Indeed, corporate and government end-users often prefer the convenience of dealing with a single supplier.

As noted above, the willingness of a particular customer to switch to a bundle will depend on their awareness/acceptance of the bundled product as well as their willingness to commit to a contract and to bear any upfront costs associated with acquiring the bundle.

As discussed in section 3.2, there are a number of supply-side alternatives to access seekers for delivering bundled fixed voice and broadband services to their end-users.

The availability of resale fixed voice and broadband services supplied by a ULLS-based access seeker in the wholesale market is limited to the geographical areas within its DSLAM footprint and is generally constrained by the availability of any excess capacity the access seeker may have on their infrastructure. There are also barriers to switching to self-supply of voice and broadband services due to the costs of investing in exchange equipment and exchange access, which are not incurred by access seekers that only purchase resale services. Telstra remains the dominant supplier of wholesale voice and broadband services on a national basis.

It is the ACCC's view that the retail and wholesale markets for bundled fixed voice and broadband services are becoming increasingly competitive, particularly in metropolitan areas where access seekers have installed their own exchange equipment. However, ongoing

access to the ULLS is critical to enabling access seekers to continue to make efficient use of their investment in DSL infrastructure and offer competitive DSL services. Regulated access to the ULLS is promoting greater competition in the retail and wholesale markets for bundled fixed voice and broadband services. However, Telstra remains in a strong position given that it controls access to the ubiquitous copper network.

Accordingly, it is the ACCC's view that the national wholesale market for bundled fixed voice and broadband services does not display the characteristics of an effectively competitive market and that there are limitations on the effectiveness of competition in the retail market for bundled services.

Conclusion

The ACCC's draft view on the state of competition is that Telstra has significant market power in both the wholesale and retail markets for fixed voice services, standalone fixed broadband services and bundled fixed voice and broadband services. Telstra's market power arises from its control of the copper access network infrastructure required to provide fixed voice and fixed broadband services and its vertical integration into retail markets.

Further the ACCC considers that Telstra's market power is supported by its dominant market share and large customer base in the wholesale markets for fixed voice and broadband services and in the retail fixed voice market. The costs to end-users of switching between retail suppliers and information asymmetries about the range and prices of competitors' products give Telstra a competitive advantage in maintaining its retail market share. Economies of scale give Telstra a further competitive advantage. Switching costs, information asymmetries and economies of scale present an obstacle to access seekers in gaining greater market share.

The ACCC considers that, absent regulated access to Telstra's copper network, the fixed voice market, standalone fixed broadband market and bundled fixed voice and fixed broadband market would not display the characteristics of effective competition. Even with regulated access to its network for access seekers, Telstra retains a competitive advantage from its position as the vertically integrated operator of the copper network, from the economies of scale and scope conferred by its large market shares in the relevant markets, and from the benefits of incumbency related to end-user switching costs and inertia. The ACCC does not expect these circumstances to change significantly in the next five years as the NBN rollout is unlikely to be completed until after this period.

4 Network access services

Key Points

- The ACCC is proposing to extend the declarations for the unconditioned local loop service (ULLS) and the line sharing service (LSS). The ACCC considers that Telstra's customer access network (CAN) will remain a bottleneck during the transition to the National Broadband Network (NBN).
- All submissions supported the continued declaration of these services.
- The ACCC is proposing to make a minor technical amendment to the LSS description to provide consistency with the ULLS service description.
- The ACCC is not proposing to vary the service description to allow for sub-loop unbundling at this time. It will consider whether to commence a variation inquiry to declare access to the sub loop, if necessary, once the implementation details for fibre to the node (FTTN) have been determined.

In 2009, the ACCC extended the declaration of two network access services, being the unconditioned local loop service (ULLS) and the line sharing service (LSS). Access seekers can purchase the ULLS and install their own equipment in Telstra's telephone exchanges to provide voice (telephone) and broadband services. The LSS only provides access to the high frequency part of the copper line, which is used to provide broadband services. The LSS is only supplied when there is an active voice service on the line.

The ACCC decided that declaring these network services would promote the long-term interests of end-users (LTIE) by promoting competition and encouraging the efficient use of, and investment in, infrastructure. The ACCC considered that Telstra's provision of the ULLS and LSS remained an enduring bottleneck service where Telstra controls access to the network necessary to provide services to end-users.

4.1 Discussion paper

In its July 2013 discussion paper, the ACCC noted that there had been a number of key changes to the telecommunications sector since the last declaration inquiry in 2009.

The ACCC sought submissions on a number of issues in relation to network access. These issues included:

- whether Telstra's Customer Access Network (CAN) continues to be a bottleneck for providing broadband and voice services to end-users;
- whether the existence of Hybrid Fibre-Coaxial (HFC) networks and/or the National Broadband Network (NBN) rollout has any implications on whether the CAN remains a bottleneck; and
- whether declaration would continue to promote the long-term interests of end-users.

The ACCC also sought submissions on whether developments in the industry since 2009 require the ACCC to consider commencing a declaration inquiry into any new or different network access service. The ACCC received one submission supporting a declaration inquiry into services supplied over HFC networks, which is discussed in more detail in chapter 7.

4.2 Submissions

The ACCC received a number of submissions commenting on the future regulation of network access services. All submissions supported the continued declaration of the ULLS and LSS.

Macquarie Telecom, Optus, iiNet, AAPT and ACCAN all submitted that Telstra's network is a bottleneck which remains in need of continued regulation. Macquarie Telecom considered Telstra, as the major supplier of retail voice and broadband services, has little incentive to provide wholesale services to access seekers on reasonable terms.[73] AAPT submitted that Telstra's copper network will continue to be an enduring bottleneck until the transition to the NBN is complete.[74] Optus noted that Telstra's CAN is the only access network until the NBN rollout is complete, and will continue to exhibit natural monopoly characteristics and remain a bottleneck for retail downstream markets.[75] iiNet submitted that Telstra's copper network is still a natural monopoly, essential to provide retail services to end-users, and that regulation is required to promote the LTIE.[76] ACCAN submitted that the absence of declaration would lead to inefficient investment, a failure to realise economies of scale, scope and density and likely lead to higher prices for consumers.[77]

Telstra submitted that the ULLS and LSS should continue to be declared.[78]

Optus submitted that the ULLS and LSS service description should be amended to clarify that the internal interconnect cable (IIC) is a necessary component for the supply of these services.[79]

4.3 ACCC's draft views

The ACCC's view is that extending the declaration for the ULLS and LSS will promote the LTIE. The ACCC has reached this view having had regard to the extent to which the declaration of the ULLS and LSS would result in achieving the objectives set out in section 152AB of the *Competition and Consumer Act 2010* (CCA) taking into account submissions to the July 2013 discussion paper and the ACCC's own analysis.

4.3.1 Would continued declaration promote competition?

In determining whether the continued declaration of the ULLS and LSS would promote the LTIE, the ACCC must assess whether declaration would result in the promotion of competition in the relevant markets for these services. The ACCC considers it useful to apply the 'with and without test' to undertake this assessment.

As explained in chapter 3 the ACCC considers that the relevant markets for the ULLS and LSS services to be:

- the retail and wholesale supply of fixed voice services;
- the retail and wholesale supply of fixed broadband services; and

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73 Macquarie Telecom, August 2013 submission, p. 5.
74 AAPT, August 2013 submission, p. 3.
75 Optus, August 2013 submission, p. 4.
76 iiNet, August 2013 submission, p. 4.
77 ACCAN, September 2013 submission, p. 6.
78 Telstra, September 2013 submission, p. 42.
79 Optus, August 2013 submission, pp. 34-35.

- the retail supply of a bundle of fixed voice and fixed broadband services.

For the purposes of this draft report, the ACCC has defined these markets as national markets.

The ACCC agrees with submissions received from Optus, Macquarie Telecom, AAPT and iiNet that Telstra's CAN will remain an enduring bottleneck, and that continued regulation of the ULLS and LSS will promote competition in retail markets for fixed voice, broadband and bundled services.

The ULLS and LSS are important inputs in the supply of fixed voice, fixed broadband and bundled fixed voice and fixed broadband services in the retail market. Continued declaration of the ULLS and LSS will enable access seekers to compete with Telstra in all retail dimensions of fixed broadband and fixed voice supply.

Access to the ULLS and LSS on reasonable terms and conditions is likely to support retail competition by access seekers. Competition in the retail market provides incentives for access seekers and Telstra to differentiate their retail service offerings and provide end-users with the products and quality they demand. As noted by iiNet access seekers that have invested in their own equipment in Telstra's telephone exchanges have greater levels of control over the features and quality of the products they can offer.[80] This means that end-users have a greater choice in service providers and a larger range of products to choose from. Furthermore, vigorous competition in the retail market places downward pressure on prices and creates incentives for access seekers to innovate their bundling and pricing offers.

The continued declaration of the ULLS and the LSS also supports the provision of wholesale fixed voice and wholesale broadband services by ULLS-based access seekers seeking to exploit unused capacity or potential economies of scale on their own networks. For example, Optus uses its digital subscriber line access multiplexer (DSLAM) network to provide wholesale services to other access seekers. Such alternative provision of wholesale services can provide increased competitive tension at the wholesale level and help to constrain Telstra's ability to price its wholesale DSL services or bundled voice and broadband services above the costs of supply.

As noted in chapter 3, there has been steady growth in the number of exchanges in which there is DSLAM competition. There has been strong growth in the number of services in operation (SIOs) and end-users served by access seekers using the ULLS and LSS. This is shown by the top line in figure 4.1 below. In December 2012, ULLS and LSS SIOs comprised 20 per cent of SIOs on Telstra's copper network.[81]

Figure 4.1 shows that since 2011 access seekers are increasingly competing to provide bundled voice and broadband services (and more recently naked DSL services). This is shown by continuing growth in the number of ULLS SIOs and the decline in LSS SIOs.

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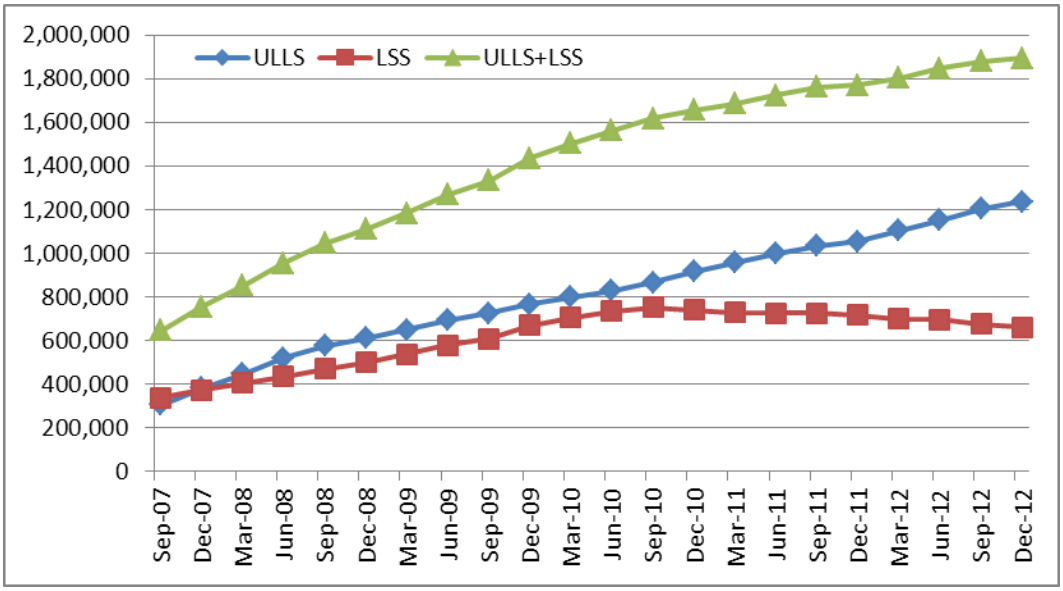
80 iiNet, August 2013 submission, p. 2.

81 Telstra, CAN RKR, December 2012.

Figure 4.1: Number of ULLS and LSS services in operation (SIOs)



Source: ACCC CAN RKR Reports

Declaration of the ULLS and LSS has contributed to a drop in the average price of broadband services. Retail prices have decreased (in real terms) every year since the ACCC began recording the information in 2007. More particularly, data allowances have increased in recent years, resulting in the effective price per GB decreasing significantly (from approximately $30/GB in 2007 to less than $1/GB today).

The ACCC agrees with iiNet that if the ULLS and LSS were no longer regulated, Telstra would have significant market power in the negotiation of commercial terms and conditions for these services.[82] The ACCC also agrees with AAPT that as a vertically integrated operator of natural monopoly bottleneck infrastructure, Telstra has the incentive to refuse potential retail competitors access to its copper infrastructure on reasonable terms and conditions. This would allow Telstra to avoid the competitive pressure that would restrict its ability to raise prices for its retail voice and broadband services.[83] This would allow Telstra to earn monopoly profits in the retail market.

Alternatively, without the ULLS and LSS declarations, access seekers would have two alternative sources of the inputs needed to compete in supplying retail fixed broadband and retail fixed voice services: resale services supplied by Telstra or wholesale services provided over other networks, such as the HFC or wireless networks. Reliance on resale alternatives would limit an access seekers' ability to effectively compete across product-price service dimensions of fixed voice and fixed voice broadband services, because they would have less scope to differentiate their retail provider offerings. In regards to the HFC and wireless networks, the ACCC does not consider these alternative networks to be effective substitutes for the ULLS or LSS for reasons discussed in chapter 3.1.

The ACCC notes that the NBN rollout will, in time, replace parts of Telstra's copper network as customers migrate to the NBN. However, the ACCC considers that Telstra's copper

82 iiNet August 2013 submission, p. 5.
83 AAPT August 2013 submission, p. 3.

network continues to remain a bottleneck service in the provision of fixed line broadband and voice services, and that the ULLS and LSS services should remain regulated for a period of five years.

4.3.2 Would continued declaration encourage the economic use of, and efficient investment in, infrastructure?

The ACCC considers the continued declaration of the ULLS and LSS will continue to encourage the economic use of, and efficient investment in, infrastructure. The ACCC agrees with Macquarie Telecom that declaration is likely to ensure access prices better reflect costs, thus providing appropriate signals for access seekers' investment decisions and use of efficient investment in infrastructure.[84]

As discussed above, it is the ACCC's view that continued declaration of the ULLS and LSS will enable greater competition in retail markets and, therefore, improve productive and dynamic efficiency. Access providers and access seekers will both invest and innovate in ways that ensure they produce services of a chosen quality at the lowest possible cost in the future. Further, allocative efficiency is likely to be improved by continued ULLS and LSS declaration because stronger retail competition will lead to the prices paid for retail services by end-users better reflecting the efficient costs of providing these services. Productive, dynamic and allocative efficiency encourage the efficient use of, and the economically efficient investment in, infrastructure.

As noted by AAPT continued declaration is likely to reduce barriers to entry and have a positive effect on investment by access seekers.[85] In the absence of the ULLS or LSS declarations, the ability of access seekers to acquire these services, or to acquire them on reasonable terms and conditions is likely to be reduced and it is reasonable to conclude that access seekers' incentives for efficient investment in infrastructure may be distorted. AAPT also notes that the withdrawal of the ULLS and LSS would also have implications for efficient investment in infrastructure because it would lead to access seeker investment becoming redundant sooner than it otherwise would.[86]

The ACCC considers that the LSS should remain declared. While access seekers appear to be switching from LSS to ULLS-based supply of services, the ULLS is not a perfect substitute for the LSS. If declaration of the LSS was revoked, some access seekers might need to upgrade their exchange equipment to enable them to supply both voice and broadband services. Many of the DSLAMs used in conjunction with the LSS service do not have voice capability and access seekers have not installed switching or other equipment to offer a traditional voice product. Alternatively, the end-users who currently receive a traditional voice service from another retail service provider might have to upgrade their customer premises equipment (at some cost) in order to receive a VoIP service – or switch to an alternative resale service provider.

Legitimate commercial interests of the access provider

The ACCC considers that continued declaration of the ULLS and LSS would not adversely affect Telstra's ability to exploit economies of scale and scope. Nor would it adversely

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84 Macquarie Telecom August 2013, p. 5.
85 AAPT August 2013 submission, p. 5.
86 AAPT August 2013 submission, p. 8.

impact upon Telstra's ability to earn a commercial return. This is because the regulatory regime allows Telstra to recover the efficient costs of supplying and charging for these services through the regulated prices for the ULLS, LSS and related services.

It is the ACCC's view that declarations of the ULLS and LSS are not detrimental to Telstra's legitimate commercial interests. The ACCC notes that Telstra has submitted that both services should continue to be declared.

4.3.3 The ULLS and LSS service descriptions should not be amended to include the IIC service

The ACCC notes Optus' submission that the ULLS and LSS service descriptions should be amended so as to specifically state the IIC service is necessary to provide the ULLS and LSS service.

The ACCC does not consider an amendment to the service description is necessary because it can regulate the IIC through the Final Access Determinations for the ULLS and LSS (see chapter 7).

4.3.4 The LSS service description should be amended for consistency with the ULLS service description

The ACCC proposes to make a minor technical amendment to the LSS service description to ensure consistency with the ULLS service. The ACCC proposes to amend the service description to remove the word 'or aluminium' from the definition of communications wire in the LSS service description.

The definition of **communications wire** is defined in the ULLS service description as:

> a copper wire forming part of a public switched telephone network

The definition of **communications wire** is defined in the LSS service description as:

> a copper *or aluminium* wire forming part of a public switched telephone network

The ACCC is not aware of any aluminium use in Telstra's CAN and considers this amendment would have no practical effect.

4.4 Sub-loop unbundling

The current ULLS (and LSS) service descriptions involve access to unconditioned communications wire in the CAN between the boundary of a telecommunications network (on the customer side) and a point where the communications wire terminates. Currently, the communications wire generally terminates at the local exchange. In contrast, access to the sub-loop involves access at a new point between the customer and the local exchange along the communications wire. That is, unbundling at the sub-loop level would enable an access seeker to gain access to a smaller part of the local copper loop (rather than the full local loop).

4.4.1 Previous ACCC consideration of sub-loop unbundling

In 2007, the ACCC commenced an inquiry into the possible variation of the service declaration for the ULLS.[87] This followed a request in March 2007 from the G9 consortium of companies to vary the ULLS service declaration to ensure that sub-loop access falls within the definition of the declared ULLS. The G9 consortium submitted that a variation would provide certainty for a fibre to the node (FTTN) provider as the provision of services over the network would be contingent on access to the sub-loop.[88]

The ACCC concluded that there was no need at that time to vary the ULLS declaration for the purpose of access or unbundling at the sub-loop level as the need for a variation was dependent on the scenario under which an FTTN network was implemented. At the time, there was uncertainty about whether and how an FTTN network might be implemented.

4.4.2 Issues

In an FTTN network, sub-loop unbundling may be a necessary input for quasi-facilities-based competitors to compete in downstream broadband and voice markets. Access seekers could potentially install their own DSLAMs and switching equipment at a node and use the sub-loop infrastructure to provide voice and data services to end-users (as access seekers currently do at Telstra's local exchange in conjunction with using the ULLS or LSS).

Access to a sub-loop may become necessary in future. For example, access to the sub-loop could allow a FTTN network to be built more efficiently depending on the design of that network. In that scenario, NBN Co (and potentially other access seekers) could install their network equipment in a cabinet or other node (along with fibre transmission), and use the existing sub-loop to connect to the end-user premises.

Location of the customer access module

The current ULLS service description states that the point where the communications wire terminates is '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'. The customer access module (CAM) is defined as 'a device that provides ring tone, ring current and battery feed to customers' equipment'. The CAM is the electronic equipment necessary to provide the traditional voice service to end-users.

The current service description requires Telstra to provide access to an exchange or cabinet if a CAM is present. Depending on how an FTTN network is implemented, a CAM may not necessarily be located at a node. For example, where voice services are provided via VoIP, the CAM could be located in the customer premises equipment.

Economics of unbundled access at the sub-loop level

In its 2007 position paper on varying the ULLS service description, the ACCC considered that any theoretical benefits of competition at the node would need to be weighed against the

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87 ACCC, *Unconditioned Local Loop Service: ACCC inquiry into possible variation of the service declaration for the unconditioned local loop service*, Position Paper, December 2007.

88 ACCC, *Unconditioned Local Loop Service: ACCC inquiry into possible variation of the service declaration for the unconditioned local loop service*, Position Paper, December 2007, p. 2.

economics of the FTTN model. In particular, the low number of addressable premises available at the node may mean that investment at the node lacks the requisite economies of scale and scope. In addition, there may be difficulties in obtaining physical access to the node or space in the node to install DSLAMs.

