Submission in response to ACCC
Discussion Paper on the Declaration Inquiry

Fixed Services Review

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Contents

Section 1.   Introduction

1.1   The ACCC most recently considered the declaration of the fixed-line services in 2009 when it decided that declaration was in the long term interest of end-users (LTIE). Optus believes the ACCC's grounds for declaring fixed-line services in 2009 remain relevant in today's environment.[1] That is because:

(a)   Telstra's CAN, and in particular the ULLS, remains an enduring bottleneck service;

(b)   Continued declaration will promote competition in the markets for fixed voice services, and bundled fixed voice and fixed broadband services; and

(c)   There are currently insufficient competitive constraints on Telstra to ensure that alternative services or an effective substitute would be available to Access Seekers, on a national basis and on reasonable terms and conditions, without declaration.

1.2   The reasons for declaration in 2009 hold true in 2013. Telstra's copper customer access network (CAN) continues to represent 95% of all fixed-line connections in the market. Indeed, the case for continued regulation of the fixed-line services is stronger now than in 2009 due to Telstra's market dominance in the downstream fixed-line markets, dominance in the market for double and triple play product bundling, and the implications of the transition to the National Broadband Network (NBN).

1.3   Therefore Optus supports the continued declaration of the six fixed-line services currently within the scope of this inquiry. Optus also submits that the fixed-line service declarations should continue to be regulated for a further five years.

The development in competition in downstream markets since 2009

1.4   Telstra's CAN will be the only ubiquitous national access network until the NBN roll-out is complete. It will continue to exhibit natural monopoly characteristics and remain a bottleneck for competition in related downstream retail markets. Accordingly, duplication of the CAN would not be an efficient investment in infrastructure. Further, premature removal of regulation would have serious consequences for competition in the period of transition to the NBN.

1.5   As a vertically integrated infrastructure operator Telstra has the ability and incentive to leverage its market power to damage competition in related downstream retail markets. Telstra has monopoly control of 95% of all fixed-line connections. Without regulation it could use this to damage competition in related downstream markets.

1.6   Since the last review in 2009, the total number of PSTN services in operation (SIOs) has gradually declined, although there has been a positive trend in the take-up in ULLS SIOs. Despite this increase in infrastructure-based competition (i.e. self-supply of broadband services by Access Seekers), Telstra's market share of voice SIOs remains at 81.6% of all voice

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[1] ACCC, *Fixed Service Review Declaration Inquiry for the ULLS, LSS, PSTN OA, PSTN TA, LCS and WLR*, Final Decision, July 2009

lines.[2] Telstra also remains dominant in the retail market for fixed broadband with 52% of all broadband subscribers (including PSTN, HFC and NBN subscribers).[3]

1.7 Declaring the ULLS and LSS has allowed Access Seekers to install their own equipment in Telstra's exchanges to provide telephony and broadband services. More importantly, it has allowed Access Seekers greater scope to compete with Telstra by; differentiating their retail service offerings so that they can compete on more dimensions of supply; providing quality of service through having greater control over the equipment used to supply their services; and being able to operate and deploy equipment more efficiently.

1.8 Regrettably, an Access Seeker's ability to obtain these network access services from Telstra and utilise them remains fettered by a number of practical and commercial constraints. In these instances, Access Seekers can supply their retail services by purchasing a combination of the declared wholesale resale services (WLR; LCS; and PSTN OTA) from Telstra.

1.9 Regulated access to fixed-line services has resulted in the retail fixed-line services market shares being less concentrated than in the market for access lines. While Telstra retains a dominant share, the ability of alternative providers to gain a small foothold in the fixed-line markets is solely due to effective access regulation.

Re-declaring fixed-line services for five years is in the LTIE

1.10 Once deployed, the NBN provides an opportunity to bring real competition into the fixed-line services market. There will also be significant first-mover advantages as NBN is deployed. As a result, Telstra's incentive to undermine competition is likely to increase as NBN is rolled-out.