In its 2007 position paper, the ACCC noted international evidence that where an incumbent telecommunications provider had built an FTTN network, access seekers have shown little interest in deploying their own DSLAM and switching equipment at nodes.[89] The ACCC considered that lack of take-up may be due to the limited economic viability of interconnecting at the node. Due to the smaller addressable market provided at nodes and higher per unit costs of equipment (relative to deployment of DSLAM and switching equipment at the local exchange), a significantly large proportion of the total number of customers in each distribution area would need to be secured by any one access seeker to meet the minimum efficient scale necessary to deploy infrastructure within a particular distribution area.

More recent international evidence suggests that this conclusion remains relevant. For example, sub-loop unbundling has been mandated in the UK since 2001. This service allows competitors to place their own DSLAM infrastructure in British Telecoms' Openreach cabinets to access Openreach's sub-loop. However, take-up of this service has been very limited.[90]

In 2013, the New Zealand Commerce Commission (NZCC) declared an unbundled sub-loop service. To date, no access seeker has taken up an unbundled sub-loop service at any cabinets. The NZCC consider that some factors that may have an effect on access seeker's choice to unbundle cabinets in New Zealand include that cabinetised lines are difficult to unbundle and the scale necessary to make investment in installing equipment at the cabinet viable.[91]

Implications of vectoring for unbundled access

As identified during the 2007 ULLS variation inquiry, an issue that may arise with sub-loop unbundling is 'cross-talk' (or 'mid point injection interference'). Cross-talk occurs when one xDSL service interferes with other xDSL services transmitted over copper pairs, which are in close proximity to each other (i.e. within a cable).[92] Currently street cabinet providers must comply with a maximum power and spectrum limit to ensure that a certain level of performance can be achieved for xDSL services provided over the ULLS to avoid cross-talk. In effect, this means that the capacity to provide higher xDSL through-put data-rates for equipment located at a cabinet would be significantly compromised, which would mean that some of the benefits of deploying a FTTN network may not be fully realised.

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89 ACCC, *Unconditioned Local Loop Service: ACCC inquiry into possible variation of the service declaration for the unconditioned local loop service*, Position Paper, December 2007, p. 10.

90 Ofcom, 'Review of wholesale local access market', 7 October 2010, p. 90, viewed 4 April 2013 at http://stakeholders.ofcom.org.uk/binaries/consultations/wla/statement/WLA_statement.pdf.

91 New Zealand Commerce Commission, Unbundled Bitstream Access Service Price Review: Update on matters relevant to the UBA price review, 13 August 2013, p. 21, viewed 15 November 2013 at http://comcom.govt.nz/dmsdocument/10926.

92 ACCC, *Unconditioned Local Loop Service: ACCC inquiry into possible variation of the service declaration for the unconditioned local loop service*, Position Paper, December 2007, p. 14.

Another solution to cross-talk is to implement vectoring. Vectoring reduces cross-talk by cancelling out some of the interfering signals. Vectoring allows higher transmission rates to be reached in the existing copper tail (or sub-loop) local network than has thus far been the case with the already advanced very high bit-rate (VDSL) vectoring technology. However, with current technologies, the effective use of vectoring is facilitated by having a single company control the use of all the copper pairs in the street cabinet, making unbundled access impractical where VDSL technology is being used.[93]

In Germany, Deutsche Telecom's requirements to provide sub-loop unbundling have recently been relaxed in preference for provision of a bitstream service utilising VDSL vectoring technology.[94]

4.4.3 ACCC's draft view

The ACCC is of the view that, given uncertainty around the details of how the FTTN network will be rolled out, it is not clear whether the current ULLS declaration may need to be varied to allow for sub-loop unbundling. The ACCC will consider the declaration of sub loop services further, if necessary, when details of the FTTN implementation have been determined.

In any future inquiry into sub-loop unbundling, the ACCC would consider the likely market demand for sub-loop unbundling, noting the low take-up of such services in other jurisdictions, and whether declaring sub-loop access would promote the LTIE.

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93 Bundesnetzagentur, Press release 'Companies should drive forward rapid broad-band roll-out', 29 August 2013 http://www.bundesnetzagentur.de/SharedDocs/Pressemitteilungen/EN/2013/130829_DecisionVectoring.html

94 Reuters, Deutsche Telekom gets conditional regulatory nod for vectoring, 9 April 2013. http://www.reuters.com/article/2013/04/09/us-deutschetelekom-regulator-idUSBRE93808520130409; See also Ovum, "Deutsche Telekom's VDSL2 vectoring decision will be a catalyst for others", 17 December 2012.

5 Resale services

Key Points

- The ACCC considers that the declarations for resale services (wholesale line rental (WLR), local carriage service (LCS) and the pre-selection and override functionality of PSTN OA) should be extended.
- Resale services play an important role in promoting competition in the retail market for fixed voice services because they lower barriers to entry by enabling access seekers to supply end-users with traditional voice services without having to invest in their own equipment in Telstra's telephone exchanges.
- Declaration of resale services will enable access seekers to efficiently maintain or build their customer bases as the industry transitions to the National Broadband Network (NBN).
- The ACCC proposes to vary the WLR, LCS and PSTN OA service descriptions to exclude resale services supplied using NBN infrastructure from the scope of regulation. The NBN will be regulated through a Special Access Undertaking. Additionally, the ACCC considers that a competitive wholesale market is likely to develop to supply smaller retail service providers with resale services supplied using NBN infrastructure.
- The ACCC proposes to vary the service descriptions for WLR and LCS to remove the existing CBD exemptions. The removal of these exemptions will promote competition and encourage efficient investment in the currently exempt CBD areas.

The ACCC may declare wholesale services which access seekers can on-sell to end-users by adding retail functions such as marketing, billing and other customer services. These wholesale services are often called resale services. Resale services enable access seekers to supply end-users with traditional voice (or broadband) services without having to invest in their own equipment in Telstra's telephone exchanges.

The wholesale line rental (WLR) service provides end-users with a telephone line and number. The local carriage service (LCS) is the wholesale provision of local calls and involves the carriage of a telephone call from one end-user to another end-user in the same standard zone.

WLR and the LCS are typically purchased together with the pre-selection and override functions of the public switched telephone network originating access (PSTN OA) service. Pre-selection and override functions, when used in conjunction with WLR, enable access seekers to supply long distance, fixed to mobile and international calling services to end-users.

Purchase of the WLR, LCS and PSTN OA (pre-selection and override) services enable access seekers to provide a full suite of voice services to their retail customers (local, long distance, international and fixed-to-mobile calls).

The special numbers functionality of PSTN OA (e.g. 13/1300 and 1800 numbers) is discussed in detail in chapter 6.

The service descriptions currently exempt (or 'carve out') the WLR and LCS services supplied in the Central Business District areas of Sydney, Melbourne, Adelaide and Perth exchange service areas (the CBD areas) from the declarations. As part of this inquiry, the ACCC has considered whether it is in the long-term interests of end-users (LTIE) for these exemptions to be continued or removed. This is discussed in chapter 5.2 below

5.1 Resale services

5.1.1 Discussion paper

In the July 2013 discussion paper, the ACCC summarised its reasons for extending the declaration of the WLR and LCS services in 2009. At the time, the ACCC considered that the declaration would promote the LTIE by:

- promoting retail competition;
- supporting competition on a national basis, where access seekers had invested in their own equipment at only some of Telstra's telephone exchanges; and
- reducing barriers to entry to the wholesale market by providing access seekers with an opportunity to build their customer bases, reputations and market knowledge before investing in their own exchange equipment.[95]

The ACCC noted a number of changes in the industry since 2009, which are relevant to the consideration of resale services. In relation to the promotion of retail competition, there continues to be market entry by new retail service providers offering fixed voice services. In relation to access seeker investment in exchange equipment, the discussion paper noted that the level of investment has slowed considerably since 2009. The ACCC also noted that the rollout of the National Broadband Network (NBN) raises the question of whether similar resale services should be supplied on a declared basis when they are provided using NBN infrastructure.[96]

The ACCC also noted that if it decides to extend the declarations for the WLR and LCS services, consideration will be given as to whether the current service descriptions remain appropriate.

With respect to pre-selection and override functions, the ACCC noted that the declaration of pre-selection and override enables end-users to have a greater choice of service provider for different call types, such as international and long distance calls. Therefore, the pre-selection and override functionality of the PSTN OA service encourages carriage service providers to compete for customers by offering cheaper call prices, attractive pricing plans and service features.

5.1.2 Submissions

Overall, submitters generally agreed that the declaration of resale services should be extended to promote competition through access to Telstra's copper network on reasonable terms and conditions until the NBN rollout is complete. However, Telstra supported the continued declaration of WLR and LCS services only where an enduring bottleneck exists,

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95 ACCC, July 2013 discussion paper, pp. 28-29.
96 ACCC, July 2013 discussion paper, pp. 29-30.

that is, where direct access services (notably the unconditional local loop service (ULLS)) are not available to provide effective competition in the supply of fixed line voice services.[97]

AAPT submitted that the declarations for resale services should be extended as Telstra would have an incentive to either cease the supply of WLR and LCS or charge monopoly rents for these services. Both would be detrimental to competition and are not in the LTIE.[98]

The ACCC did not receive any submissions that opposed extending the declaration of the pre-selection and override functionality of PSTN OA, when supplied over legacy networks.

Optus submitted that without regulated access to PSTN OTA services, 'Telstra would have the incentive and ability to use OTA to damage competition' in the fixed line and mobile markets.[99] Optus further submitted that there are a number of barriers to entry in acquiring ULLS including availability of a continuous copper loop and obtaining exchange access and space in a timely manner.[100]

Other submitters emphasised the importance of extending the declarations for resale services to promote retail competition. Macquarie Telecom submitted that the declaration of resale services lowers barriers to entry, ensures that end-users are provided with an alternative to Telstra as the service provider and therefore provides competitive tension in terms of price, service and service bundling at the retail level.[101] ACCAN stated that declaration of resale services remains an important element in promoting the LTIE and has been successful in improving retail competition in recent years.[102] Likewise, Optus considered that continued declaration of the WLR and LCS services is required to sustain competition in the provision of voice and broadband services.[103] Furthermore, Optus stated that resale services are important to be able to offer relevant services to the corporate and government segment, which is a more complex market. Optus stated that, for it to be able to compete in this market there needs to be certainty of access to Telstra infrastructure and products.[104]

Other submitters highlighted the importance of extending the declarations for resale services provided on the copper network prior to the transition to the NBN. Optus submitted that there will be greater reliance on resale services to achieve a national footprint ahead of the NBN rollout.[105] Optus expects that, during the transition to the NBN, usage of resale services will increase. It also submitted that during this transition it will be more efficient to promote the use of the existing customer access network (CAN) rather than encouraging alternative infrastructure which would become stranded following the NBN rollout.[106] iiNet noted that there has been a slowing down of access seeker investment in exchange equipment due to the NBN rollout, which will increase the necessity of access to resale services.[107]

Macquarie Telecom and iiNet submitted that PSTN OA is required to provide a full PSTN voice service using wholesale resale inputs. Therefore, any consideration of whether or not

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97 Telstra, September 2013 submission, p. 50.
98 AAPT, August 2013 submission, pp. 11-12.
99 Optus, August 2013 submission, p. 47.
100 Optus, August 2013 submission, p. 39.
101 Macquarie Telecom, August 2013 submission, p. 7.
102 ACCAN, August 2013 submission, p. 6.
103 Optus, August 2013 submission, p. 41.
104 Optus, August 2013 submission, p. 42.
105 Optus, August 2013 submission, p. 43.
106 Optus, August 2013 submission, p. 48.
107 iiNet, August 2013 submission, pp. 6-7.

PSTN OA should continue to be declared cannot be conducted in isolation from the declaration of WLR and LCS.[108]

5.1.3 ACCC's draft view

The ACCC's view is that extending the declaration for the WLR, LCS and PSTN OA (pre-section and override) will promote the LTIE. The ACCC has reached this draft view having regard to the extent to which declaration of the resale services would result in achieving the objectives set out in s152AB of the *Competition and Consumer Act 2010* (CCA) and after considering submissions made to the discussion paper.

The ACCC considers that the scope of the declared resale services should not extend to voice services supplied over the NBN, discussed below in section 5.3.

Would continued declaration promote competition?

In determining whether the continued declaration of the resale services would promote the LTIE, the ACCC must assess whether declaration would result in the promotion of competition in the relevant markets for these services. The ACCC considers it useful to apply the 'with and without test' to undertake this assessment.

The ACCC considers that the relevant markets for resale services are the retail and wholesale supply of fixed voice services as well as the retail supply of a bundle of fixed voice and fixed broadband services. As noted in chapter 3, the ACCC has defined these markets, for the purposes of this draft report, as national.

The ACCC considers that continued declaration of the resale services will promote competition in the supply of fixed voice and bundled fixed voice and fixed broadband services for the reasons set out below.

Wholesale and retail markets for fixed voice services

The ACCC considers that at present competition in the market for retail fixed voice services occurs predominantly using a full suite of fixed voice services—line rental, local calls, long-distance, international and fixed to mobile voice. As noted in chapter 3, the ACCC has defined these markets, for the purposes of this draft report, as national.

Pre-selection and override functions enable retail end-users to select a different long distance provider from their basic access provider. Telstra submitted that **[c-i-c] [c-i-c]**.[109] This indicates that end-users generally purchase their long distance, fixed-to-mobile and international calls from the same retail service provider that provides their basic access and local calls. However, WLR-based providers typically use the pre-selection function in conjunction with their own long distance network (or with long distance services purchased from a provider other than Telstra) to supply a full suite of voice services to their end-users—that is, the access seeker pre-selects its own long distance network (or the network carrying its long distance calls).

A significant share of retail fixed voice services are currently supplied using resale services and this is likely to remain so over the next five years. The ACCC agrees with iiNet and Macquarie Telecom that the continued declaration of resale services would allow access

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[108] Herbert Geer, August 2013 submission, p. 9; Macquarie Telecom, August 2013 submission, p. 9.
[109] Telstra, September 2013 submission, p. 37.

seekers to provide end-users with additional choices in terms of service provider, increased competition on the retail service dimensions and competitively priced fixed voice services.[110] These benefits are likely to continue to be enjoyed by a significant number of end-users during the NBN rollout. As noted by Optus in its submission there is likely to remain a substantial number of end-users served over the copper network in the next five years.[111]

The ACCC considers that the continued declaration of resale services will also support broader retail competition by access seekers that have already invested in their own equipment in some telephone exchanges. The availability of resale services will enable these access seekers to offer their customers voice services in areas where they have not installed their own exchange equipment. As noted by Optus, the availability of the resale services are an important input in supplying the corporate and government segment of the market, which require ubiquitous coverage .[112]

The ACCC notes that a number of submissions state that resale services will be important in the transition to the NBN. The ACCC considers that retail service providers have incentives to build scale during the rollout period to enhance their ability to compete over the NBN, particularly to the extent that there may be economies of scale in providing NBN services. The ACCC considers that some retail service providers have additional incentives to build or maintain scale due to payments for services migrated to the NBN. Accordingly, the ACCC considers there are incentives for network operators to deny access or charge above-cost prices for resale services to build their retail market share at the expense of other retail service providers. The ACCC considers that extending the declarations of these resale services will allow access seekers to obtain access to resale services on reasonable terms and conditions during the transition to the NBN.

As noted by AAPT, and others submitters, if the declaration for resale services was not extended, Telstra would have the incentives to either cease the supply of WLR or LCS services or supply these services on unfavourable terms and conditions. The extent to which Telstra actions would have an effect on competition would depend on the availability of substitutes for these resale services in the wholesale market and fixed voice services in the retail market.

As discussed in chapter 3 of this draft report, the ACCC considers that mobile voice services are a limited substitute for fixed voice services and, for the majority of end-users, remain a complement to fixed voice services. The ACCC considers that plain old telephone service (POTS) emulation VoIP services are substitutable at the retail level for traditional (POTS) fixed voice services. These services can be supplied by ULLS-based access seekers that have installed their own exchange equipment.

As discussed in chapter 3, potential substitutes for resale services are:

- self-supply of fixed voice services (using either ULLS or an alternative end-to-end network such as hybrid fibre-coaxial cable (HFC) or fibre optic); or
- re-sale of a fixed voice service supplied by a service provider other than Telstra (that is, via an effective wholesale market in resale services).

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[110] iiNet, August 2013 submission, p. 6, and Macquarie Telecom, August 2013 submission, p. 7.
[111] Optus, August 2013 submission, p. 20.
[112] Optus, August 2013 submission, p. 42.

ULLS

The substitutability of ULLS-based services for resale services depends on the level of investment required by access seekers to switch to ULLS-based supply of retail voice services. It also requires exchange access on reasonable terms and conditions to allow access seekers to install their own exchange equipment.

As discussed in chapter 3, the ULLS has the potential to act as a competitive constraint on resale service providers by enabling ULLS-based access seekers to supply retail voice services through the provision of POTS or POTS emulation VoIP services. ULLS-based access seekers that have invested in analogue PSTN switching equipment or multi-service access nodes (MSANs) are able to provide a POTS. However, most access seekers have not made investments in legacy PSTN switching equipment (which has been used historically by Telstra for its copper network) and are unlikely to make such investments in the future, given that legacy switching equipment has been surpassed by IP switching technology. While some access seekers have invested in soft switching to enable them to provide POTS emulation VoIP services, the ACCC understands that the commercial viability of such investments require economies of scale because of significant sunk costs for access seekers.[113]

ULLS-based access seekers that cannot supply POTS or POTS emulation VoIP services can offer standard VoIP service to end-users. In order to use these services, end-users must invest in VoIP-enabled customer premises equipment at additional cost.

As noted in chapter 3, there has been steady growth in the number of exchanges in which there is digital subscriber line access multiplexer (DSLAM) competition. However, the ACCC notes that as the DSLAM footprint has broadened and deepened, the marginal returns from further DSLAM investments have fallen because the most profitable investments have already been undertaken. The ACCC considers it likely that access seekers are less willing to invest in areas where the returns are expected to be lower. The rollout of the NBN is expected to have further reduced the returns and increased the risks of new copper-based equipment investments which will become stranded when customers migrate off the copper network. This means that while ULLS-based supply can be a substitute for resale services, it is less effective in providing a competitive constraint outside the existing competitive footprint because any significant expansion of the footprint, through DSLAM investment in exchanges where access seekers do not currently have a presence, is unlikely.

In areas where access seekers do currently have a presence, there are still some limitations on ULLS-based services as a substitute for resale services. First, Telstra offers inferior Service Level Agreements for the ULLS compared to WLR. This may limit the substitutability of ULLS-based wholesale supply for services outside of CBD areas for particular segments of the market such as corporate/government end-users.[114] Second, ULLS is not available on all lines, as noted by Optus some lines have 'blockers', such as large pair gain systems, that prevent the supply of broadband services on the line.[115] In such cases, voice-only services are the only fixed line services that can be provided to the end-user and Telstra's resale services are the only means for an access seeker to provide these services.

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113 ACCC, *Inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services: Final Report*, December 2011, p. 77.

114 ACCC, *Inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services: Final Report*, December 2011, p. 34.

115 Optus, August 2013 submission, p. 43.

The ACCC concludes that while ULLS-based services are capable of being a substitute for resale fixed voice services, there are some limitations to the extent of competitive constraint that ULLS-based services are able to provide.

Alternative networks

As discussed in chapter 3, the ACCC considers that voice services provided over alternative HFC and fibre networks are unable to provide significant competitive constraint in the national market for fixed voice services. These networks are often geographically limited and, particularly in the case of the HFC networks, are not configured to provide wholesale access services. While these networks may be a competitive alternative to Telstra's resale services for the owners of the networks, they are limited in the extent to which they provide a suitable supply substitute for other access seekers.

Additionally, given the substantial sunk costs involved in building an alternative fixed network and the rollout of the NBN, it is unlikely that any party would consider establishing their own alternative network to supply retail or wholesale fixed line voice services. The ACCC notes that NBN services will not substitute for copper-based voice services because as the rollout occurs end-users will be transitioned over from a copper base service to a fibre based service.

Development of an effective wholesale market for resale services

A number of telecommunications providers other than Telstra supply a wholesale fixed voice service to other access seekers. For example, the ACCC notes that Optus is one such provider that offers a wholesale product using soft switching and the ULLS combined with DSLAM/MSAN deployment to supply a wholesale fixed voice bundle to other providers. To the extent that these services are available at competitive rates, the ACCC consider that they could pose an effective substitute to resale services available from Telstra.