1.11 Prematurely relaxing regulation of services offered on Telstra's monopoly CAN is likely to undermine the competitive benefits of a wholesale-only NBN. Optus supports the current fixed-line services declarations for the period continuing until the NBN roll-out is completed. According to the latest NBN Co roll-out plan there will remain a sizeable number of households in 2019 still dependent on the existing CAN for their fixed-line connections. Given recent delays in the NBN roll-out, it is possible that copper-based connections will be higher than anticipated and remain for a longer period.

1.12 Optus submits that the fixed-line services declarations should continue for the maximum five year period until 2019. The ACCC will be in a better position to assess the impact of NBN on the CAN closer to 2019. Should it be clear that regulation of the CAN is no longer needed before the expiry in 2019 the ACCC has the option of varying the terms of the declarations. It is too early in the NBN deployment to make these decisions, which would remove access to the national Telstra CAN without access to a national NBN.

Regulation of fixed-line services must take into account NBN payments

1.13 The agreement between NBN Co and Telstra provides that NBN Co will lease access to and purchase many components of the Telstra CAN. Telstra expects to receive around $3.3 billion from NBN Co in revenue for fixed-line assets during the period of this declaration (2014-

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[2] This includes all reported Telstra retail and wholesale SIOs as a proportion of total PSTN SIOs and HFC connections. Telstra, 2013, 2013 Full Year Results Supporting Material, 5 Year KPIs

[3] Company data and Analyst Reports

2019).[4] The latest financial results show that Telstra received $89 million in NBN Infrastructure Services Agreement payments for FY2013, which included rental income associated with access to network infrastructure and the sale of lead in conduits. This is expected to increase over the next few years as NBN Co connects more premises.

1.14   Optus is concerned that the agreement with NBN Co covers many of the same assets that are included in the Telstra CAN, the costs of which are recovered from Access Seekers. The payments to be received from NBN Co will likely cover a large proportion of the annual revenue requirement for the CAN under the fixed-line Regulatory Asset Base (RAB). Failure to account for this in regulated rates will result in Telstra over-recovering its costs.

1.15   Optus is also concerned by the lack of transparency over the details of the agreement regarding the actual assets to be purchased or leased by NBN Co and the timeframe at which this is expected to occur.

1.16   Optus recommends that the ACCC issue detailed information requests so that it can analyse the Definitive Agreements forensically and identify where they overlap with the assets included in the fixed-line services RAB. For example, with respect to the sale of lead-in conduits to NBN Co, the Definitive Agreement states that Telstra will receive an agreed payment per lead-in conduit transferred to NBN Co, with the per conduit payment increasing in line with the CPI.[5] Optus submits that the ACCC request that Telstra provide information on the size of the agreed payment per lead-in conduit over time and its forecast of revenue to be received over the 10 year period.

The ULLS service description should be altered

1.17   Access Seekers are required to procure access to the ULLS from Telstra in order to provide the downstream service to end-users. Underlying the ULLS (and LSS) provisioning processes are a number of planning, deployment and maintenance issues, such as gaining access to different types facility access services. These undeclared services are often bottleneck services that can also pose potential barriers to entry and competitive constraints.

1.18   Optus considers there is sufficient scope for the declaration of the internal interconnect cable (IIC) as a separate ancillary service for the supply of ULLS and LSS. There is currently nothing in the ULLS service description that requires the interpretation of the Access Seekers' network boundary to be located at the MDF – it only needs to be *"located at or associated with a customer access module…"* and is a necessary input for the supply of an ULLS service, this would similarly infer that the IIC is itself a bottleneck service. As such, if there are insufficient cable pairs within an IIC, then regardless of the remaining capacity in the DSLAM, an Access Seeker would still be unable to connect a new ULLS. In addition, the relevant service descriptions should clarify that the IIC is a necessary component for the supply of the ULLS and LSS and that any recurring charges for the IIC should only be incurred in conjunction with the supply of an active ULLS or LSS service.