However, there are limitations on the development of an effective wholesale market for resale services. First, the development of an effective wholesale market is constrained by the limits on the supply-side substitutability of the ULLS (including the costs of required infrastructure investment and exchange access). Additionally, the ACCC considers that the economies of scale in efficiently providing voice only services, using the ULLS and access seeker exchange equipment, have limited the development of a strong wholesale market for voice only products.

Second, access seekers' limited DSLAM footprint means they cannot supply wholesale services using their own equipment on a national basis. This limits the substitutability of ULLS-based services for supplying 'whole of business' services to corporate and government end-users with national operations.

Third, Optus's HFC network has a limited footprint, is currently not configured to supply wholesale services and would require investment to enable the provision of such services.

Retail market for bundled fixed voice and fixed broadband services

The ACCC's draft view is that extending the declarations for resale services will promote competition in the supply of bundled fixed voice and fixed broadband services to the extent that end-users consider a traditional fixed voice service an essential component of the bundle.

The ACCC acknowledges Optus's submission that Telstra has an incentive to increase WLR prices in undeclared areas to 'frustrate the ability of access seekers to compete' using a

wholesale ADSL service.[116] The ACCC considers this argument extends to access seekers competing using a bundled WLR and LSS product to provide a bundled voice and broadband product to end-users.

Would continued declaration encourage the economically efficient use of, and investment in, infrastructure?

The ACCC considers that the future with declaration of resale services is more likely to encourage the efficient use of infrastructure used to supply fixed voice and fixed broadband services than the future without declaration, especially taking into account the NBN rollout.

Incentives for efficient investment in infrastructure

Since 2009, access seekers' investment in exchange equipment has slowed significantly, largely due to the rollout of the NBN,[117] which has reduced the incentives to invest in copper-based infrastructure such as DSLAMs, which will become redundant when the NBN is rolled out. There is greater risk that access seekers may be unable to receive an adequate return on any such investment. Nevertheless, there will still be incentives, in some cases, for access seekers to invest in exchange equipment where it is commercially efficient to do so.

The ACCC agrees with AAPT that without declaration of resale services, access seekers may be forced to make inefficient investments in copper-based exchange equipment if the removal of resale regulation resulted in these services not being provided on reasonable terms and conditions, including price. [118]

The ACCC considers that ongoing declaration of the resale services will promote efficient use of existing infrastructure. Without declaration, the use of Telstra's sunk copper-based equipment may be underutilised if deregulation resulted in monopoly pricing of resale services and a fall in their use by access seekers. Without regulated access to PSTN OA, access seekers may find it difficult to make a commercial rate of return from using their own existing transmission and switching networks. Were this to occur, existing network assets may be underutilised or stranded.

Technical feasibility – technology in use or availability

The ACCC notes that Telstra has been providing third party access to the resale services for many years and that it is technically feasible for Telstra to continue to supply and charge for the services. Additionally, the ACCC considers that the legislative framework ensures that, in providing access to declared services, Telstra is able to recover the costs of providing access to the services and earn a commercial return on its investment. Therefore, the ACCC considers that Telstra's legitimate commercial interests would not be harmed from the ongoing declaration of the resale services.

5.2 CBD exemptions

The service descriptions for the WLR service and LCS currently exempt (or 'carve out') these services in the Central Business District areas of Sydney, Melbourne, Adelaide,

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116 Optus, August 2013 submission, p. 42.

117 ACCC, Public inquiry to make a final access determination for the Wholesale ADSL service, Final Report, May 2013, pp. 69-70.

118 AAPT, August 2013 submission, p. 11.

Brisbane and Perth exchange service areas (ESAs) (the CBD areas) from the declarations. As a result, access providers are not obliged to supply these services in these areas and the regulated terms and conditions (including price) in the final access determinations for these services do not apply.

The ACCC has considered whether it is in the LTIE of end-users for the CBD exemptions to be maintained or removed.

Telstra (and other access seekers) were first granted exemptions from supplying the LCS (and by extension the WLR service) in CBD areas in July 2002. The CBD exemption was included in the service description for the WLR service when it was declared as a separate service in 2006.[119]

5.2.1 Submissions

The ACCC received a number of submissions and supplementary submissions on the issue of CBD exemptions providing arguments both in support of and against the removal of CBD exemptions from the WLR and LCS service descriptions.

The ACCC considered it needed additional information to enable it to make a well informed, robust decision on this issue. The ACCC therefore issued an information request to a number of stakeholders on 9 October 2013. Responses to this request are listed in appendix G.

Optus submitted that the CBD exemptions should be removed so as to facilitate competition in the corporate and government segment of the market, in which Telstra has a 75 per cent market share. It submitted that this market had unique characteristics including:

- customers requiring national connectivity (which requires access seekers to utilise Telstra resale services outside their DSLAM footprints);
- customers having 'large premises within the CBD areas that require access seekers to utilise Telstra resale services'; and
- capacity constraints at CBD exchanges, which makes it difficult for access seekers to provide services using ULLS.[120]

Macquarie Telecom submitted that the ACCC's rationale for the removal of exemptions in the ACCC's 2011 inquiry to vary the final access determinations (FADs) for the fixed line services (2011 exemptions inquiry) applies to the CBD exemptions.[121] It stated that it currently **[c-i-c] [c-i-c]** as opposed to $22.84 in regulated areas, **[c-i-c] [c-i-c]**[122]

Macquarie Telecom, AAPT and iiNet jointly submitted that the ACCC's rationale for its 2011 FAD variation inquiry decision to remove exemptions apply to CBD areas.[123] They submitted that competition is not effective, as evidenced by the fact that access seekers pay significantly more for WLR services in CBD areas. They further submitted that access to the service on cost-based terms is essential to protect resale competition, and that there is little to

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119 ACCC, *Local Services Review*, Final Decision, July 2006, p. 88.
120 Optus, August 2013 submission, p. 46.
121 Macquarie Telecom, August 2013 submission, p. 1. The ACCC notes that it provided a summary of its reasons for its 2011 review of the metropolitan exemptions in its July 2013 Discussion Paper (ACCC, Fixed Services Review, Discussion Paper on the Declaration Inquiry, July 2013, p. 60.)
122 Macquarie Telecom, August 2013 submission, p. 8.
123 Macquarie Telecom, AAPT and iiNet, September 2013 joint submission, p. 1.

no prospect of investment in alternative wholesale infrastructure given the NBN rollout. They submitted a report by Frontier Economics which found the LTIE would be promoted if exemptions were removed as competition would be promoted in downstream markets for voice services and increase the efficient use of infrastructure.[124]

In a supplementary submission, Macquarie Telecom submitted a (second) report from Frontier Economics which argued that high WLR price levels in CBD areas have not been undermined by substitution towards other services that provide WLR and LCS like functionality.[125] The Frontier Economics report presented a critical loss analysis showing that setting significantly above-cost WLR prices in the CBD areas is profit-maximising because of Telstra's vertical integration and its dominance in the retail voice market.

Telstra submitted that the CBD exemptions should remain.[126] It submitted that CBD ESAs are highly competitive, noting its retail market share for broadband services in CBD areas is **[c-i-c] [c-i-c]** per cent points lower than its national average market share. Telstra stated that there is extensive infrastructure-based competition in CBD ESAs, noting that there is an average of **[c-i-c] [c-i-c]** DSLAM-based competitors in CBD areas compared to an average of **[c-i-c] [c-i-c]** in the 466 Band 2 ESAs in which there is at least one DSLAM-based competitor.[127] It noted that there are multiple fibre-based and wireless fixed access networks in these areas.

Telstra further submitted that CBD ESAs exhibit unique demographic characteristics which make them attractive for infrastructure investment. This includes the significantly larger addressable market in CBD ESAs than in other ESAs, a low percentage of end-user services provided by non-MDF infrastructure (due to a low proportion of lines affected by pair-gain systems and other 'line blockers'), and the higher number of SIOs per premises (an average of **[c-i-c] [c-i-c]** in CBD areas compared to **[c-i-c] [c-i-c]** in metropolitan areas).[128]

Telstra submitted that regulation of a particular wholesale input is only in the LTIE if there is an enduring bottleneck, which exists if two criteria are met. First, there should be 'no alternative input or process' that enables a competitor to produce an equivalent product at a comparable cost. Telstra submitted that alternative inputs for supplying a WLR service exist, as evidenced by the number of copper-based alternatives and fibre networks in CBD areas.[129]

Second, there should be no substitute final good or service that can be produced and sold at a comparable price without using that input. It submitted that an increasing number of buildings (particularly those housing large enterprise and government premises) within the CBD areas are already connected to alternative fibre networks, over which access seekers can provide a full range of voice and data services.[130] It considered there are an increasing range of substitutable services that are being selected in preference to PSTN-based voice services. Telstra stated that the Enterprise and Government segment of the market is highly competitive.[131]

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[124] Macquarie Telecom, AAPT and iiNet, September 2013 joint submission – Attachment 1: Frontier Report,
[125] Macquarie Telecom, November 2013 supplementary submission, p. 1.
[126] Telstra, September 2013 submission, p. 30.
[127] Telstra, September 2013 submission, p. 32.
[128] Telstra, September 2013 submission, p. 34.
[129] Telstra, October 2013, response to information request, p. 5.
[130] Telstra, October 2013, response to information request, p. 6.
[131] Telstra, October 2013, response to information request, pp. 7-8.

Telstra further stated its view that the levels of competitive activity in CBD areas and the low percentage of WLR SIOs that are business lines are likely to result in a relatively low level of reliance on resale services within the CBD ESAs.[132]

Consistency with the wholesale ADSL service

Optus submitted that the CBD exemptions should be removed so the scope of regulation for the WLR service is consistent with the national declaration of the wholesale ADSL service. It stated the 'the ACCC has mandated that WLR is acquired with WADSL, and as such the WADSL service cannot be provided' without the WLR service.[133] Optus submitted that Telstra has an incentive to increase charges in undeclared exchanges to 'frustrate' access seeker ability to compete using wholesale ADSL services.[134]

Telstra's supplementary submission stated that it does not force its wholesale customers to bundle the two services.[135]

The ACCC notes access seekers are not required to purchase a WLR service when they purchase the wholesale ADSL service. However, similar to the LSS, the wholesale ADSL service can only be purchased when there is an active voice service on the line. The active voice line can be provided by Telstra Retail, by another access seeker, or by a single access seeker choosing to buy the Wholesale ADSL and WLR services together to provide voice and broadband services to the end-user.

5.2.2 ACCC's draft view

The ACCC's draft view is to vary the WLR and LCS service descriptions to remove the existing exemptions in CBD areas. The ACCC has reached this view having had regard to the extent to which declaration of the resale services would result in achieving the objectives set out in section 152AB of the CCA and after considering submissions made to the discussion paper and in response to its information request.

The ACCC considers that the removal of the CBD exemptions will provide end-users with additional choices in terms of service provider and increased competition in retail service dimensions. Access seekers will be able to compete more effectively with Telstra to offer competitively-priced products to end-users.

Would removing the exemption provisions and declaring the CBD areas for the WLR service promote competition?

In determining whether the removal of the CBD exemptions would promote the LTIE, the ACCC must assess whether declaration would result in the promotion of competition in the relevant markets in the currently exempt CBD areas. The ACCC considers that the relevant markets for resale services are the markets for retail and wholesale supply of fixed voice services as well as the retail market for the supply of a bundle of fixed voice and fixed broadband services. As noted in chapter 3, the ACCC has defined these markets, for the purposes of this draft report, as national. However, consistent with its previous approach to

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132 Telstra, October 2013, response to information request, pp. 7-8.
133 Optus, August 2013 submission, p. 46.
134 Optus, August 2013 submission, p. 46.
135 Telstra, October 2013, response to information request, p. 2.

determining whether to grant or revoke geographic exemption provisions, the ACCC has also considered the impacts of the CBD exemptions on competition within the CBD ESAs.

The ACCC considers that the removal of CBD exemptions and the declaration of the WLR service and LCS in CBD areas are likely to promote competition in the supply of fixed voice and bundled fixed voice and fixed broadband services for reasons set out below.

Telstra (and other access seekers) were first granted exemptions from supplying the LCS (and by extension the WLR service) in CBD areas in July 2002. At the time, the ACCC considered there was sufficient alternative local access infrastructure (e.g. local fibre networks) and declared services (local PSTN OA and ULLS) for originating local calls in these areas and that this competing infrastructure would provide an effective constraint on Telstra's prices. The CBD exemption was included in the service description for the WLR service when it was declared as a separate service in 2007.

Based on this reasoning, the ACCC would expect that the WLR and LCS prices in exempt areas would reflect the costs of supplying these services, as is typically the case over time in effectively competitive markets. In its 2011 inquiry into making final access determinations for the declared fixed line services (2011 FAD inquiry), the ACCC determined the regulated nationally averaged price for the WLR using its Fixed Line Services Model (FLSM). In estimating the WLR price, the ACCC recognised that the costs of supplying a WLR service in Band 1 areas (the CBD areas) were likely to be lower than the nationally-averaged price, which includes the costs of supplying WLR services in the higher-cost Bands 2-4 areas.[136]

The ACCC has received evidence in submissions to this inquiry that Telstra is charging significantly higher prices for the WLR service in the exempt CBD areas than the regulated WLR price of $22.84. Telstra's website indicates that its standard wholesale charges for CBD areas are $31.77 per month (for business end-users) and $27.60 (for residential end-users).[137]

Comparison of access seeker and Telstra costs and revenues for 'typical' CBD end-users

To assist it in assessing the competition effects of the higher WLR prices charged in the CBD areas, the ACCC has calculated the expected costs and revenues for access seekers and Telstra to supply services to four types of end-users typically found in the CBD areas. These calculations have assisted the ACCC in assessing the impact the higher WLR price in CBD areas are likely to have on access seekers' ability to compete in these areas. The ACCC's findings, and the evidence and assumptions used by the ACCC in making these calculations, are set out below.

Average residential voice-only end-user

The ACCC has obtained information from retail service providers' websites on retail charges for a basic voice-only service. For a single line rental service, Telstra's national retail price is

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136 ACCC, *Inquiry into making final access determinations for the declared fixed line services*, Final Report, p. 10.

137 Telstra, 'Our Customer Terms, Wholesale Services Section' http://www.telstra.com.au/customer-terms/download/document/wp.pdf. Telstra's monthly access charge is $31.77 for a Basic Telephone Service with Business Access and $27.60 for a Basic Telephone Service with Home Access.

$22.95[138], Optus offers a $22.00 product[139] and iiNet offers a telephone service for $29.95 per month.[140]

Telstra charges $27.60 per month for a WLR service in CBD areas. Therefore access seekers using the WLR service will earn little or no gross margin on supplying retail services (and, in some cases, will have a negative gross margin). Unless these access seekers are able to sell other services to their residential customers, such as broadband services (provided using the LSS or Wholesale ADSL service), the evidence suggests that they will not earn sufficient gross margin to cover their retail costs (which include billing, marketing, and customer service costs). Based on this analysis, the ACCC considers that access seekers' ability to compete with Telstra in supplying retail voice-only services to residential end-users is at the very least limited where these access seekers do not have their own exchange equipment.

For access seekers with their own exchange equipment, the ACCC notes that economies of scale in supplying voice-only services on their DSLAMs is likely to limit these access seekers' ability to compete with Telstra in supplying to retail voice-only services to residential end–users.

The ACCC considers that in CBD areas, retail competition in relation to voice-only end-users is adversely affected as a result of the CBD exemptions.

Small business end-users

The ACCC considers a small business in CBD areas would typically constitute a sole trader such as a dental surgery, watch repairer or cafe, at a single location. Based upon the information available to the ACCC, this type of business would tend to represent around one third of all business establishments in the CBD.[141]

The ACCC understands that this type of end-user would typically require two line rental services – one for an EFTPOS machine and another for either a voice-only service or a bundled voice and broadband service.

The ACCC has estimated the likely difference in the relative costs to Telstra and access seekers in supplying services to a typical small business end-user, based on the assumptions set out below.

Telstra offers a single line rental service for business customers at $40 per month.[142] The ACCC considers that, in order to compete with Telstra, access seekers must match or better this price. The ACCC understands that some access seekers may choose to supply a voice line service at a loss in order to develop a market presence and potentially sell a broader range of services to end-users at a profit at some point in the future. Accordingly, the ACCC has assumed that access seekers will charge between $31.77 and $40.00 for a basic business line rental product.

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138 Telstra, Plans and rates, https://www.telstra.com.au/home-phone/plans-rates/index.htm

139 Optus, Plans, https://www.optus.com.au/shop/homephone?SID=con:cat:cat:her:1::yes:phoneaf:

140 iiNet, Home Phone Plans, http://www.iinet.net.au/phone/home/. These plans differ slightly in terms of included call costs.

141 Based on information provided by Macquarie Telecom, AAPT and iiNet, November 2013 case studies.

142 Telstra, Business Line Fixed Phone Line Plan, http://www.telstra.com.au/business-enterprise/business-products/telephony/plans-pricing/businessline-plans/index.htm#tab-casual

The ACCC has also assumed that Telstra's cost of supplying a retail line rental service will fall within the range of **[c-i-c] [c-i-c]** (estimated in the ACCC's FLSM for the purposes of the 2011 FAD inquiry)[143] and $22.84 (the regulated price in the current FAD for the WLR service); it will also incur retail costs which will need to be covered from its gross profit margin. The ACCC notes that the costs of supplying a line rental service in CBD areas is likely to be lower than nationally averaged costs due to the higher population densities and shorter distances to reach customer premises mean that less ducts and pipes and copper cables are needed to provide each service compared to non-CBD areas.[144]

The ACCC has estimated the typical usage charges for a small business end-user based on information provided by access seekers in response to the ACCC's request for market information.[145] For the purposes of this example, the ACCC has assumed that Telstra and the access seeker both face the same revenue and costs for voice usage and the supply of a broadband service.

Example of a small business end-user—estimated costs and revenues (per month) of providing a voice and broadband bundle

Service	**Revenue (Access seeker and Telstra)**	**Telstra costs**	**Telstra gross margin**	**Access seeker costs**	**Access seeker gross margin**	**Difference between Telstra and access seeker costs**
Line rental (x2)	$63.54 - $80[146]	**$[c-i-c] [c-i-c]** - 45.68[147]	28 - **[c-i-c] [c-i-c]**%	$63.54[148]	0 - 21%	
Voice Usage	$60	$37	38%	$37	38%	
Broadband[149]	$50	$35	30%	$35	30%	
TOTAL	$174 - 190	$**[c-i-c] [c-i-c]**-	32 - **[c-i-c][c-i-**	$135.54	22 - 29%	$17.86 - **[c-i-c][c-i-c]**

[143] See chapter 11 of ACCC, *Public inquiry to make final access determinations for the declared fixed line services: Discussion paper*, April 2011.

[144] ACCC, *Review of the 1997 telecommunications access pricing principles for fixed line services: Draft report*, September 2010, p. 91.

[145] Macquarie Telecom, AAPT and iiNet, November 2013 case studies.

[146] Assuming the revenue received by telecommunication providers in CBD areas for a single voice only line is between $31.77 (being the cost charged by Telstra for a WLR service) and $40 (being the retail amount Telstra charges for a single business voice-only line).

[147] Assuming the cost for Telstra to supply a voice only line is between **[c-i-c] [c-i-c]** and $22.84 (being the regulated cost of supply as set by the ACCC).

[148] Assuming access seekers pay the CBD price of $31.77 per WLR line.

[149] Based upon Macquarie Telecom, AAPT and iiNet, November 2013 case studies estimates. Broadband costs are assumed to comprise of ADSL port cost, bandwidth cost, national cost and backhaul cost.

		117.68	**c]**%			

On the basis of the calculations shown in the table, an access seeker's costs of supplying line rental to a typical small business end-user in the CBD areas would be between $17.86 and $**[c-i-c][c-i-c]** per month higher than Telstra's costs.

The ACCC understands that access seekers generally require a gross profit margin of around 20-25 per cent to cover their retail costs (which include billing, marketing, and customer service costs). However, the calculations in the table demonstrate that access seekers' gross margins are likely to fall between 0 and 21 per cent to supply line rental to a typical small business end-user in CBD areas. The overall gross margin for access seekers supplying the full line rental, voice usage and broadband bundle to these customers also appears to be marginal – at only 22 to 29 per cent. Consequently, the ACCC considers that the higher WLR prices charged in CBD areas (compared to the regulated WLR price in all other areas) mean that access seekers are unlikely, in most cases, to earn sufficient revenue to cover all of their costs of supplying small business end-users in these areas.