1.19   Optus also considers that in acquiring the ULLS there should be scope for Access Seekers to seek further clarity on a number of non-price commitments. Access Seekers should be able to *at least* access a suite of enhanced service commitments equivalent to those offered for

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[4] Telstra, *Telstra's participation in the roll-out of the National Broadband Network*, Explanatory Memorandum for the resolution under item 2 at the annual general meeting on 19 October 2011

[5] Telstra, *Telstra's participation in the roll-out of the National Broadband Network*, Explanatory Memorandum for the resolution under item 2 at the annual general meeting on 19 October 2011, p.38

WLR. The WLR and ULLS are fundamental wholesale inputs for the provision of downstream services for both residential and business customers. For example,

(a)   There should be closer alignment in the timing commitments (and transactional timeframes) in the provisioning process required to connect a new service and rectify faults between the ULLS and WLR services; and

(b)   Access Seekers should have access to a wider suite of service levels for the rectification of faults, which are currently wider in scope for WLR services than ULLS. Where this is made available, Access Seekers should also have the flexibility to obtain this suite of enhanced services levels on reasonable terms on either a recurring or 'pay per event' basis.

1.20   Optus similarly considers that the current non-price commitments for ULLS should also be reviewed to ensure that they continue to meet the requirements of both residential and business customers.

The WLR service description should be altered

1.21   The focus of the WLR has changed since 2009 from a voice service to a service facilitating the provision of WADSL. The need to combine the WLR and WADSL arises from the ACCC's refusal to allow naked WADSL in the recent WADSL Declaration decision. However, the WLR service description states that it must allow for an ability to make and receive calls and a telephone number.

1.22   Optus submits that the description be altered to allow for a stripped-down version of the WLR that provides the minimum technical service needed to enable the provision of a WADSL service.

1.23   Furthermore, the CBD exemption for WLR should be removed due to it being inconsistent with the national declaration of WADSL. Optus repeats that the ACCC has mandated that the WLR must be purchased for a working WADSL to be supplied. By exempting CBD WLR from regulation, the ACCC is in effect removing the regulation of WADSL from CBD areas. Such an outcome does not promote the LTIE.

ACCC should investigate IP interconnection

1.24   The ACCC asks whether the industry has developed to an extent that would warrant the ACCC investigating possible declaration of any new or different interconnection services. Optus expects that SIP interconnection will be introduced by the industry during the period of the next fixed-line services declaration **[CiC]**. The ACCC should therefore consider how it will deal with SIP interconnection together with PSTN TDM interconnection, and the potential for providers to refuse to adopt SIP in order to protect legacy service revenue.

1.25   There is a risk that dominant players may have a commercial interest to delay the introduction of SIP and otherwise frustrate its use to maintain the existing PSTN interconnection arrangements. As such, Optus supports the ACCC starting a separate inquiry to declare SIP interconnection at a time closer to the industry fully adopting SIP. The ACCC should also be prepared to utilise BROCs where there is evidence that dominant networks are refusing reasonable requests to interconnect using SIP, or are imposing unfair terms and conditions.

1.26   Optus sees merit in the ACCC starting a separate Declaration Inquiry closer to the time of the implementation of SIP interconnection. SIP interconnection enables next generation core networks to interconnect and deliver any-to-any connectivity for next generation voice

services. It may, however, be premature to regulate a service which is still subject to industry negotiation at the current time.

ACCC should investigate the Facilities Access Service

1.27   Optus acknowledges that Telstra will retain exclusive ownership over the facilities at which telecommunications equipment will need to be located to facilitate interconnection during the transition to the NBN *and* after its full deployment.

1.28   This has the potential to inhibit the ability for Access Seekers to install their own infrastructure in order to deliver downstream services using a network access service (e.g. ULLS) and restricts the type of interconnection that is allowed within the exchange. Facilities access terms and conditions are therefore very relevant to the ULLS, LSS and to a lesser extent, PSTN OTA services. Facilities access also impacts on related mobile market and future interconnection arrangements with NBN Co.