In contrast, Telstra enjoys margins of between 28 and **[c-i-c][c-i-c]** per cent for retail line rental services, and between 32 and **[c-i-c][c-i-c]** per cent on the overall bundle of services, which appear to allow it to recover its retail costs and earn a contribution to net profit.

Therefore, overall the ACCC considers the difference in costs faced by access seekers and Telstra significantly inhibits access seekers' ability to compete effectively for small business end-users in the CBD areas.

Medium-sized business end-users

A typical medium-sized business end user would have multiple locations, located both within and outside the CBD areas, for example, a national retail chain. Information available to the ACCC suggests this type of business would tend to represent around one quarter of all business establishments in the CBD.[150]

Based on market information submitted by access seekers,[151] the ACCC understands this type of end-user would usually have two line rental services in each location – one for an EFTPOS machine and another for a bundled voice and broadband service.

For the purposes of comparing likely costs and revenue for access seekers and Telstra, the ACCC has assumed a medium-sized business end-user would have 50 locations; 25 within the CBD areas and 25 outside the CBD areas. Each location has two line rental services.

The ACCC has assumed that the WLR price to access seekers outside CBD areas is the regulated price of $22.84 per month, and that these end-users have higher voice and broadband usage than small business end-users. The ACCC has also assumed that retail line rental charges for these end-users will be lower than for the retail list price (which is assumed to be paid by small business end-users). The ACCC understands that retail service providers typically offer a discounted price that is lower than the retail list price for larger customers with a greater number of locations and larger number of services. Consequently the ACCC has assumed for the purpose of its calculations that retail line rental charges fall within the range of $31.77 and $35.00 per month. The ACCC has estimated the voice usage charges and

[150] Based on information provided by Macquarie Telecom, AAPT and iiNet, November 2013 case studies.
[151] Macquarie Telecom, AAPT and iiNet, November 2013 case studies

broadband costs for a typical medium-sized business end-user based on information provided by access seekers in response to the ACCC's request for market information.[152] Other assumptions are the same as for a typical small business end-user.

Example of a medium-sized business end-user—estimated costs and revenues (per month) of providing a voice and broadband bundle						
Service	**Revenue**	**Telstra costs**	**Telstra gross margin**	**Access seeker costs**	**Access seeker gross margin**	**Difference in Telstra and access seeker costs**
Line rental in CBD (x50)	$1589 - 1750[153]	$**[c-i-c] [c-i-c]** - 1142[154]	28 - **[c-i-c] [c-i-c]**%	$1589[155]	0 - 9%	
Line rental outside CBD (x50)	$1589 - 1750	$1142[156]	28 - 77%	$1142[157]	28 - 35%	
Voice usage	$1201	$780	35%	$780	35%	
Broadband	$1450	$1000	31%	$1000	31%	
TOTAL	$5828 - 6151	$**[c-i-c] [c-i-c]** - 4064	30 - **[c-i-c] [c-i-c]**%	$4511	26 - 29%	$446.50 - **[c-i-c] [c-i-c]**

Based on these calculations, an access seeker would face additional monthly costs of between $447 and $**[c-i-c] [c-i-c]** compared to Telstra in supplying line rental to the 'typical' medium-sized business end-user assumed in this example.

The calculations in the table indicate that access seekers' likely gross margins for supplying line rental to this type of end-user would fall between 0 and 9 per cent in the CBD areas. Since access seekers are understood to require a gross profit margin of between 20-25 per cent to cover their retail costs, the example suggests that access seekers could be making a loss on the CBD line rental services supplied to these types of businesses and are cross subsidising voice services from their higher margins on non-CBD voice services, voice usage and broadband services. As with the small business end-user, access seekers' gross margin

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152 Macquarie Telecom, AAPT and iiNet, November 2013 case studies

153 Assuming retail service providers charge between $31.77 (being the cost charged by Telstra for a WLR service) and $35 per month for a single voice-only line.

154 As outlined in the small business example above, the ACCC has assumed that the cost for Telstra to supply a voice only line in CBD areas falls between **[c-i-c][c-i-c]** and $22.84 (being the regulated cost of supply as set by the ACCC).

155 Assuming access seekers pay the non-regulated price of $31.77 per WLR line.

156 Assuming Telstra faces a cost equal to the regulated price of $22.84 per WLR.

157 Assuming access seekers pay the regulated price of $22.84 per WLR line.

on supplying the total bundle of services to medium-sized end-users also appears to be marginal (at 26 to 29 per cent).

However, the ACCC's calculations suggest that Telstra has the ability to offer these end-users larger discounts to win their business than access seekers can offer, due to the significantly higher gross margins on the total bundle of services supplied it is likely to earn (of between 30 and **[c-i-c] [c-i-c]** per cent compared to access seekers with 26 to 29 per cent).

Large business end-users

A large business end-user is typically a mass market retail outlet with greater scale than medium-sized business end-users and more CBD locations compared to suburban or regional locations. These end-users may also have corporate office requirements (such as additional broadband services, hosting requirements and mobile telephony requirements) but their defining feature is the large number of CBD locations which are each relatively small, requiring only (on average around) two voice lines at each location.[158]

In a competitive market, retail service providers seeking to supply this business segment may compete by offering discounts for providing a package of services. For example, an access seeker using WLR services to supply a large business end-user with 200 voice-only lines in the CBD areas would face additional supply costs of at least $1786[159] per month compared to Telstra.

The ACCC understands that large business end-users often issue separate tenders for their fixed voice services, mobile voice services, and data services to achieve the best possible price and service offering. This practice will reduce the ability of access seekers reliant on resale services to cross-subsidise loss-making CBD voice-only services from more profitable lines of business and constrain their ability to compete with Telstra and ULLS-based access seekers.

ACCC's findings on the state of competition in the CBD areas

To identify the reasons for Telstra's ability to charge significantly above-cost prices for the WLR services in the exempt CBD areas, the ACCC has analysed the state of competition in the relevant markets in those areas. The ACCC's findings are below.

There remains significant demand for copper-based voice-only services in CBD areas.

A significant number of end-users currently purchase voice-only services in the exempt CBD areas. Telstra currently has **[c-i-c] [c-i-c]** voice only SIOs in CBD areas, including **[c-i-c] [c-i-c]** wholesale SIOs.[160]

From an end-user perspective (as discussed in chapter 3), there are additional costs in moving from a traditional copper-based voice-only service to a VoIP service. End-users must acquire a VoIP-enabled phone or modem in order to receive equivalent voice services over an IP-based network, such as fibre and HFC networks and many ULLS-based access seeker

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158 This is to be contrasted with single location corporate customers, such as a medium sized law firm, where a service provider can replace all the copper lines (say, 30) to the floor of the customer's building with a single fibre connection across which both voice and data can be supplied (using VOIP technology).

159 Calculated as the difference between the WLR price in CBD areas of $31.77 and the regulated WLR price of $22.84, multiplied by 200 lines.

160 Telstra, October 2013 response to information request, Appendix: CBD data request.

networks. Moving to a bundled voice and broadband service similarly requires the end-user to incur costs and usually be willing to sign up to a 12-24 month contract (in some cases where the end-user signs up to a lengthy contract term, the cost of the modem may be spread over the life of the contract). These additional costs and conditions limit the retail substitutability of these alternative services.

Optus submitted **[c-i-c] [c-i-c]**[161]

The ACCC further notes that the Frontier Economics report submitted by Macquarie Telecom referred to a recent Ofcom finding that there is a material group of users for whom Metallic Path Facility (MPF) (being the UK equivalent to ULLS) is not suitable for voice access and who therefore have limited alternatives to British Telecom's WLR-equivalent service. These are notably voice-only customers and some customers purchasing voice and broadband separately (including many business users).[162]

In addition, submissions by Macquarie Telecom[163] and Optus stated that WLR services are typically used to supply 'special services' to end-users. These are services which have historically been provided over a voice-only copper line and include point of sale (EFTPOS) equipment, facsimile, security alarms, elevator telephones and back-up telephones.

The ACCC understands that, while solutions are being developed to supply special services over IP-based networks, using IP-based special services requires significant end-user investment in replacing equipment at the end-user premises in order for it to be compatible with an IP solution.

The ACCC has received evidence in submissions that end-users are often reluctant to upgrade to IP-based alternatives if these services might be 'less reliable and cost more.'[164] Telstra advised the ACCC that **[c-i-c] [c-i-c]**.[165]

The ACCC has reached a draft view that customer inertia and the costs of switching to IP-based retail services require access seekers to supply certain end-users in CBD areas with a traditional copper-based voice service. Based on this, the ACCC considers that in the absence of regulation of WLR in CBD areas it is unlikely, for the foreseeable future, that access seekers will be able to compete effectively for a significant proportion of these end-users.

There are limited competitive substitutes for supplying voice-only services in CBD areas.

The competitive impact of retaining the CBD exemptions provisions is dependent on the availability of effective substitutes for these resale services in the wholesale market and for retail services supplied using these resale services.

The ACCC notes Telstra's submission that CBD areas are characterised by a higher level of DSLAM-based investment (on average) than in non-CBD areas and numerous alternative fixed line and fibre networks. However, the ACCC considers that, from an access seeker's

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161 Optus, October 2011 Submission in response to the ACCC Issues Paper - Inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services, p. 14.
162 Macquarie Telecom, November 2013 second supplementary submission, p. 7.
163 Macquarie, October 2013 response to information request, p. 3.
164 Macquarie, October 2013 response to information request, p. 3.
165 Telstra, email to ACCC, November 2013.

perspective, voice services supplied using access seeker DSLAM infrastructure and fibre infrastructure are not fully substitutable for voice services supplied using the WLR service.

The ACCC has received evidence that there are higher unit costs in providing voice services using access seeker equipment and the ULLS. AAPT stated that these additional costs derive from **[c-i-c] [c-i-c]** [166] These additional costs, and the costs of installing their own exchange equipment, reduce access seekers' ability to substitute self-supply of voice-only services for WLR services.[167]

Further, the ACCC has received evidence that, reflecting these higher costs, access seekers often impose conditions on supplying wholesale voice services. AAPT submitted that it offers a PSTN voice service replacement but cannot **[c-i-c]. [c-i-c].**[168] Optus submitted that it offers a wholesale voice product with significant conditions. Optus provided evidence that **[c-i-c] [c-i-c]**[169] In contrast, **[c-i-c] [c-i-c]**[170]

The ACCC notes that the Frontier Economics report submitted by Macquarie Telecom referred to a recent Ofcom finding that MPF (being a UK equivalent for ULLS) 'is inherently less efficient than WLR for the provision of voice only services'.[171]

While HFC networks are technically able to provide voice services, the ACCC notes that Optus' HFC network is not configured to provide wholesale access services and that there are likely to be significant costs in upgrading the network to provide these services.[172] Further, as noted above, HFC and fibre-based voice services are not fully substitutable for copper-based voice services from an end-user perspective.

The ACCC's draft view is that ULLS-based services and services provided using HFC and fibre networks have limitations as competitive supply substitutes for supplying voice-only services in CBD areas.

The commercial WLR price charged by Telstra tends to hold up retail prices for voice services in CBD areas.

As noted above, a significant number of end-users demand voice-only services in the CBD areas and there are limited substitutes available for these services at both retail and wholesale levels.

The ACCC considers that the above-cost prices Telstra is able to charge for WLR services in CBD areas, in the absence of declaration, reflects a lack of effective competition in the retail and wholesale voice-only markets in the CBD areas. In the ACCC's view, this lack of effective competition is likely to keep retail prices high not just for the **[c-i-c] [c-i-c]** voice-only SIOs supplied by access seekers but also for the **[c-i-c] [c-i-c]** voice-only SIOs supplied

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166 AAPT, October 2013, response to information request, p. 6.

167 In contrast, access seekers are more easily able to obtain scale economies in supplying fixed broadband services and fixed voice/broadband bundles services using the ULLS and their own exchange equipment. This is largely because the prices, and therefore margins, for retail broadband and bundled products are greater than for a single voice-only service on a line.

168 AAPT, October 2013, response to information request, p. 5.

169 Optus, October 2013, response to information request, p. 2.

170 Telstra, October 2013, response to information request, p. 12.

171 Macquarie Telecom, November 2013 second supplementary submission, p. 7.

172 ACCC, *Declaration of the wholesale ADSL service under Part XIC of the Competition and Consumer Act 2010, Final Decision*, February 2012, p. 11.

by Telstra retail.[173] This is because the high WLR prices paid by access seekers make it more difficult for them to undercut Telstra's retail prices and offer lower prices to end-users in the CBD areas.

The Frontier Economics report submitted by Macquarie Telecom set out a critical loss analysis of the CBD exemptions. It considers that Telstra has an incentive to maintain above-cost WLR prices in the CBD areas as a profit-maximising strategy. This is because Telstra will either (i) earn large profit margins on its WLR sales to access seekers or (ii) if access seekers lose retail customers (end-users) from passing on the high WLR prices in their retail charges, Telstra Retail is likely, based on market share analysis, to gain the majority of access seekers' previous retail customers. Telstra's profit margins on its retail sales are also high because Telstra's costs of supplying retail services in CBD areas is lower than the national average (while retail prices are set on a national basis).[174]

In an effectively competitive market, the ACCC would expect that competition would drive retail prices down to reflect the costs of supplying voice services and promote innovation and greater choice for end-users. The ACCC considers that declaring the WLR service in CBD areas would promote competition and lead to lower retail prices, more innovation and greater choice for end-users.

The ACCC has not received evidence that the price for the LCS is higher in the exempt CBD areas than the regulated LCS price. However, as discussed at the start of this chapter, the LCS is typically purchased with a WLR service (and the PSTN OA (pre-selection and override) service) to enable access seekers to provide a complete package of voice services to end-users.

The ACCC considers that, given the lack of effective competition in supplying voice-only services in the CBD areas, Telstra would have an incentive and the ability to raise the LCS price in the CBD areas in the event that the CBD exemptions were removed from the WLR service description but not from the LCS service description. Such a price increase could be designed to compensate for the removal of the current price differential between the commercial WLR price and the regulated price.

The ACCC notes Optus' submission that Telstra has an incentive to increase WLR prices in the CBD areas to 'frustrate the ability of access seekers to compete' using a wholesale ADSL service.[175] The ACCC considers this argument could be extended to access seekers competing using a bundled WLR and LSS product to provide a bundled voice and broadband product to end-users in the CBD areas. Telstra has submitted that **[c-i-c] [c-i-c]** SIOs[176] in the CBD areas are supplied using the WLR service and either the Wholesale ADSL service or LSS.

Corporate and government end-users with national operations often prefer a 'whole of business' solution from a single retail service provider.

The ACCC has received evidence that corporate and government end-users prefer to have a single telecommunications provider for all of their voice and broadband services. The ACCC understands that many of these end-users, such as large retail chains, require a mixture of

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173 Data sourced from Telstra, October 2013 response to information request, Appendix: CBD data request.
174 Frontier Economics Report, November 2013 p. 11.
175 Optus, August 2013 submission, p. 46.
176 Data sourced from Telstra, October 2013 response to information request, Appendix: CBD data request.

multiple voice and broadband services for some of their premises and a small number of voice-only lines (for telephone calls and special services) for their smaller retail outlets.

Optus submitted that the ability for any telecommunications provider to offer a 'whole of business' option is critical.[177] It stated that this requires access seekers to be able to purchase resale services from Telstra in areas where they do not have an infrastructure footprint so that they can supply services nationally to all of the end-user's premises.[178] AAPT also submitted that corporate customers increasingly expect data and voice solutions from a single supplier.[179]

The ACCC considers that the high commercial WLR prices in CBD areas are likely to affect the ability of access seekers to offer competitively-priced 'whole of business' packages of voice and broadband services to corporate and business end-users that have nationally-distributed operations. In addition, the ACCC understands that retail service providers typically offer discounts to end-users for purchasing a 'whole of business' package in order to win their business.

The ACCC considers that Telstra is likely to be in a better position to offer competitively-priced and discounted 'whole of business' services to end-users than access seekers that have to pay above-cost prices for WLR services in the CBD areas. As noted above, the ACCC considers that there are limited substitutes for providing voice-only services. Telstra's ability to charge above-cost WLR prices in CBD areas is likely to allow it to undercut access seekers and win 'whole of business' end-users operating in both the CBD areas and non-CBD areas. In this way, Telstra could leverage its market power in the CBD areas into other parts of the relevant markets. Telstra has stated that the existing exemptions do not impact upon the ability of access seekers to compete for customers in the enterprise and government sector as these customers typically require a broad range of telecommunications and data services and the contracts are typically of a 'high value'.[180]

Service Level Agreements and large pair-gain systems are not significant factors in the substitutability of ULLS-based supply in CBD areas.

In its 2011 exemptions inquiry, the ACCC found that inferior Service Level Agreements (SLAs) for the ULLS and the significant proportion of lines affected by large pair-gain systems were factors reducing the ability of access seekers to supply services in metropolitan areas using the ULLS as a substitute for the WLR service. In response to submissions referring the ACCC to its reasoning in the 2011 exemptions inquiry, the ACCC has examined the relevance of these factors to its consideration of the CBD exemptions.

The ACCC found, in its 2011 exemptions inquiry, that the SLAs offered by Telstra for the ULLS were inferior to those provided by the WLR service in metropolitan ESAs.[181] These inferior SLAs were particularly significant in reducing the substitutability of ULLS-based

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177 Optus, October 2011 Submission in response to the ACCC Issues Paper - Inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services, p. 18.

178 Optus, October 2011 Submission in response to the ACCC Issues Paper - Inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services, p. 16.

179 AAPT, October 2013, response to information request, p. 4.

180 Telstra, October 2013 response to information request, p. 7.

181 ACCC, *Public inquiry to make final access determinations for the declared fixed line services: Final Decision*, p. 98.

voice services for the WLR service for the purpose of providing retail voice services to business end-users, for whom continuity of supply and rapid fault restoration are important.

The ACCC notes that, in CBD areas, Telstra offers customers the ability to purchase superior enhanced SLAs for the ULLS than for the WLR service.[182] However, the ACCC understands from Telstra **[c-i-c] [c-i-c]**. The ACCC considers therefore that SLAs are unlikely to be significant to the substitutability of ULLS and WLR services.

In regard to pair-gains, the ACCC found that the existence of large pair gain systems or 'line blockers' (which prevent the ULLS being provided on the line) were a significant factor in reducing the availability of substitutes for the WLR service in metropolitan areas in its 2011 exemptions inquiry.[183] Similarly, in the ACCC's 2013 inquiry into making a FAD for the wholesale ADSL service, ACCC reached the view that the presence of line blockers like large pair-gain systems reduced the scope for competition and limited the ability of non-Telstra wholesale ADSL providers to constrain the pricing and terms and conditions of supply of Telstra's wholesale ADSL services.

However, the ACCC notes Telstra's submission that there are less than 1 per cent of PSTN services are delivered through line blockers in CBD areas.[184] The ACCC does not consider this is a significant factor in reducing the substitutability of the ULLS for the WLR service.

Would removing the exemptions encourage the economically efficient use of, and investment in, infrastructure?

The ACCC's draft view is that the removal of the CBD exemptions from the declared WLR and LCS is more likely to promote the efficient use of infrastructure used to supply fixed voice and fixed broadband services than that if the exemptions were maintained, especially during the transition to the NBN.

As discussed above, since 2009, access seekers' investment in exchange equipment has slowed significantly, largely due to the rollout of the NBN,[185] which has reduced the incentives to invest in copper-based infrastructure such as DSLAMs, which are likely to become redundant when the NBN is rolled out. Access seekers therefore face greater risks that they may be not receive an adequate return on any such investment. Nevertheless, there will still be incentives, in some cases, for access seekers to invest in exchange equipment where it is commercially efficient to do so. Without the removal of CBD exemptions, access seekers may be forced to make inefficient investments in copper-based exchange equipment if the removal of resale regulation resulted in these services not being provided on reasonable terms and conditions, including price. [186]

As noted above, and in a submission by Macquarie Telecom,[187] Telstra's ability to charge WLR prices in the exempt CBD areas that are significantly above the regulated price is likely to reduce access seekers' ability to compete effectively with Telstra for retail customers,

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182 Telstra, October 2013, response to information request, p. 5.

183 ACCC, *Public inquiry to make final access determinations for the declared fixed line services: Final Decision*, p. 73.

184 Telstra, October 2013, response to information request, p. 8

185 ACCC, Public inquiry to make a final access determination for the Wholesale ADSL service, Final Report, May 2013, pp. 69-70.