1.29   Optus, therefore, sees merit in the ACCC conducting further inquiries to examine this issue.

Section 2.   Access to the CAN promotes competition

2.1   There have been significant changes in consumer behaviour since 2009. Total broadband connections have grown by 19%, while PSTN voice lines have declined by 14%.[6] Fixed voice revenue continues to decline and it appears that for many people the primary reason for maintaining a fixed connection is to access fixed broadband. However, this change does not address the natural monopoly characteristics of the CAN and competition in the fixed-line services markets remains dependent on access to elements of Telstra's existing ubiquitous network infrastructure.

2.2   Any growth in retail competition since 2009 has been a result of effective wholesale access regulation to the Telstra CAN, and cannot be used as justification for removal of access regulation. Nothing has changed since 2009 in relation to the composition of the underlying network characteristics; the Telstra CAN is still the only ubiquitous fixed-line access network. The hybrid fibre-coaxial (HFC) networks have not been expanded and still cover around 2.6 million premises.[7] No provider is able to effectively compete against Telstra in the relevant fixed-line services markets without access to the underlying Telstra PSTN network. Telstra's vertical integration provides it with the incentive and ability to discriminate against Access Seekers.

2.3   Optus therefore supports the continued declaration of the six fixed-line services currently within the scope of this Inquiry. Optus also submits that the fixed-line service declarations should continue to be regulated for a further five years.

Access to the CAN promotes fixed-line competition

2.4   Competition in the fixed-line telecommunications markets is dependent on access to a fixed-line telecommunications network. There have historically been two types of access technologies, the CAN and the HFC networks. Telstra owns both the CAN and a HFC network; and Optus owns a HFC network. However, the geographic reach of these alternative networks remains limited. For example, Optus' HFC presence in three capital cities is almost completely replicated by Telstra's HFC footprint, while TransACT's (iiNet) fibre network presence only encompasses the ACT region. In terms of facilities-based competition, the ACCC similarly also noted that *"alternative fixed-line networks are limited in their capacity to impose an effective constraint on Telstra's behaviour in relation to access to the ULLS."[8]*

2.5   The NBN is being rolled-out during the timeframe of the next declaration and upon completion will replace all existing fixed-line networks. However, this is not expected to be completed until at least 2021. During this transition period, access to the fixed-line telecommunications markets will be dependent on existing legacy networks and the NBN. Optus discusses the implications of the NBN roll-out in the next section.

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[6] Broadband includes Telstra retail and wholesale broadband connections plus ULLS lines. Source: Telstra, 2013, Full Year Results 2013 Supporting Material, 5 Year KPIs.

[7] See ACCC, Determination on Applications for Authorisations lodged by NBN Co Ltd in respect of provisions of the HFC Subscriber Agreement entered into with Singtel Optus Pty Ltd and other Optus entities, July 2012, para.2.21

[8] ACCC, *Fixed Service Review Declaration Inquiry for the ULLS, LSS, PSTN OA, PSTN TA, LCS and WLR*, Final Decision, July 2009, p.56

2.6   The primary economic market to be addressed by the declaration of fixed-line services is the national wholesale fixed-line telecommunications markets.

2.7   Currently, and until completion of the NBN roll-out, the Telstra CAN is the only ubiquitous national access network. In 2009 the ACCC concluded that Telstra's CAN exhibited natural monopoly characteristics and was a bottleneck for competition in related downstream retail markets. It also found that Telstra, as a vertically integrated infrastructure operator, has the ability and incentive to leverage its market power to damage competition in related downstream retail markets.[9] Nothing has changed to alter this conclusion.

2.8   The HFC networks have limited coverage in selected capital cities. Optus' HFC passes 2.4 million premises, of which 1.4 million are serviceable premises; while Telstra's HFC passes 2.5 million premises. The combined total number of passed premises is 2.6 million.[10] The market shares of the fixed-line networks (Telstra's CAN and HFC; and Optus' HFC) have remained largely unchanged since 2009. Telstra's networks have around 95% of SIOs, and Optus' HFC around 5%.[11] Additionally, Telstra's market share remains relatively unchanged at 94% including premises connected to the NBN.[12]

2.9   Access to Telstra's ubiquitous CAN is required in order to participate in any of the related downstream markets. These services are currently being discussed within the scope of this declaration inquiry.