186 AAPT, August 2013 submission, p. 11.

187 Macquarie Telecom, November 2013 second supplementary submission, p. 1.

including for corporate and government end-users seeking a 'whole of business' solution. As a result, the CBD exemptions may hinder the efficient use of access seekers' existing DSLAM and switching infrastructure, including access seeker infrastructure located outside the CBD areas. Any loss of corporate and government end-users by access seekers, which was caused by the high WLR price in CBD areas, would mean that existing DSLAMs in CBD and non-CBD areas may not be efficiently utilised to provide the broadband services required by those end-users.

The ACCC considers that economic efficiency requires that the use of these assets should not be artificially reduced by above-cost pricing of resale services during the transition to the NBN.

The ACCC further agrees with Macquarie Telecom, iiNet and AAPT's submission that there is little risk that the removal of exemptions would create a risk of inefficient investment in the CBD areas.[188] Existing infrastructure owners will be keen to exploit their networks in areas where they have already entered to avoid using WLR and LCS when it is efficient to do so.

Other considerations

Telstra has been supplying the WLR service and LCS for more than a decade. Some other access seekers also provide equivalent resale services. The ACCC considers that it will be technically feasible for Telstra and other access seekers to continue to supply and charge for the services in the event that the services were declared in the CBD areas.

Applying the regulated prices in the currently exempt CBD areas would still allow Telstra to recover costs of providing access to the services and to earn a commercial return on its investment. Therefore, the ACCC considers that Telstra's legitimate commercial interests would not be harmed from the removal of the exemptions.

The ACCC has not received evidence that the price for the LCS is higher in exempt CBD area than the regulated LCS price. However, as noted above, Telstra and other access providers would have an incentive and the ability to raise LCS prices in the CBD areas if the LCS exemption were to be retained in the CBD areas while the CBD exemption was removed in respect of the WLR service. The ACCC considers therefore that the LCS should be declared in the CBD areas.

In addition, the ACCC considers that removing the CBD exemptions from the declared WLR and LCS would improve regulatory certainty and consistency for Telstra and access seekers because the service descriptions for the WLR, LCS and PSTN OA services would provide for the same geographic coverage. The scope of regulation would therefore be the same for these three services, which are typically purchased together.

5.3 Resale services provided using NBN infrastructure

5.3.1 Discussion paper

The July 2013 discussion paper noted that the rollout of the NBN raised the question of whether resale services should be supplied on a declared basis when they are provided using

[188] Macquarie Telecom, AAPT and iiNet, September 2013 joint submission) Attachment 1, Frontier Report p. 6.

NBN infrastructure. The ACCC sought submissions on whether potential access seekers will face significant barriers to entry to supplying services on the NBN and whether the LTIE would be promoted by declaring resale services provided over the NBN infrastructure.

5.3.2 Submissions

Telstra, AAPT, iiNet and Macquarie Telecom submitted that resale services provided using NBN infrastructure should not be regulated.

Telstra submitted that services should only be declared where there is an essential bottleneck facility and noted that the NBN has been designed at the outset to maximise competition on a national basis. Telstra stated there are therefore no significant barriers to entry in supplying services over the NBN and that it would be contrary to the LTIE to regulate voice services (or other resale) services provided over the NBN.[189]

A number of stakeholders submitted that a competitive wholesale market is likely to develop for resale services provided over the NBN. AAPT considered that there is a strong likelihood that there will be a competitive wholesale market for resale services over the NBN.[190] iiNet submitted that access seekers and potential access seekers are unlikely to face significant barriers to entry in supplying resale services over the NBN. Both iiNet and AAPT submitted that the NBN's 121 points of interconnection is likely to encourage smaller retail service providers to purchase wholesale resale services and competition in the market for NBN wholesale services is likely to be stimulated by this demand.[191]

In regard to the PSTN OA service, Telstra submitted that the obligation to provide pre-selection and override functionality should only apply in respect of the PSTN.[192] Telstra submitted three reasons why pre-select and override are not applicable over next generation networks:

- the rationale for pre-selection and override (i.e. a separate long distance access alternative) has significantly diminished, even over the PSTN;
- Next Generation Networks (NGNs), such as the NBN, are fundamentally different in structure to its copper CAN. The suite of voice services is highly replicable over NGNs so there is no inherent calling service bottleneck as there is with the PSTN; and
- Telstra's NGN-based networks do not presently have pre-selection and override capability. To enable this functionality, Telstra and other carriers would incur significant upfront and ongoing operating costs to alter relevant systems.[193]

Telstra submitted that the additional costs of supplying pre-selection functionality over the NBN were a reason for the *Telecommunications (Consumer Protection and Service Standards) (Characteristics for Standard Telephone Service) Regulation 2012* which introduced a three year exemption to the legislative requirement[194] for carriers and carriage

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189 Telstra, September 2013 submission, p. 50.
190 AAPT, August 2013 submission, p. 14.
191 iiNet, August 2013 submission, p. 7; AAPT, August 2013 submission, p.14.
192 Telstra, September 2013 submission, p. 37.
193 Telstra, September 2013 submission, pp. 37-38.
194 Section 349 of the Telecommunications Act.

service providers to provide pre-selection and override capability. The exemption commenced in June 2012.[195]

Telstra submitted that over the NBN, the full suite of voice services (local and long distance) will be provided by the end-user's retail service provider of choice. It stated that NBN Co's regulated access service replaces the two options currently used to supply the full suite of services, that is, ULLS or the combination of WLR/LCS and PSTN OA (pre-select and override).[196]

Finally, Telstra submitted that 'for similar reasons to… WLR and LCS services, there is no requirement for bundled long distance voice access to be regulated over NBN (or other next generation networks).'[197]

5.3.3 ACCC's draft views

The ACCC's draft view is that the WLR, LCS and PSTN OA (pre-selection and override) services should not be declared in respect of resale services provided where connectivity between the end-user and the public switched telephone network is provided by means of a Layer 2 bitstream service supplied by an NBN corporation (henceforth referred to as NBN infrastructure or the NBN). Although the NBN is a natural monopoly (bottleneck) infrastructure, there are several features of the industry structure and regulatory environment which the ACCC considers are likely to mitigate NBN Co's ability to exercise market power.

The access component of providing a voice service using NBN infrastructure will be regulated. NBN Co will provide basic access services on regulated terms pursuant to its Special Access Undertaking (SAU). Further, the ACCC can make access determinations for services or terms and conditions not regulated via an accepted SAU.

Additionally, NBN Co is wholesale-only, meaning that it does not have a presence in downstream retail markets and will not have the incentive that a vertically integrated operator has to discriminate against downstream competitors in favour of its own retail operations. Further, the non-discrimination obligations in Part XIC of the CCA prohibit NBN Co from discriminating between access seekers in relation to the terms and condition of access to NBN services and in carrying out related activities such as developing or enhancing services and facilities.

The ACCC notes that a carrier's core voice network using the NBN for access is different in structure and uses different equipment to PSTN networks. As a result, it is relatively inexpensive to self-supply voice services over the NBN. Additionally, a carrier is able to supply Layer 3+ voice services using the Layer 2 NBN service and its own switching equipment.

The ACCC considers that there is potential for the emergence of a competitive aggregation market for voice services. The ACCC notes that, under current policy and regulatory settings, there are likely to be economies of scale in providing a national voice service over the NBN, largely for the purchase of CVC services and transmission. Telstra, iiNet and AAPT submitted that there is likely to be an emerging and competitive market in the supply of resale services with numerous providers of aggregation and other wholesale services already

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195 Telstra, September 2013 submission, p. 38.
196 Telstra, September 2013 submission, p. 39.
197 Telstra, September 2013 submission, p. 39.

participating or planning to participate in the market.[198] AAPT submitted that a number of access seekers, including AAPT, Telstra and Optus are offering or intend to offer wholesale services over the NBN.[199]

A number of service providers have indicated that they intend to provide aggregation and other wholesale services when the NBN is further rolled out. The ACCC notes that NBN Co's website lists 12 providers of wholesale services, including aggregation services, backhaul services and Layer 3 voice and internet services.[200] The ACCC notes that the extent to which such services will be provided, and when, is not yet clear as the market is still in its formative stages.

With respect to PSTN OA (pre-selection and override) the ACCC notes Telstra's submission that to offer pre-selection and override capability over the NBN, it would need to make an initial investment of approximately **[c-i-c] [c-i-c]** and incur annual operating costs of approximately **[c-i-c] [c-i-c]** of the initial investment. Telstra submitted that other carriers would likely face similar costs.[201] The ACCC notes that the use of pre-selection and override by end-users to select a different long distance provider is declining, and that access seekers will be able to provide a full suite of voice services directly using NBN infrastructure and their own switching equipment. Accordingly, the ACCC considers that the costs of investing to provide resale services over the NBN are unlikely to be matched by the likely benefits to end-users. The ACCC considers therefore that the declaration of this service over the NBN would be likely to lead to inefficient investment in new infrastructure.

5.4 Service descriptions

The ACCC's proposed service descriptions for WLR, LCS and PSTN OA are contained in appendices C, D and E respectively.

The ACCC notes that the specific amendments it is proposing to make to the PSTN OA service description, relating to pre-selection and override, are discussed in this section. The other amendments that the ACCC is proposing to make to the PSTN OA service description are discussed in section 6.4 of this paper.

5.4.1 The WLR and LCS service descriptions should be amended to remove CBD exemptions

As discussed in section 5.3.3, the ACCC considers that the provisions that give effect to CBD exemptions should be removed from the WLR and LCS service descriptions. Therefore the ACCC is proposing to remove the following provisions.

WLR

> except where the supply of the line rental telephone service is within the Central Business District Area of Sydney, Melbourne, Brisbane, Adelaide and Perth.

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198 Telstra, September 2013 submission, p. 26, iiNet, August 2013 submission, p. 7, AAPT, August submission, p. 14.

199 AAPT, August 2013 submission, p. 15.

200 http://www.nbnco.com.au/industry/service-providers/wholesale-service-providers.html, viewed 21 October 2013.

201 Telstra, September 2013 submission, p. 38.

Central Business District Area means the exchange service areas that are classified as CBD for the purposes of the ordering and provisioning procedures set out in the Telstra Ordering and Provisioning Manual as in force on the date of effect of the declaration.

LCS

however, the local carriage service does not include services where the supply of the local carriage service originates from an exchange located within a Central Business District Area of Sydney, Melbourne, Brisbane, Adelaide or Perth and terminates within the standard zone which encompasses the originating exchange

Central Business District Area means the exchange service areas that are classified as CBD for the purposes of the ordering and provisioning procedures set out in the Telstra Ordering and Provisioning Manual as in force on the date of effect of the renewed declaration.

5.4.2 The WLR, LCS and PSTN OA service descriptions should be amended to exclude regulation of resale services over the NBN

As discussed in section 5.3.2, the ACCC considers that resale services should not be regulated where voice services are being provided using NBN infrastructure. To give effect to this intention, the ACCC has included the following provision in its proposed WLR and LCS service descriptions:

except where the connectivity between the end-user and the public switched telephone network is provided in whole or in part by means of a layer 2 bitstream service that is supplied by an NBN corporation.

Layer 2 bitstream service has the same meaning as in the Telecommunications Act 1997.

NBN corporation has the same meaning as in the *National Broadband Network Companies Act 2011*.

The ACCC notes Telstra's submission that the scope of the WLR, LCS and pre-selection and override functionality of PSTN OA should be restricted to the PSTN.[202]

The ACCC considers that, on the information available to it at this time, regulation of resale services should only be excluded over NBN-based voice networks. To give effect to the ACCC's draft report not to regulate PSTN OA (pre-selection and override) services provided using NBN infrastructure, the ACCC is proposing to include the following provisions in its proposed PSTN OA service description:

Pre-selection and code override services are not declared where the connectivity between the end-user and the public switched telephone network is provided in whole or in part by means of a Layer 2 bitstream service that is supplied by an NBN corporation.

Layer 2 bitstream service has the same meaning as in the Telecommunications Act 1997.

NBN corporation has the same meaning as in the *National Broadband Network Companies Act 2011*.

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

The ACCC notes that other interconnection services, that is, the PSTN TA and PSTN OA (special numbers) services, will still be regulated with respect to the NBN, as discussed in chapter 6.4 of this paper.

6 Interconnection services

Key Points

- The ACCC proposes to extend the declaration of the PSTN Terminating Access (PSTN TA) service and the PSTN Originating Access (PSTN OA) service in respect of special numbers (origination of calls to 13/1300 and 1800 numbers). All submissions supported extending the declaration of these services.
- The ACCC considers that, in the absence of regulated access, network owners would have the incentive and ability to impose above-cost charges for call origination to special numbers and for call termination. Declaration of these interconnection services is likely to promote competition in the wholesale and retail markets for fixed voice services, achieve any-to-any connectivity and encourage the economically efficient use of, and investment in, infrastructure.
- The ACCC proposes to monitor industry development and implementation of any Internet Protocol-based (IP-based) interconnection standards. The ACCC may consider commencing an inquiry into varying the existing interconnection service descriptions, where appropriate.
- The ACCC is proposing to amend the service descriptions for PSTN OA and PSTN TA by:
    - removing provisions that represent the kinds of non-price terms and conditions that the ACCC usually includes in Final Access Determinations (FADs);
    - inserting provisions that exclude the obligation to supply pre-selection and override functionality over National Broadband Network (NBN)-based voice networks (discussed in chapter 5); and
    - changing the name of PSTN OA to Fixed Originating Access Service (FOAS) and PSTN TA to Fixed Terminating Access Service (FTAS).

Interconnection is the handover of telephone calls and data traffic between telecommunications network operators. Through interconnection arrangements, network operators provide end-users with access to other end-users, services or content on other networks.

The presently declared PSTN TA service involves the carriage of telephone calls, by the access provider, from a point of interconnection (POI) with the access seeker's network to the party receiving the call.

The presently declared PSTN OA service performs two functions:

- pre-selection and override – call origination, including handover to another network for transmission, switching and termination (used to supply long-distance, fixed to mobile and international calls)
- special numbers – call origination for the facilitation of 13/1300 and 1800 number services.

PSTN TA and the special numbers functionality of PSTN OA are interconnection services and are discussed in this chapter.

As pre-selection and override services are typically purchased together with other resale services, these functions of PSTN OA are discussed with other resale services in chapter 5.

6.1 Discussion paper

Chapter 4 of the July 2013 discussion paper outlined the ACCC's reasons for declaring the PSTN TA service in 2009. At that time, the ACCC considered that PSTN TA would promote any-to-any connectivity by ensuring that a network operator with a large customer base cannot exercise market power in negotiating with smaller network operators for the provision of terminating access services[203]

The July 2013 discussion paper noted that an important distinction between the PSTN OA and PSTN TA services is that, with respect to PSTN TA, the party originating the call, and paying for the cost of making the call, cannot choose the retail service provider of the party being called (and the network the call terminates on). In contrast to PSTN OA, end-users choose their retail service provider, which determines which network their calls originate from.[204] The PSTN OA (pre-selection and override) service is more akin to the PSTN TA service in that, as discussed below, the party incurring the cost for PSTN OA (special services), that is, the called party, does not select the retail service provider that originates the service.

The discussion paper noted four key changes in the telecommunications industry that may be relevant to the ACCC's consideration of whether to declare interconnection services:

- The number of fixed line telephone services in operation (SIOs) has fallen while the use of mobile services has increased significantly.
- There has been a significant decline in the number of local calls, national call minutes and fixed to mobile minutes on Telstra's network. The number of SIOs supplied via access seeker equipment and unconditioned local loop service (ULLS) has increased significantly.
- The use of Voice over Internet Protocol (VoIP) services has increased significantly.
- The volume of Internet Protocol (IP)-based traffic on Australian networks has increased significantly and will likely continue to increase.[205]

The ACCC also noted that the majority of fixed line voice only end-users remain connected to Telstra's network and that 'there remains a significant asymmetry in the size and reach of Telstra's network, relative to competing fixed line networks, especially when measured on a national basis'.[206]

The majority of voice services within and between networks in Australia are controlled using CCS#7 signalling; the PSTN OTA service descriptions reference this signalling protocol. The discussion paper noted, however, that growth in data traffic is currently driving significant

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[203] ACCC, July 2013 Discussion Paper, p. 32.
[204] ACCC, July 2013 Discussion Paper, p. 32.
[205] ACCC, July 2013 Discussion Paper, pp. 33-34.
[206] ACCC, July 2013 Discussion Paper, pp. 34-35.

increases in IP-based interconnections.[207] The ACCC sought submissions on whether the existing PSTN OA and PSTN TA service descriptions should be technology neutral.[208]

6.2 Submissions

6.2.1 PSTN TA service

All submissions supported the continued declaration of the PSTN TA service. AAPT, ACCAN, iiNet, Macquarie Telecom, Optus and Telstra submitted that regulated termination of voice calls should be available on all networks to ensure any-to-any connectivity.[209]

Macquarie Telecom submitted that the ongoing declaration of the PSTN TA service will also promote competition and the efficient use of and investment in infrastructure.[210] Optus added that the ongoing declaration of PSTN OTA services would benefit both fixed and mobile telecommunications markets.[211]

6.2.2 PSTN OA service (special numbers)

Telstra submitted that the special numbers functionality of the PSTN OA service enables access seekers to provide 13/1300 and 1800 retail services.[212] Telstra considers that when PSTN OA is used for these purposes, it is akin to a terminating access service in that the party paying for the cost of the call (in this case, the called party) cannot choose the retail service provider supplying part of the call (in this case, the call origination). Telstra submitted that declaring the PSTN OA service for special numbers functionality facilitates any-to-any connectivity.[213]

6.2.3 IP-based interconnection

Telstra submitted that the currently used Time Division Multiplexing (TDM), CCS#7 signalling and 2.048Mbit/s interconnection standards facilitate any-to-any connectivity and will continue to be the primary form of interconnection, including between National Broadband Network (NBN-)based voice networks and other networks, for the foreseeable future.[214] Telstra noted that the major carriers operating entirely IP-based voice networks use low cost media converters to enable them to interconnect with Telstra using the existing interconnection standards.

Telstra submitted that it would be premature to alter the existing interconnection standard specified in the PSTN OTA service descriptions until an accepted industry standard and sufficient demand for IP-based interconnection has developed. Telstra expects this to occur over the next 3-5 years.

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207 ACCC, July 2013 Discussion Paper, p. 35.
208 ACCC, July 2013 Discussion Paper, pp. 35-36.
209 AAPT, August 2013 submission, p. 13 and 29; ACCAN, August 2013 submission; p. 9; iiNet, August 2013 submission, p. 9; Macquarie Telecom, August 2013 submission, p. 10.; Optus, August 2013 submission, pp. 48-49; Telstra, September 2013 submission, p. 40.
210 Macquarie Telecom, August 2013 submission, pp. 9-10.
211 Optus, August 2013 submission, p. 49.
212 Telstra refers to this functionality as 'Special Access Services'.
213 Telstra, September 2013 submission, p. 40.
214 Telstra, September 2013 submission, p. 40.

Optus submitted that Session Initiated Protocol (SIP) is a signalling protocol that can be used for the purpose of transporting voice services over carriers' internal IP networks and between carriers' networks. Optus indicated that it already uses SIP within its own voice networks, but, as yet, the major carriers do not directly send SIP traffic to other carriers.[215]

Optus submitted that it **[c-i-c]**'**[c-i-c]**[216]

Optus indicated that it expects industry agreement on IP-based interconnection will be reached by **[c-i-c] [c-i-c]** but submitted that Telstra may have incentives to delay the implementation of, or limit the features enabled by, SIP interconnection in order to protect its PSTN traffic and revenue base.[217]

Optus submitted that the ACCC should monitor industry development of SIP interconnection protocols and intervene where there is evidence of market failure. Further, Optus submitted that it would be premature to regulate a service which is still subject to industry negotiation and that it would be more appropriate for the ACCC to commence a separate declaration inquiry after the implementation of an agreed SIP interconnection protocol by industry.[218]

6.2.4 Service descriptions

AAPT submitted that the service descriptions for the fixed line services should be 'robust enough' to ensure that changes in technology do not lead to a 'de facto withdrawal' of regulation of a bottleneck. Additionally, the service descriptions should not include infrastructure owners or service providers who are already constrained by competition from the incumbent bottleneck infrastructure operator.[219] The ACCC further discusses this in chapter 7.5.

iiNet submitted that the current service descriptions for the PSTN OA and PSTN TA services are still appropriate and the reference in the current service descriptions to 'PSTN and PSTN equivalent' ensures that they are technology neutral.[220]

Macquarie Telecom submitted that it prefers technology-neutral service descriptions to ensure any-to-any connectivity. It stated that certain aspects of the current service descriptions are out-dated. Some of the technical specifications in the current service descriptions (e.g. 2.048 Mbit/s switchports and CCS#7 signalling) may no longer be appropriate for connectivity between Telstra's fixed network and IP networks.[221]

Telstra submitted that 'existing PSTN interconnection…as currently defined, continues to work well in facilitating any to any connectivity regardless of the underlying technology providing the basic access functionality'.[222]

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215 Optus, August 2013 submission, pp. 50-51.
216 Optus, August 2013 submission, pp. 49-50.
217 Optus, August 2013 submission, p. 52.
218 Optus, August 2013 submission, p. 52.
219 AAPT, August 2013 submission, p. 21.
220 Herbert Geer, August 2013 submission, p. 9.
221 Macquarie Telecom, August 2013 submission, pp. 10-11.
222 Telstra, September 2013 submission, p. 40.

6.3 ACCC's draft views

The ACCC's view is that extending the declaration for the PSTN TA and PSTN OA (the special numbers component) services will promote the long-term interests of end-users LTIE The ACCC is proposing to change the names of the PSTN OA and PSTN TA services to Fixed Originating Access Service (FOAS) and Fixed Terminating Access Service (FTAS) to clarify that the scope of the declared service is not confined to the PSTN network.

The ACCC is also proposing to amend the service descriptions to remove provisions that are terms and conditions of supply that the ACCC would normally include in Final Access Determinations (FADs).

The ACCC is not proposing, at this stage, to amend the PSTN OTA service description to regulate interconnection provided using an IP-based interconnection protocol. The ACCC intends to monitor industry developments in regard to the development and implementation of any IP-based interconnection standard and may consider whether to amend the service description in the future.

The reasons for the ACCC's draft views are set out below.

6.3.1 PSTN TA and PSTN OA (special numbers) services

The PSTN TA service facilitates the carriage of telephone calls originated on an access seeker's network from a point of interconnect (POI) to the B-party (called party) on the access provider's network. The A-party's (calling party's) network provider purchases PSTN TA from the B-party's network provider. The B-party, in turn, ensures that the call from the A-party is connected to the B-party.[223]

The special numbers functionality of PSTN OA facilitates the origination of calls to telephone numbers beginning with 13/1300 and 1800. That is, an A-party can call a B-party without incurring a charge, or only incurring a limited charge, from their service provider. Instead, the B-party's service provider purchases PSTN OA and pays for the cost of originating the call. This origination charge and other costs, relating to the provision of special numbers services by the B-party's network, are then billed to the B-party.

The ACCC notes that the special numbers functionality of PSTN OA is similar to those of the PSTN TA, in that the party incurring a charge for termination or special numbers origination does not have control over the other network, on which the call originates.

Will continued declaration promote competition?

To determine whether the continued declaration of the PSTN TA and PSTN OA (special numbers) services will promote the LTIE, the ACCC must assess whether declaration will promote competition in the relevant markets for the service. The ACCC considers it useful to apply the 'with and without test' to undertake this assessment.

As discussed in chapter 3, the ACCC considers that the relevant markets for the PSTN TA and PSTN OA (special numbers) services are the retail and wholesale supply of fixed voice services and the retail supply of bundled fixed voice service and fixed broadband services. The ACCC has defined these markets as national for the purposes of this draft report.

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[223] A-Party is the service in operation (SIO) making or originating the call. The B-Party is the SIO receiving or terminating the call.

Wholesale and retail markets for fixed voice services

The ACCC considers that, absent regulation, a network owner with a large number of fixed voice SIOs has an incentive and the ability to raise the price of termination for telephone calls on its network to any network owner that has a smaller number of fixed voice customers.

A caller (the A-party) on a small network cannot select which network the called party (B-party) is on. If the A-party wants to call the B-party, the call must terminate on the network operated by the B-party's retail service provider; there is no scope to substitute to an alternative provider of termination. This gives the larger network owner market power.

The larger network owner will therefore have the ability and incentive to impose an above-cost termination charge, which would likely be passed onto the A-party by its retail service provider through higher charges for calls terminating on the larger network. Consequently the A-party may decide to switch to the larger network, where there are a larger number of parties who can be called 'on-net' (that is, on the same network) where termination charges are cheaper. Thus the larger network's market power is increased by network externalities from its larger subscriber base.

Accordingly, the ACCC considers that without declaration of PSTN TA, end-users are likely to face increased prices and a reduction in competition in the supply of retail voice services.

The ACCC notes that any exercise of market power in the provision of PSTN TA in markets for fixed line voice services also have the ability to affect competition in the market for mobile voice and broadband services. This is because several owners of fixed line voice networks also own mobile networks. Any market power in the provision of fixed line PSTN TA can also be used to increase the price of termination for mobile telephone calls that terminate on its fixed network. A provider of PSTN TA with market power is likely to have an incentive to raise prices for termination from mobile networks that compete with its own mobile network, which has the potential to harm competition in the market for mobile voice services.

The ACCC is of the view that similar considerations apply to the special numbers component of the PSTN OA service (where the called party pays all or most of the cost of the call). That is, absent regulation, a network owner with a greater number of fixed voice SIOs has an incentive and the ability to raise the price of origination for calls on its network to special numbers that terminate on a network with fewer fixed voice customers.

For these reasons, the ACCC considers that the ongoing declaration of the PSTN TA and the PSTN OA (special numbers) services will promote competition in the market for fixed voice services.

Retail market for bundled fixed voice and fixed broadband services

The ACCC considers that the continued declaration of the PSTN TA and the PSTN OA (special numbers) services will promote competition in the supply of bundled fixed voice and fixed broadband services.

A fixed voice service is an essential component of the bundle of fixed telecommunications services. Therefore, the analysis conducted above for the wholesale and retail markets for fixed voice services also applies to bundled fixed voice and fixed broadband services.

Will continued declaration achieve any-to-any connectivity?

The ACCC must consider whether continued declaration is likely to achieve the objective of any-to-any connectivity. The ACCC considers that the ongoing declaration of the PSTN TA and the PSTN OA (special numbers) services will promote the achievement of any-to-any connectivity.[224]

As discussed above, network operators have market power in respect of calls terminating on their network and calls to special numbers that originate on their network. Network operators have the ability and incentive to use their market power to either deny interconnection or to impose above-cost charges for these interconnection services. Doing so would either prevent or discourage any-to-any connectivity.

As such, the ACCC considers that regulated access to the PSTN TA and the PSTN OA (special numbers) services is likely to ensure that network operators will not have the ability to exercise market power over termination and special numbers origination. Consequently, end-users will be able to call other end-users, regardless of the network they are calling from and the network the called end-user is on, thereby achieving any-to-any connectivity.

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

The ACCC must consider a number of issues relating to the use of, and investment in, infrastructure when deciding whether declaration of a service is in the LTIE.

The ACCC considers that the ongoing declaration of PSTN TA and PSTN OA (special numbers) will encourage the economically efficient use of, and investment in, infrastructure used to supply listed services.

As discussed above, in the absence of regulated access to interconnection services, larger network owners would have the ability and incentive to exercise market power arising from network externalities to encourage end-users to switch to their network from smaller networks and discourage their own end-users from switching to another network. The ACCC considers that this is likely to deter efficient investments in new networks (or new network capacity). In addition, existing networks or network capacity may not be used efficiently for the same reason.

The ACCC considers that the achievement of any-to-any connectivity allows all network owners the opportunity obtain the positive network externalities required to invest in and use infrastructure efficiently.

6.3.2 IP-based interconnection

The current PSTN OA and PSTN TA service descriptions refer to the 'carriage of telephone (i.e. PSTN and PSTN equivalent such as voice from ISDN) calls'. The ACCC considers that this includes all telephone calls, regardless of the core switching technology used in both the originating and terminating networks.

However, the PSTN OA and PSTN TA service descriptions specify a particular method of interconnection using CCS#7 signalling and 2.048 Mbit/s switchports. The ACCC notes that

[224] Subsection 152AB(2)(d) of the CCA

interconnection between major carriers currently occurs using this method, including carriers that have IP core voice networks.

However, the ACCC considers that growth in VoIP, be it through plain old telephone service (POTS) emulation, carrier grade VoIP or over the top VoIP, is likely to lead to an alternative method of interconnection being developed and agreed upon by industry in the future. The ACCC notes that Optus submitted **[c-i-c] [c-i-c]**[225]

The ACCC notes that no industry standard for an alternative voice interconnection service has been developed and agreed upon at this time. Until an agreed industry standard exists, the ACCC considers it would be premature to specify a particular IP-based interconnection protocol in the PSTN OA and PSTN TA service descriptions.

However, the ACCC notes Optus' submission that particular carriers may have the incentive to delay the implementation of an alternative fixed voice interconnection standard.[226] The ACCC considers it appropriate that it monitors industry developments in this area and may consider whether to commence an inquiry into varying the service descriptions when an agreed industry standard for IP-based interconnection exists.

6.4 Service descriptions

The ACCC is proposing to make a number of changes to the service descriptions for PSTN OA and PSTN TA. The ACCC's proposed service descriptions are contained in appendices E and F respectively.

6.4.1 The PSTN TA service description should not be amended to alter the scope of regulation.

Consistent with its views in section 6.3.1, the ACCC is not proposing to alter the scope of regulation for PSTN TA. That is, the ACCC is proposing to maintain regulated access for termination services across all fixed line networks.

6.4.2 The PSTN OA service description should be amended to exclude regulation of resale services over the NBN for pre-selection and override.

As discussed in chapter 5.4.2 the ACCC is proposing to alter the scope of regulation to exclude PSTN OA (pre-selection and override) services provided using NBN infrastructure. The ACCC is proposing to maintain regulated access for the remaining PSTN OA services—that is, special number origination—across all fixed line networks.

6.4.3 The PSTN OA and PSTN TA service descriptions should be amended to remove terms and conditions of supply

The ACCC notes that the current PSTN OA and PSTN TA service descriptions contain provisions that do not describe the declared services themselves, but instead detail terms and conditions of access to the declared service.

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225 Optus, August 2013 submission, pp. 49-50.
226 Optus, August 2013 submission, p. 52.

For example, the current service descriptions contain provisions relating to the forecasting of port requirements:

> For each POI, the AS should provide forecasts, at least half yearly, of switchport requirements for 6, 12, 18, 24, 30 and 36 months from the time of the forecast. Forecasts should be provided on dates to be agreed between the AP and the AS and forecast the switchport requirements from operative dates of 31 December and 30 June. Forecasts will be discussed by the AP and the AS with a view to agreement within 30 Business Days. Forecasts will be used by the AP for network planning and not for charging purposes.

Similarly, the current service descriptions for PSTN OA and PSTN TA contain provisions relating to:

- service elements;
- availability;
- service restrictions;
- barring;
- interconnection handover arrangements;
- POI locations
- POI designation for codes
- Calling Line Identification (CLI)
- Forecasting, ordering and provisioning arrangements
- Network conditioning
- Operational and fault handling arrangements
- Inter carrier/carriage service provider (C/CSP) billing frequency
- Provision of tones and network announcements
- Customer billing

The ACCC is proposing to remove these provisions from the service descriptions, as they relate to processes in supplying the declared services and as such are more appropriate as non-price terms and conditions of access. The ACCC notes that these types of provisions are usually contained within access determinations for declared services.

The ACCC notes that it does not consider it appropriate to regulate alternative methods of voice interconnection at this time, as discussed in section 6.3.2. Consequently, the ACCC is not proposing to remove provisions that functionally describe the declared services or those provisions that dictate the technical specifications of interconnection (e.g. CCS#7 signalling and 2.048 Mbit/s switchports). The ACCC considers that its proposed service description is technically feasible as the major carriers, regardless of their core voice network infrastructure, presently interconnect using this method and have been doing so for some time.

While proposed service descriptions specify the method of interconnection (i.e. are technology specific), the ACCC further discusses technology neutrality, in the context of the core switching technology of voice networks, in section 6.4.4.

6.4.4 The PSTN OA and PSTN TA service descriptions should be amended to better reflect the technological neutrality of the declared services

Carriers with IP-based core voice networks are currently able to use PSTN OA and PSTN TA to interconnect with voice networks using PSTN/TDM switching cores. In this respect, the ACCC considers that the service descriptions are technologically neutral, in that they are not limited by network infrastructure.

The ACCC considers that regulated voice interconnection services are, and should be, available across all networks.

For the sake of clarity, the ACCC is proposing to remove the provisions in the existing service descriptions that refer to 'PSTN and PSTN equivalent'. The ACCC considers that this will remove ambiguity and reflects its view that the scope of the declared service is not confined to the PSTN network and that voice networks with an IP-based core fall within the scope of regulation of interconnection services.

For the same reason, the ACCC is proposing to amend the name of the PSTN OA service to Fixed Originating Access Service (FOAS) and PSTN TA to Fixed Terminating Access Service (FTAS).

7 Other issues

Key Points

- The ACCC intends to give further consideration to whether to commence a separate inquiry into declaring facilities access services. The ACCC notes that facilities access services that are ancillary to declared services may be regulated through the Final Access Determinations (FADs) for the relevant declared services.
- The ACCC considers that access terms and conditions for the internal interconnection cable (IIC) is best regulated through the FADs for the unconditioned local loop service (ULLS) and line sharing service (LSS).
- The ACCC will assess whether there is any need to consider an inquiry into the declaration of hybrid-fibre coaxial cable (HFC) services further, following clarification of the role of HFC networks in supplying telecommunications services within the broader context of the National Broadband Network (NBN).
- The ACCC will consider whether to commence a separate inquiry into declaring a wholesale business-grade (symmetrical) DSL service.
- On the basis of the information available to it, the ACCC does not intend to commence an inquiry into declaring a fixed to mobile service. The ACCC is of the view that there are good substitutes for buying a bundled fixed to mobile service and that current fixed to mobile charges appear to be broadly reflective of the costs of supplying the service.
- The ACCC does not consider it necessary to amend the service descriptions for any of the six declared services so as to exempt carriers other than Telstra from supplying the declared services. The ACCC does not consider that granting such carrier-specific exemptions would promote competition and be in the long-term interests of end-users (LTIE).
- The ACCC considers that an appropriate duration for the declarations is five years.
- The ACCC may consider any other emerging issues relevant to the provision of fixed line telecommunications services using the processes in Parts XIB and XIC of the *Competition and Consumer Act 2010* (CCA) where appropriate.

The ACCC notes that the structure of the telecommunications industry is currently undergoing significant change, including the transition from Telstra's copper network to the National Broadband Network (NBN). The ACCC considers there is some uncertainty regarding how markets for the delivery of fixed line telecommunications services will develop. The competitive and regulatory landscape is also likely to be influenced by policy developments relating to the design and rollout of the NBN and any associated commercial arrangements.

Additionally, the ACCC notes that the industry is characterised by rapid developments in technology, such as the deployment of new access networks and the introduction of new, higher quality services over existing access networks.

The ACCC considers that a number of policy, commercial and technology developments may potentially have implications for competition in markets for fixed line services. The

ACCC proposes to monitor emerging issues and may initiate processes under Parts XIB or XIC of the *Competition and Consumer Act 2010* CCA as appropriate, should it receive information from industry or should circumstances develop that warrant further consideration.

The ACCC received a number of submissions on issues not covered in the previous chapters of this draft report.

A number of submissions advocated that the ACCC declare services that are not currently declared. Before the ACCC can declare a new eligible service, it is required to hold a public inquiry about its proposal to make the declaration under section 152AL of the CCA.[227] This would be separate to this current inquiry. To declare a service, the ACCC must be satisfied that doing so will promote the LTIE of end-users. The following considers whether separate public inquiries should be held for certain services.

7.1 Facilities access services

In its July 2013 discussion paper, the ACCC noted it is considering facilities access service issues in both its fixed services review and Domestic Transmission Capacity Services (DTCS) declaration inquiries. Facilities access services facilitate the supply of a listed carriage service and include Telstra Equipment Building Access (TEBA), the External Interconnect Cable, the Internal Interconnect Cable, duct access and transmission towers, among other things.

The ACCC noted that during its inquiry into varying the Facilities Access Code, a number of stakeholders had submitted that the existing regulatory framework for facilities access was ineffective, and that facilities access services should be declared. The ACCC considered the two declaration inquiries were an appropriate forum to consider facilities access issues further.

The ACCC noted that the growth in the number of end-users being supplied voice and broadband services using access seeker equipment has grown since 2009, and that facilities access has become a more significant issue. The ACCC stated that it would consider whether particular facilities exhibit natural monopoly characteristics and whether declaration would encourage the efficient use of and investment in infrastructure, taking into account the existing regulatory environment for these services.

The ACCC sought submissions on three key questions:

- whether access seekers have experienced any unreasonable difficulties in obtaining access to facilities (and if so, a description of these issues);
- whether the ACCC should declare any facilities access services, and the reasons for declaring these services; and
- whether regulation of facilities access service through the Final Access Determinations (FADs) for declared fixed line services would be more or less effective in promoting the LTIE than declaring these services in their own right.

[227] In contrast, this inquiry into the declaration of the current declared fixed line services is being conducted in accordance with the requirements of section 152 ALA(7) of the CCA.

7.1.1 Submissions

The ACCC received a number of submissions on facilities access services in response to its discussion paper.

Regulation via declaration

Macquarie Telecom, Optus, iiNet, Megaport and AAPT supported the declaration of facilities access services, stating that Telstra's facilities are, or have the potential to be, enduring bottlenecks. Optus submitted that difficulties in obtaining facilities access services have the potential to inhibit the ability of access seekers to install their own infrastructure to deliver downstream network access services.[228] It noted Telstra would retain exclusive ownership of certain facilities in the transition to, and after, the full deployment of the NBN.[229] Access seekers made some specific submissions on TEBA and duct access, as outlined below.

With respect to TEBA, Optus submitted that space is limited and there is a possibility that access seekers may be unable to obtain sufficient rack capacity in exchanges to meet future requirements.[230] ACCAN submitted that it is concerned that Telstra, in doing nothing to provide more space in exchanges, disadvantages its retail competitors via inaction as opposed to any act or measure that would place it in breach of its structural separation undertaking.[231] It submitted that the ACCC should consider whether declaring a TEBA access service could compel Telstra to take positive steps to ensure a wholesale customer is able to access space in an exchange.

Megaport submitted that access to Telstra ducts is necessary for competitive services as it would be disruptive to the community and not economically feasible to install further underground ducts. Installing more ducts would potentially be an improper use of installation powers granted under the *Telecommunications Act 1997* (Telecommunications Act).[232] It submitted that declaring facilities access services would promote competition and create a sustained environment where the LTIE are promoted through lower priced, better quality and more diverse services.[233] It stated that declaration would not negatively impact Telstra's incentives for efficient investment since facilities access charges comprise a relatively small component of its revenue from the network.[234]

iiNet submitted that access to both TEBA space and duct access, which are both controlled by Telstra, is vital to competition in telecommunications markets.[235]

Effectiveness of existing facilities access regulation

Macquarie Telecom, iiNet, Megaport and AAPT acknowledged the existing regulatory regime for facilities access services, including schedule 1 of the Telecommunications Act and the Facilities Access Code. However, they generally considered the existing regulatory regime is not entirely effective, primarily because of the inability of the ACCC to determine

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228 Optus, August 2013 submission, p. 53.
229 Optus, August 2013 submission, p. 59.
230 Optus, August 2013 submission, p. 57.
231 ACCAN, September 2013 submission, p. 9.
232 Megaport, September 2013 submission, p. 1-2.
233 Megaport, September 2013 submission, p. 5.
234 Megaport, September 2013 submission, p. 5.
235 Herbert Geer, August 2013 submission, p. 12.

up-front charges for the service as a fall-back for access seekers in negotiations with Telstra. iiNet compared internationally benchmarked duct access charges with Telstra's charges to argue that Telstra's rates are excessive.[236] Megaport made a similar submission and stated that a cost-based duct access charge is integral to efficient use of underground infrastructure.[237]

Macquarie Telecom submitted that it faced a number of difficulties in acquiring access to facilities due to the absence of regulated charges.[238] It considered that declaring these services would result in cost-based pricing which would be conducive to effective competition.[239] It further noted that the Facilities Access Code only covered a limited range of services.[240] **[c-i-c] [c-i-c]** [241]

Telstra submitted that facilities access is already well regulated, and that further regulation could be inconsistent or duplicative of current legislation and regulatory instruments.[242] It submitted that the cost of additional regulation would therefore outweigh the benefits, contrary to the LTIE.[243] It also noted that any additional regulation would generate uncertainty, which would discourage investment at a time when regulatory certainty is especially important.[244]

Telstra further submitted that it could not have been Parliament's intention to have two different access regimes applying to the same facilities, and given the specific regime set out in the Telecommunications Act it would be beyond the scope of the ACCC to declare access to facilities under the CCA.[245]

Telstra submitted that additional regulation would not promote competition or encourage efficient investment in new infrastructure when compared to the long standing existing regulatory framework which it considers already works effectively.[246]

Regulation through the FADs for existing declared services

Submissions did not favour the ACCC regulating facilities access services through the FADs for declared services.

Macquarie Telecom considered that declaring facilities access services would create a consistent approach to regulating telecommunication services. Some access seekers (AAPT, iiNet and Megaport) generally noted that regulating facilities access services via the FADs for the relevant declared services would not be effective for facilities access services that are not ancillary to the supply of a declared service (such as duct access) as they cannot be regulated through the FADs for declared services.

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236 Megaport, September 2013 submission, p. 4.
237 Megaport, September 2013 submission, p. 4.
238 Macquarie Telecom, August 2013 submission, p. 12.
239 Macquarie Telecom, August 2013 submission, p. 13.
240 Macquarie Telecom, August 2013 submission, p. 14.
241 AAPT, August 2013 submission, p. 30.
242 Telstra, September 2013 submission, p. 43.
243 Telstra, September 2013 submission, p. 43.
244 Telstra, September 2013 submission, p. 43.
245 Telstra, September 2013 submission, p. 44.
246 Telstra, September 2013 submission, p. 44.

Telstra submitted that the ACCC could only regulate facilities access services through the FADs if it can establish a 'sufficient nexus' between the facilities access services in question and the declared service.[247]

iiNet submitted that the ACCC should regulate the IIC through the FADs for the ULLS and LSS, or alternatively by declaring access to TEBA space.[248] It submitted that TEBA and duct access should be declared, and that the IIC should otherwise be declared if the ACCC decides not to include the IIC charge in the FADs for the ULLS and LSS.[249]

7.1.2 ACCC's draft views

The ACCC is giving further consideration to whether to commence an inquiry into the declaration of facilities access services. In doing so, the ACCC will take into account the existing regulatory regime established under the Telecommunications Act and the ACCC's ability to specify terms and conditions for access to facilities through the FADs for declared fixed line services.

The ACCC considers that access to the IIC service is best regulated through the FADs for the ULLS and LSS. The existing arbitrated price terms expire on 30 June 2014. The ACCC will seek submissions on access terms and conditions for the service in its inquiry into making FADs for the fixed line services and the wholesale ADSL service.

Access seekers may also acquire facilities access services that are not ancillary to an active declared service. For example, access seekers may require exchange access to install mobile telephone equipment or transmission equipment. With respect to such services, the ACCC notes that the Telecommunications Act imposes a general facilities access obligation on carriers.[250] The Telecommunications Act also provides the ACCC with the power to arbitrate a dispute where there is a failure to agree on the terms and conditions of access and a failure to agree on the appointment of an arbitrator.[251] The ACCC has also set non-price terms of access in a code of access to certain facilities (telecommunications transmission towers, sites of telecommunications transmission towers and underground facilities designed to hold lines). The Telecommunications Act does not, however, provide for upfront price and non-price terms of access to facilities in an access determination.

The ACCC notes submissions from access seekers in relation to the effectiveness of the current facilities access regime and considers that, despite there being relatively few disputes over access to facilities, there may be some further issues to be examined, with respect to the most effective way to regulate facilities access services. The ACCC considers that its declaration powers under Part XIC of the CCA apply to facilities access services, which would allow the ACCC to directly set terms and conditions of access in a FAD (which would apply where there is no commercial agreement).

If the ACCC considers it necessary to set access terms and conditions for facilities access services (such as those that are ancillary to declared fixed line services or the Domestic Transmission Capacity Service (DTCS)) the ACCC will seek submissions during the relevant FAD inquiry on which services should be regulated as ancillary to the declared services and

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247 Telstra, September 2013 submission, p. 44.
248 Herbert Geer, August 2013 submission, p. 14.
249 Herbert Geer, August 2013 submission, p. 12.
250 Clause 17 Part 3 and clause 35 Part 5, Schedule 1 to the Telecommunications Act.
251 Subclauses 18(1) and 36(2) of Schedule 1 to the Telecommunications Act.

on the appropriate terms and conditions. The ACCC may consider further facilities access service issues as part of a future declaration inquiry depending upon the nature of submissions received during the course of the relevant FAD inquiries.

7.2 HFC services

In response to the July 2013 Discussion Paper, Dermot Cox submitted that the ACCC should declare a Hybrid Fibre-Coaxial (HFC)-based broadband service. He submitted that HFC networks now provide a significantly superior broadband product than ADSL2+ and therefore competition would be promoted if there was wholesale access to these services.[252]

Dermot Cox also submitted that the NBN will not provide a competitive superfast broadband product in metropolitan areas until 2021 and the cost to enable wholesale access over the Telstra and Optus HFC networks is nominal.[253]

ACCAN submitted that there are good reasons why the HFC networks are not currently declared, but noted that HFC networks appear to play a part in a number of NBN policy options being considered by the Coalition (now the Government). It noted that the ACCC may need to revisit this issue after the election.[254]

Macquarie Telecom submitted that the existing HFC networks have a minor impact on the retail supply of broadband services because of the relatively small number of subscribers (maximum 15 per cent share of fixed line broadband subscribers) and limited geographic coverage of HFC networks.[255] Macquarie Telecom did not support declaration of HFC services.

7.2.1 ACCC's draft view

The ACCC will assess whether there is any need to consider an inquiry into the declaration of HFC services further, following clarification of the role of HFC networks in supplying telecommunications services within the broader context of the NBN.

7.3 Wholesale business DSL service

The ACCC received a submission on declaring a wholesale business-grade (symmetrical) DSL service. iiNet submitted that competition would be enhanced if there was a declared resale service that allowed the provision of 'high volume and/or symmetrical downstream services' for corporate and government customers.[256] It stated that this service would be similar to a symmetrical version of the declared wholesale ADSL service, which enables access seekers to supply resale broadband services in areas where they do not acquire the ULLS or LSS.[257]

The ACCC notes that no other submissions proposed declaring such a service.

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252 Dermot Cox, August 2013 submission, p. 5, 11.
253 Dermot Cox, August 2013 submission, p. 5-6.
254 ACCAN, August 2013 submission, p. 10.
255 Macquarie Telecom, August 2013 submission, p. 3-4.
256 Herbert Geer, August 2013 submission, p. 8.
257 Herbert Geer, August 2013 submission, p. 8.

7.3.1 ACCC's draft view

The ACCC notes that Telstra already supplies business-grade services on a commercial basis and it is not clear the extent to which access to a regulated wholesale business-grade (symmetrical) DSL service is a significant issue for the industry more broadly. Subject to any further information the ACCC receives during the course of this inquiry, the ACCC does not propose to commence an inquiry into the declaration of a business-grade (symmetrical) DSL service.

The ACCC may consider whether to commence an inquiry into declaring a wholesale business-grade (symmetrical) DSL service, either by varying the wholesale ADSL service description or declaring a new service, should further information become available to warrant such an inquiry.

7.4 Fixed-to-mobile service

Macquarie Telecom submitted that the ACCC should declare a fixed-to-mobile service, that is, an end-to-end bundled service that originates on a fixed network and terminates on a mobile network.[258] It stated that because of a lack of bargaining strength, it pays more for a fixed-to-mobile service than the sum of the regulated charges for the public switched telephone network originating access (PSTN OA) (pre-selection and override) service and the mobile terminating access service (MTAS).[259]

7.4.1 ACCC's draft view

A fixed-to-mobile service includes an originating access service, a terminating access service and a transmission service. The ACCC therefore considers that a fixed-to-mobile service would be expected to cost more than the sum of PSTN OA and MTAS charges alone.

The ACCC considers that there are good substitutes for buying a bundled fixed-to-mobile service. Access seekers can purchase the PSTN OA service and MTAS at the regulated prices and separately purchase a transmission service, at the DTCS regulated price on non-competitive routes or at a competitive price on routes where there is a choice of suppliers.

On the evidence before the ACCC it appears that current fixed-to-mobile charges are broadly reflective of the costs of the three components of the bundled service, that is, originating access, MTAS and transmission (based on assumptions about average transmission costs per call minute).

The ACCC considers that commencing an inquiry into declaring a fixed-to-mobile service is not warranted at this stage.

7.5 Carrier-specific exemptions

The ACCC received a submission from AAPT advocating that infrastructure owners or service providers 'sufficiently constrained by competition' should not be burdened by unnecessary regulation.[260] It considered this was consistent with the principle 'recognised by

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[258] Macquarie Telecom, August 2013 submission, p. 11.
[259] Macquarie Telecom, August 2013 submission, p. 9.
[260] AAPT, August 2013 submission, p. 21.

the ACCC' in making a final access determination for the Wholesale ADSL service. It submitted the service descriptions for the fixed services should therefore be 'specifically targeted' at Telstra or that other carriage service providers be exempted from the standard access obligations in respect of the declared service.

7.5.1 ACCC's draft view

The ACCC is of the view that the service descriptions for the declared fixed line services should not be amended to exempt providers other than Telstra from supplying the declared services.

The ACCC notes that declarations are a service based regime and relate to specific services. A service description describes the service and the identity of the service provider is not relevant to that description. Where the ACCC grants carrier-specific exemptions, it does this by including a provision in the relevant FAD for the declared service where it is satisfied that granting such an exemption is in the LTIE.

The ACCC further notes that, in granting carrier-specific exemptions for the Wholesale ADSL service in 2012, the ACCC concluded that requiring non-Telstra providers to supply the regulated Wholesale ADSL service may require these providers to 'undertake significant investment in billing and provisioning systems to provide a wholesale ADSL service.'[261] The ACCC has not received any evidence that there would be significant additional costs for non-Telstra providers in supplying the declared fixed line services and notes that these services have been declared for some time.

The ACCC is aware of service providers other than Telstra that are currently providing wholesale fixed line services. It does not consider that exempting these providers from providing the declared services would promote competition or be in the LTIE.

7.6 Duration of declarations

The ACCC must determine an appropriate duration for any declarations that may emerge from this inquiry.

Section 152ALA(1) of the CCA requires the ACCC to specify an expiry date for a declaration. In specifying an expiry date, the ACCC must have regard to the principle that an expiry date should occur within the period that begins three years after the declaration was made and ending five years after the declaration was made, unless the ACCC forms the opinion that there are circumstances that warrant a longer or shorter declaration period.[262] This is intended to enable the ACCC to provide longer-term regulatory certainty, where appropriate, in order to promote competition and investment.[263]

Subsection 152ALA(4) allows the ACCC to extend or further extend the expiry date of a specified declaration as long as the extension or further extension is for a period of not more than five years.

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[261] ACCC, Public Inquiry to make a final access determination for the Wholesale ADSL service, Final Report, May 2013, p. 7.

[262] Subsection 152ALA(2) of the CCA.

[263] Explanatory Memorandum to the CACS Act, p. 167.

Submissions from iiNet, AAPT, Optus and Macquarie Telecom considered that the fixed line service declarations should be extended for a five year period.[264] Telstra submitted that a duration of 3-5 years would be appropriate.[265] ACCAN submitted that the length of the declaration should be guided by the NBN rollout completion dates.[266]

Several submitters noted the importance of regulatory certainty in the transition to the NBN. AAPT submitted that declaration would have the benefit of providing certainty to industry during a period of significant change.[267] Optus submitted that the ACCC will be in a better position to assess the impact of the NBN on the CAN closer to 2019.[268] Macquarie Telecom submitted that there is a need to provide operators and investors with a more certain operating environment and that 'it is unlikely that changes which are occurring in the telecommunications sector such as the roll-out of the NBN and the growth in VoIP services will materially affect Telstra's control of bottleneck services over the next five years.'[269]

7.6.1 ACCC's draft view

In the 2009 fixed services review, the ACCC declared the six currently-declared fixed line services for five years. The ACCC concluded that this period took into consideration the need for regulatory certainty during the transition to an NBN environment.[270]

The ACCC notes that the rollout of the NBN is expected to continue over the next five years. The ACCC considers that during this period, it is likely that Telstra will retain control of the copper network and that this network will remain an essential bottleneck facility. Additionally, the ACCC considers that a five-year regulatory period will provide a degree of certainty and facilitate business planning during the transition to the NBN, which will in turn promote efficient investment decisions by both Telstra and access seekers.

Accordingly, the ACCC considers that the fixed line services should be declared for a further five year period with an expiry date of 31 July 2019.

7.7 Emerging issues

As noted at the beginning of this chapter, the telecommunications industry is currently undergoing significant change. The ACCC considers that the nature and extent of access regulation will need to remain under review during a period of transition to new industry structures. For instance, as industry migrates to a wholesale only supply model for fixed line services, access regulation will likely focus more tightly on monopoly providers of the access network.

The deployment of new access networks, or the introduction of new higher quality services over existing access networks, could also raise questions as to whether adjustments to the scope of access regulation is needed to promote the LTIE. Wholesale access to these new

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264 iiNet, August 2013 submission, p. 14; AAPT, August 2013 submission, p. 33; Optus, August 2013 submission, p. 5; Macquarie Telecom, August 2013 submission, p. 14.
265 Telstra, September 2013 submission, p. 45.
266 ACCAN, August 2013 submission, p. 11.
267 AAPT, August 2013 submission, p. 33.
268 Optus, August 2013 submission, p. 5.
269 Macquarie Telecom, August 2013 submission, p. 14.
270 ACCC, Fixed services review declaration inquiry for the ULLS, LSS, PSTN OA, PSTN TA, LCS and WLR, Final Decision, July 2009, p. 114.

networks or services on reasonable terms could potentially become an important facilitator of competition in the future, for example, access to fibre services or VDSL services (such as those supplied using a node in large buildings.)

Under present regulatory settings, these new or emerging services would be declared only where they are supplied by a NBN corporation or a provider of the local bitstream access service (LBAS). Whether broader application of access regulation to these services is warranted will likely depend upon the importance of that access to competition in the transitional period, as well as the preparedness of network operators to provide wholesale access on reasonable terms and conditions.

Should any competition concerns emerge in relation to new or emerging networks and services, the ACCC will consider how best to respond, depending on the circumstances, including using processes in Parts XIB and XIC of the CCA.

Appendix A: Proposed service description for the ULLS

Declared service

The Australian Competition and Consumer Commission declares pursuant to section 152AL(3) of the Competition and Consumer Act 2010 (the Act) that the unconditioned local loop service (ULLS) is a '"declared service"' for the purposes of Part XIC of the Act.

Date

The declaration takes effect on 1 August ~~2009~~2014 and expires on 31 July ~~2014~~2019.

Service description

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.

Definitions

Where words or phrases used in this declaration are defined in the Competition and Consumer Act 2010 ~~Trade Practices Act 1974~~ or the Telecommunications Act 1997, they have the 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 1997;

communications wire is a copper based 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 Access Switch;

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

Appendix B: Proposed service description for the LSS

Declared service

The Australian Competition and Consumer Commission declares pursuant to section 152AL(3) of the Competition and Consumer Act 2010 (the Act) that the line sharing service (LSS) is a "'declared service'" for the purposes of Part XIC of the Act.

Date

The Ddeclaration ~~of the line sharing service~~ takes effect on 1 August ~~2009~~2014 and expires on 31 July ~~2014~~2019.

Service Description

The line sharing service~~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 Competition and Consumer Act~~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 1997;

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 a public switched telephone network and delivered by means of the voiceband portion of the frequency spectrum available over ~~of~~ a ~~metallic~~copper line.

Appendix C: Proposed service description for the WLR

Declared service

The Australian Competition and Consumer Commission declares pursuant to section 152AL(3) of the Competition and Consumer Act 2010 ~~Trade Practices Act 1974~~ (the Act) that the line rental ~~Line rental~~ service, now known as the wholesale line rental service (WLR), is a "'declared service'" for the purposes of Part XIC of the Act.

Date

The declaration takes effect on 1 August ~~2009~~2014 and expires on 31 July ~~2014~~2019.

Service description

The wholesale line rental service is a line rental telephone service which allows an end-user to connect to a carrier or carriage service provider's public switched telephone network, and provides the end-user with:

- (a) an ability to make and receive any 3.1khz bandwidth calls (subject to any conditions that might apply to particular types of calls), including, but not limited to, local calls, national and international long distance calls; and
- (b) a telephone number

~~except where the supply of the line rental telephone service is within the Central Business District Area of Sydney, Melbourne, Brisbane, Adelaide and Perth.~~

except where the connectivity between the end-user and the public switched telephone network is provided in whole or part by means of a Layer 2 bitstream service that is supplied by an NBN corporation.

Definitions

Where words or phrases used in this declaration are defined in the Competition and Consumer Act 2010~~Trade Practices Act 1974~~ or the Telecommunications Act 1997, they have the same meaning given in the relevant Act.

In this Appendix:

~~**Central Business District Area** means the exchange service areas that are classified as CBD for the purposes of the ordering and provisioning procedures set out in the Telstra Ordering and Provisioning Manual as in force on the date of effect of the declaration.~~

Layer 2 bitstream service has the same meaning as in the Telecommunications Act 1997.

NBN corporation has the same meaning as in the National Broadband Network Companies Act 2011.

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

Appendix D: Proposed service description for the LCS

Declared service

The Australian Competition and Consumer Commission declares pursuant to section 152AL(3) of the Competition and Consumer Act 2010~~Trade Practices Act 1974~~ (the Act) that the ~~L~~local carriage service (LCS) is a ~~"~~‘declared service’~~"~~ for the purposes of Part XIC of the Act.

Date

The declaration takes effect on 1 August ~~2009~~2014 and expires on 31 July ~~2014~~2019.

Service description

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~~, , however, the local carriage service does not include services where the supply of the local carriage service originates from an exchange located within a Central Business District Area of Sydney, Melbourne, Brisbane, Adelaide or Perth and terminates within the standard zone which encompasses the originating exchange.~~

except where the connectivity between the end-user and the public switched telephone network is provided in whole or part by means of a Layer 2 bitstream service that is supplied by an NBN corporation.

Definitions

Where words or phrases used in this declaration are defined in the Competition and Consumer Act 2010~~Trade Practices Act 1974~~ or the Telecommunications Act 1997, they have the meaning given in the relevant Act.

In this Appendix:

~~**Central Business District Area** means the exchange service areas that are classified as CBD for the purposes of the ordering and provisioning procedures set out in the Telstra Ordering and Provisioning Manual as in force on the date of effect of the renewed declaration.~~

Layer 2 bitstream service has the same meaning as in the Telecommunications Act 1997.

NBN corporation has the same meaning as in the National Broadband Network Companies Act 2011.

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

standard zone has the same meaning as in Part 4 of the Telecommunications (Consumer Protection and Service Standards) Act 1999.

telephone calls are calls for the carriage of communications at 3.1kHz bandwidth solely by means of a public switched telephone network.

Appendix E: Proposed service description for the PSTN OA

Declared service

The Australian Competition and Consumer Commission declares pursuant to section 152AL(3) of the Competition and Consumer Act 2010~~Trade Practices Act 1974~~ (the Act) that the Domestic PSTN Originating Service, now known as the fixed originating access services (FOAS), is a "~~'~~declared service~~'~~" for the purposes of Part XIC of the Act.

Date

The declaration takes effect on 1 August ~~2009~~2014 and expires on 31 July ~~2014~~2019.

Service description and definitions

An access service for the carriage of telephone ~~(i.e. PSTN and PSTN equivalent such as voice from ISDN)~~ calls (i.e. voice, data over the voice band) to a POI from end-customers assigned numbers from the geographic number ranges of the Australian Numbering Plan and directly connected to the ~~A~~access ~~P~~provider's network.

For the avoidance of doubt, the service also includes a service for the carriage of telephone calls from customer equipment at an end-user's premises to a POI, or potential POI, located at or associated with a local switch (being the switch closest to the end-user making the telephone call) and located on the outgoing trunk side of the switch.

~~The Service as described comprises a number of different elements as follows:~~

1. ~~Access via Preselection, AS number ranges such as those numbers listed in POASD7 or 14xy Override code as required to achieve the objective of any-to-any connectivity~~
2. ~~Call Barring~~
3. ~~POI Location~~
4. ~~Forwarding a call beyond the POI of table OASD2 to OASD3 where applicable (see POIs below)~~
5. ~~Signalling~~
6. ~~CLI provision~~
7. ~~Provision of Switchports~~
8. ~~Network Conditioning~~
9. ~~Fault Handling~~
10. ~~Inter C/CSP Billing~~

~~Restrictions on availability and others factors relating to the provision of Access are further described below.~~

~~In accordance with the Trade Practices Act 1974 Part XIC, these elements:~~

~~- may not be available from all APs~~
~~- may have restrictions in their availability~~

~~**Availability**~~

~~The availability of the services may vary depending on the geographic and technical capability of the AP's network at the time at which a request for the service is made or the service is delivered.~~

~~The AP will make available to ASs documents describing the availability of this service on its network. See Services & Interconnection hand over arrangements below.~~

Channel Capacity

The service will establish a connection for the purposes of voice communication with the standard bandwidth of 3.1kHz.

Services

The service is provided on a call that is made with:

- pre-selection, or
- an access seeker~~AS~~ specific code including Special Services codes and number ranges ~~(with some exceptions) as per table POASD7~~, or
- a long distance, international or shared operator codes dialled with an over-ride/access code in accordance with the Australian Numbering Plan.

Pre-selection and code override services are not declared where connectivity between the end-user and the public switched telephone network is provided in whole or in part by means of a Layer 2 bitstream service that is supplied by an NBN corporation.

~~The AP will publish at least half yearly, tables detailing the geographic number ranges where there are restrictions on the provision of this service.~~

~~**Service Restrictions**~~

~~At least annually, the AP will advise of end-customer services that may restrict the provision of this service e.g. Real Time Metering in a Table POASD5.~~

~~**Barring**~~

~~The AP may provide a service that will allow barring of over-ride codes at the request of the end-customer.~~

~~End-customers may request generic barring services which may restrict access to these services.~~

~~The AP should detail this barring in a table POASD6.~~

~~**Interconnection handover arrangements**~~

~~The AP and the AS are each responsible for the provision, installation, testing, making operational and monitoring of all the network on their respective sides of the POI.~~

POIs

"Point of Interconnection" or "POI" means an agreed location which:

1. is a physical point of demarcation between the networks nominated by the AS and the AP; and
2. is associated (but not necessarily co-located with) with one or more gateway exchanges of each of the networks nominated by the AS and the AP in respect of the POIs nominated by the AP.

Calls originated by the A-party will be handed over to the AS at Points of Interconnection agreed by the AS and the AP in accordance with POI locations and POI designation for codes.

POI locations

The AP will provide a table (Table POASD1) listing of POIs where this service may be provided. This listing will be updated at least annually. The AS may request a point of interconnect with the AP's network at a location other than one specified by the AP. The AP must, to the extent technically and operationally feasible, permit the location of a point of interconnect at that location.

POI designation for codes

The AP will provide a table (Table POASD2) listing of the geographic number ranges associated with each POI. When Originating Access is being provided access from these codes will be provided at the corresponding POI. The POIs in table POASD2 will be the POI for " near-end handover" of calls from the origins listed.

The AP will provide a table (Table POASD3) listing of POIs and of associated POIs from which traffic that could have been handed over as per table POASD2 may be collected. [Different charges will be payable where traffic that could have been collected at the POI in table POASD2 is collected at a POI in table POASD3.]

The AP will indicate how these tables POASD2 and POASD3 apply to the different call types of paragraph 1.3.

The provisions of this Service Description apply to traffic collected at POIs listed in Table POASD2 or POASD3

Signalling

Signals for this service will use CCS#7 signalling. Unless otherwise agreed, this CCS#7 signalling will be in accordance with the NIIF/ACIF Interconnection-ISUP specification.

The AP will provide a table (Table OASD4) of the locations where the AS may interconnect its CCS#7 signalling network with that of the AP for the purpose of accepting this service.

Signalling interconnection may not be provided at all POIs. The POIs of 1.4.1.1 may provide for interconnection of only voice circuits. Control of voice circuits where direct signalling interconnection is not provided, will be via "quasi-associated signalling" using Signalling Transfer Point (STP) operation, with signalling via a nominated other gateway where signalling interconnection is provided.

CLI

The CLI of the A-party will be provided as part of the CCS#7 signalling for this service.

Nature of switchports

At POIs the calls will be delivered to the access seekerAS at 2.048Mbit/sec Switchports. The switchports will operate at 2.048Mbit/sec in accordance with the ITU Recommendations G.703, G. 704 and G.732 (Blue Book).

Send and receive speech levels

The send and receive levels for speech will be -13 dBr unless specified otherwise in the Australian Network Performance Plan.

The AP will not provide Echo Control unless this is a requirement within the AP's own network for calls between the end customer and the AP's gateway exchange.

Forecasting, ordering and provisioning arrangements

Interconnection forecasting and planning requirements

Forecast of port requirements

For each POI the AS should provide forecasts, at least half yearly, of switchport requirements for 6, 12, 18, 24, 30 and 36 months from the time of the forecast. Forecasts should be provided on dates to be agreed between the AP and the AS and forecast the switchport requirements from operative dates of 31 December and 30 June. Forecasts will be discussed by the AP and the AS with a view to agreement within 30 Business Days. Forecasts will be used by the AP for network planning and not for charging purposes.

Forecast of network capacity requirements

For each POI and for each of the AP's charging districts the AS should provide forecasts, at least half yearly, of traffic requirements for 6, 12, 18, 24, 30 and 36 months from the time of the forecast. These forecasts should provide daily and weekly profiles for the traffic forecasted and advice of any material non-uniformities in the dispersion of the sources of originating access traffic. Forecasts should be provided on dates to be agreed between the AP and the AS and forecast the traffic requirements from operative dates of 31 December and 30 June. Forecasts will be discussed by the AP and the AS with a view to agreement within 30 Business Days.

Ordering of Switchports

The AP will accept orders for switchports up to the level of the agreed forecasts for each POI. The AS should order switchports allowing 6 months for their provision.

The AP will provide access up to the level of the agreed traffic forecasts for each POI.

The AS may request and the AP will give reasonable consideration to such provision, but is under no obligation to provide access of switchports above the level of the agreed forecasts. If such access is provided, delivery times may be longer than those specified in Ordering of Switchports.

Interconnection Ordering Requirements

Compliance testing

The AS will be required to demonstrate compliance with the agreed CCS#7 signalling System prior to the provision of the service.

~~The AP and the AS will develop an agreed test plan and the AS will provide results of tests to this plan from an appropriate test house or other such party. The AP will provide results of such tests if it is not otherwise seeking a switched access service from the AS.~~

~~The AP and the AS shall review the test results of the agreed test plan within 20 business days and if the AP accepts that the test results of the agreed test plan are satisfactory then the AP and the AS will agree a date for commissioning tests.~~

~~The test results of the agreed test plan will form the prime documentary basis for ongoing operations, fault analysis and fault management of signalling between the AP and the AS.~~

~~**Network Conditioning**~~

~~Network Conditioning of the AP's network will be required before the provision of the service.~~

~~**Operational and Fault handling arrangements**~~

~~The AP will provide a contact point for the Operation and Maintenance of the service. Faults may be reported to this centre which will manage the clearance of these faults.~~

~~**Inter C/CSP Billing frequency**~~

~~The AP will invoice the AS on a monthly basis for this service.~~

~~**Provision of Tones and Network Announcements**~~

~~Where calls attempting this service do not progress to the POI the call may be connected to tones as per AUSTEL Technical Standard TS002 or to a network RVA in the AP's network.~~

~~**Customer Billing**~~

~~Customer billing should be in accordance with an approved telecommunications access code.~~

Definitions

access provider has the same meaning as in Part XIC of the Competition and Consumer Act 2010

access seeker has the same meaning as in Part XIC of the Competition and Consumer Act 2010

Layer 2 bitstream service has the same meaning as in the Telecommunications Act 1997.

NBN corporation has the same meaning as in the National Broadband Network Companies Act 2011.

point of interconnection or **POI** means an agreed location which:

1. is a physical point of demarcation between the networks nominated by the access seeker and the access provider; and
2. is associated (but not necessarily co-located with) with one or more gateway exchanges of each of the networks nominated by the access seeker and the access provider in respect of the POIs nominated by the access provider.

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

Appendix F: Proposed service description for the PSTN TA

Declared service

The Australian Competition and Consumer Commission declares pursuant to section 152AL(3) of the Competition and Consumer Act 2010~~Trade Practices Act 1974~~ (the Act) that the Domestic PSTN Terminating Service, now known as the fixed terminating access service (FTAS), is a "~~'~~declared service~~'~~" for the purposes of Part XIC of the Act.

Date

The declaration takes effect on 1 August ~~2009~~2014 and expires on 31 July ~~2014~~2019.

Service description and definitions

An access service for the carriage of telephone ~~(i.e. PSTN and PSTN equivalent such as voice from ISDN)~~ calls (i.e. voice, data over the voice band) from a POI to end-customer assigned numbers from the geographic number ranges of the Australian Numbering Plan and directly connected to the ~~A~~access ~~P~~provider's network.

For the avoidance of doubt, the service also includes a service for the carriage of telephone calls from a POI, or potential POI, located at or associated with a local switch and located on the incoming trunk side of the switch to customer equipment at an end-user's premises.

~~The Service as described comprises a number of different elements as follows:~~

- ~~Access for calls forwarded for termination in the AP's fixed network~~
- ~~POI Location~~
- ~~Forwarding a call beyond the POI of table TPASD3 to TPASD2 where applicable (see POIs below)~~
- ~~Signalling~~
- ~~CLI provision~~
- ~~Provision of Switchports~~
- ~~Network Conditioning~~
- ~~Fault Handling~~
- ~~Inter C/CSP Billing~~
- ~~Restrictions on availability and others factors relating to the provision of Access are further described below.~~

~~In accordance with the Trade Practices Act Part XIC these elements~~

~~- may not be available from all APs~~
~~- may have restrictions in their availability~~

~~**Availability**~~

~~The availability of the services may vary depending on the geographic and technical capability of the AP's network at the time at which a request for the service is made or the service is delivered.~~

~~The AP will make available to ASs documents describing the availability of this service on its network. See Services & Interconnection Handover arrangements~~

Channel Capacity

The service will establish a connection for the purposes of voice communication with the standard bandwidth of 3.1kHz.

Services

The service is provided on a call that is handed over for termination to a customer directly connected to the ~~AP~~access provider's network with numbering in accordance with the Australian Numbering Plan.

~~**Service Restrictions**~~

~~At least annually, the AP will advise of end-customer services that may restrict the provision of this service e.g. Services barred from accepting Reverse Charge Calls in a Table PTASD5.~~

~~**Interconnection Handover arrangements**~~

~~The AP and the AS are each responsible for the provision, installation, testing, making operational and monitoring of all the network on their respective sides of the POI.~~

~~**POIs**~~

~~"Point of Interconnection" or "POI" means an agreed location which:~~

- ~~is a physical point of demarcation between the networks nominated by the AS and the AP; and~~
- ~~is associated (but not necessarily co-located with) with one or more gateway exchanges of each of the networks nominated by the AS and the AP.~~

~~Calls originated by the A-party will be handed over to the AS at Points of Interconnection agreed by the AS and the AP in respect of the POIs nominated by the AP in accordance with POI locations and POI designation for codes.~~

~~**POI locations**~~

~~The AP will provide a table (Table PTASD1) listing of POIs where this service may be provided. This listing will be updated at least annually. The AS may request a point of interconnect with the AP's network at a location other than one specified by the AP. The AP must, to the extent technically and operationally feasible, permit the location of a point of interconnect at that location.~~

~~**POI designation for codes**~~

~~The AP will provide a table (Table PTASD2) listing of the geographic number ranges associated with each POI. When Terminating Access is being provided access to these codes will be provided at the corresponding POI. The POIs in table PTASD2 will be the POI for " far end handover" of calls to the destinations listed.~~

~~The AP will provide a table (Table PTASD3) listing of POIs and of associated POIs from which traffic that could have been handed over as per table TPASD2 may be handed over for termination. [Different charges will be payable where traffic that could have been handed over at the POI in table TPASD2 is handed over at a POI in table TPASD3.]~~

~~The provisions of this Service Description apply to traffic handed over at POIs listed in Table PTASD2 or PTASD3.~~

Signalling

Signals for this service will use CCS#7 signalling. Unless otherwise agreed, this CCS#7 signalling will be in accordance with the NIIF/ACIF Interconnection-ISUP specification.

~~The AP will provide a table (Table PTASD4) of the locations where the AS may interconnect its CCS#7 signalling network with that of the AP for the purpose of accepting this service.~~

~~Signalling interconnection may not be provided at all POIs. These POIs would provide for interconnection of voice circuits only. Control of voice circuits where direct signalling interconnection is not provided, will be via "quasi-associated signalling" using Signalling Transfer Point (STP) operation, with signalling via a nominated other gateway where signalling interconnection is provided.~~

~~**CLI**~~

~~Unless otherwise agreed the CLI of the A-party should be provided as part of the CCS#7 signalling for this service.~~

Nature of switchports

At POIs the calls will be delivered to the access seeker~~AS~~ at 2.048Mbit/sec Switchports. The switchports will operate at 2.048Mbit/sec in accordance with the ITU Recommendations G.703, G. 704 and G.732 (Blue Book).

~~**Send and receive speech levels**~~

~~The send and receive levels for speech will be -13 dBr unless specified otherwise in the Australian Network Performance Plan.~~

~~The AP will not provide Echo Control unless this is a requirement within the AP's own network for calls between the end customer and the AP's gateway exchange.~~

~~**Interconnection Forecasting, ordering and provisioning arrangements**~~

~~**Forecasting and planning requirements**~~

~~**Forecast of port requirements**~~

~~For each POI the AS should provide forecasts, at least half yearly, of switchport requirements for 6, 12, 18, 24, 30 and 36 months from the time of the forecast. Forecasts should be provided on dates to be agreed between the AP and the AS and forecast the switchport requirements from operative dates of 31 December and 30 June. Forecasts will be discussed by the AP and the AS with a view to agreement within 30 Business Days. Forecasts will be used by the AP for network planning and not charging purposes.~~

Forecast of network capacity requirements

For each POI and for each charging district of the AP the AS should provide forecasts, at least half yearly, of traffic requirements for 6, 12, 18, 24, 30 and 36 months from the time of the forecast. These forecasts should provide daily and weekly profiles for the traffic forecasted and advice of any material non-uniformities in the dispersion of the terminating access traffic. Forecasts should be provided on dates to be agreed between the AP and the AS and forecast the traffic requirements from operative dates of at the end of the quarters i.e. 31 December and 30 June. Forecasts will be discussed by the AP and the AS with a view to agreement within 30 Business Days.

Ordering of Switchports

The AP will accept orders for switchports up to the level of the agreed forecasts for each POI. The AS should order switchports allowing 6 months for their provision.

The AP will provide access up to the level of the agreed traffic forecasts for each POI.

The AS may request and the AP will give reasonable consideration to, and use reasonable endeavours to provide, such provision, but is under no obligation to provide access or switchports above the level of the agreed forecasts. If such access is provided, delivery times may be longer than those specified in Ordering of Switchports.

Interconnection Ordering Requirements

Compliance testing

The AS will be required to demonstrate compliance with the agreed CCS#7 signalling system prior to the provision of the service.

The AP and the AS will develop an agreed test plan and the AS will provide results of tests to this plan from an appropriate test house or other such party. The AP will provide the results of such tests if it is not otherwise seeking a switch access service from the AS.

The AP and the AS shall review the test results of the agreed test plan within 20 business days and if the AP accepts that the test results of the agreed test plan are satisfactory then the AP and the AS will agree a date for commissioning tests.

The test results of the agreed test plan will form the prime documentary basis for ongoing operations, fault analysis and fault management of signalling between the AP and the AS.

Network Conditioning

Network Conditioning of the AP's network will be required before the provision of the service.

Operational and Fault handling arrangements

The AP will provide a contact point for the Operation and Maintenance of the service. Faults may be reported to this centre which will manage the clearance of these faults.

Inter C/CSP Billing frequency

The AP will invoice the AS on a monthly basis for this service.

Provision of Tones and Network Announcements

~~Where calls attempting this service do not progress to the end customer the call may be connected to tones as per AUSTEL Technical Standard TS002 or to a network RVA in the AP's network.~~

~~**Customer Billing**~~

~~Customer billing should be in accordance with an approved telecommunications access code.~~

Definitions

access provider has the same meaning as in Part XIC of the Competition and Consumer Act 2010.

access seeker has the same meaning as in Part XIC of the Competition and Consumer Act 2010.

national broadband network has the same meaning as in the National Broadband Network Companies Act 2011.

point of interconnection or **POI** means an agreed location which:

1. is a physical point of demarcation between the networks nominated by the access seeker and the access provider; and
2. is associated (but not necessarily co-located with) with one or more gateway exchanges of each of the networks nominated by the access seeker and the access provider in respect of the POIs nominated by the access provider.

~~1.~~2.

Appendix G: List of submissions received

Submissions received in response to July 2013 Discussion Paper on the Declaration Inquiry
AAPT, (confidential version), 27 August 2013. **(AAPT, August 2013 submission)**
ACCAN, 27 August 2013. **(ACCAN, August 2013 submission)**
Dermot Cox, 23 August 2013. **(Dermot Cox, August 2013 submission)**
Herbert Geer, on behalf of iiNet Limited (confidential version), 23 August 2013. **(iiNet, August 2013 submission)**
Macquarie Telecom, (confidential version), 28 August 2013. **(Macquarie Telecom, August 2013 submission)**
Megaport, (confidential version), 9 September 2013. **(Megaport, September 2013 submission)**
MyNetFone, [Symbio Networks] (confidential version), 19 September 2013. **(MyNetFone, September 2013 submission)**
Optus, (confidential version), 27 August 2013. **(Optus, August 2013 submission)**
Telstra, (confidential version), 6 September 2013. **(Telstra, September 2013 submission)**
Submission & appendix 1: Submission and Responses to questions in the discussion paper, (confidential) 6 September 2013
Appendix 2: Market information report (confidential), 6 September 2013
Appendix 3: King report (public), 6 September 2013
Appendix 4: Cave report (confidential), 6 September 2013
Appendix 5: Technical witness statement (Fixed networks), (confidential), 6 September 2013
Appendix 6: Technical witness statement (PSTN OA and TA), (confidential), 6 September 2013
Appendix 7: Mark ups to service descriptions (public), 6 September 2013
Vodafone, 23 August 2013. **(Vodafone, August 2013 submission)**
Supplementary submissions received in response to July 2013 Discussion Paper on the Declaration Inquiry
Macquarie Telecom, AAPT and iiNet, Joint Submission, 17 September 2013. **(Macquarie**

Telecom, AAPT and iiNet, September 2013 joint submission)
Attachment 1: Frontier report, (public version) 17 September 2013.
Macquarie Telecom, 17 September 2013. **(Macquarie Telecom, September 2013 supplementary submission)**
Macquarie Telecom, (confidential version), 15 November 2013, (confidential) Frontier report. **(Macquarie Telecom, November 2013 second supplementary submission)**.
Telstra, (confidential version), 4 December 2013. **(Telstra, December 2013 submission)**
Supplementary submissions received in response to 9 October 2013 request for market information
AAPT, (confidential version), 30 October 2013. **(AAPT, October 2013 response to information request)**
iiNet, (confidential version), 18 October 2013. **(iiNet, October 2013 response to information request)**
Macquarie Telecom, (confidential version), 21 October 2013. **(Macquarie, October 2013 response to information request)**
MyNetFone, (confidential version), 18 October 2013. **(MyNetFone, October 2013 response to information request)**
Optus, (confidential version), 25 October 2013. **(Optus, October 2013 response to information request)**
Telstra, (confidential version), 25 October 2013. **(Telstra, October 2013 response to information request)**
Appendix: ACCC CBD data request (confidential), 25 October 2013
Telstra, (confidential version) 7 November 2013, Presentation Slides to ACCC. (**Telstra, November 2013 Presentation slides**)
Macquarie Telecom (confidential version), 20 November 2013, case studies. **(Macquarie Telecom, November 2013 case studies)**
Telstra, (confidential version) 21 November 2013, Email to ACCC **(Telstra, email to ACCC, 21 November 2013)**
Macquarie Telecom, AAPT and iiNet, (confidential version), 25 November 2013, Presentation Slides to ACCC. **(Macquarie Telecom, AAPT and iiNet, November 2013 Slides to ACCC)**
Macquarie Telecom, AAPT and iiNet, (confidential version), 29 November 2013, Case

studies. **(Macquarie Telecom, AAPT and iiNet, November 2013 case studies)**