2.10   The ability of facilities based access regulation to promote effective competition is shown by the fact that "*the regulated services can be used in different combinations to supply fixed voice and/or broadband products at the retail level*".[13] Allowing Access Seekers to utilise different access products to develop wholesale and retail packages has promoted competition to a greater degree than through a pure resale obligation. Competition in related downstream retail and wholesale markets has occurred due to access to these network components of the national CAN. As shown in the table below, this demonstrates there is a strong dependence on the declared services as important wholesale network inputs that can be used to supply the related downstream fixed-line services products.

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[9] ACCC, *Fixed Services Review – Discussion paper on the Declaration Inquiry*, July 2013, p.14.

[10] See ACCC, Determination on Applications for Authorisations lodged by NBN Co Ltd in respect of provisions of the HFC Subscriber Agreement entered into with Singtel Optus Pty Ltd and other Optus entities, July 2012, para.2.21

[11] Telstra, *FY2013 Financial Results CEO/CFO Presentation*, p.65; Telstra's SIOs include Basic Access Lines, ULLS, and NBN subscribers. Optus's HFC numbers sourced Singtel Ltd, *Q3FY13 Historic Summary KPIs*.

[12] At June 2013, NBN had 70,100 premises connected to its networks. http://www.nbnco.com.au/about-us/media/news/nbnco-meets-revised-end-of-year-fibre-roll-out-target.html. Telstra highlighted in its annual report it has 12,000 NBN voice connections.

[13] ACCC, *Fixed Service Review Declaration Inquiry for the ULLS, LSS, PSTN OA, PSTN TA, LCS and WLR*, Final Decision, July 2009, p.16

Figure 1 Combinations of regulation services used to provide downstream retail products

Retail product	Possible means of supply	
Fixed voice	ULLS WLR / LCS / PSTN OA LSS	Declared
	Wholesale voice (including local calls, long distance calls, international calls and fixed-to-mobile calls)	Unregulated
Fixed broadband	ULLS LSS Wholesale DSL	Declared
Bundled fixed voice and broadband	ULLS LSS & WLR / LCS / PSTN OA Wholesale DSL & WLR / LCS / PSTN OA	Declared
	LSS & wholesale voice Wholesale DSL & wholesale voice	Declared & Unregulated

Source: ACCC

2.11   Access Seekers are able to procure wholesale access service offered over Telstra's CAN using the declared fixed-line services, such as ULLS, WLR and LSS. These network inputs can then be resold to end-users as a direct resale product or utilised as an input for the provision of services using their own equipment (i.e. partial infrastructure-based competition).

2.12   As previously highlighted by the ACCC,

> *The potential for resale-based competitors to invest in their own infrastructure will place a constraint on behaviour in the wholesale market. The strength of this constraint on the exercise of market power in supplying resale services will depend on the relative costs and risks associated with self-supply compared to purchasing resale services.[14]*

2.13   Where possible, Access Seekers are increasingly using their own equipment to provide voice and broadband services facilitated by access to ULLS and LSS as key wholesale inputs. This is evidenced by the steady but slowing growth in ULLS SIOs since 2007. In contrast, the take-up of LSS SIOs has gradually declined in recent quarters following a peak in 2010.[15] However, this decline in LSS has also been offset by continued carrier migration from LSS to ULL services.

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[14] ACCC, *Inquiry into varying the exemption provisions in the final access determinations for the WLR,LCS and PSTN OA services*, Issues Paper, September 2011, p.48

[15] ACCC, *Fixed Services Review – Discussion paper on the Declaration Inquiry*, July 2013, p.19

Figure 2 Take-up of ULLS and LSS since 2007 (total SIOs)
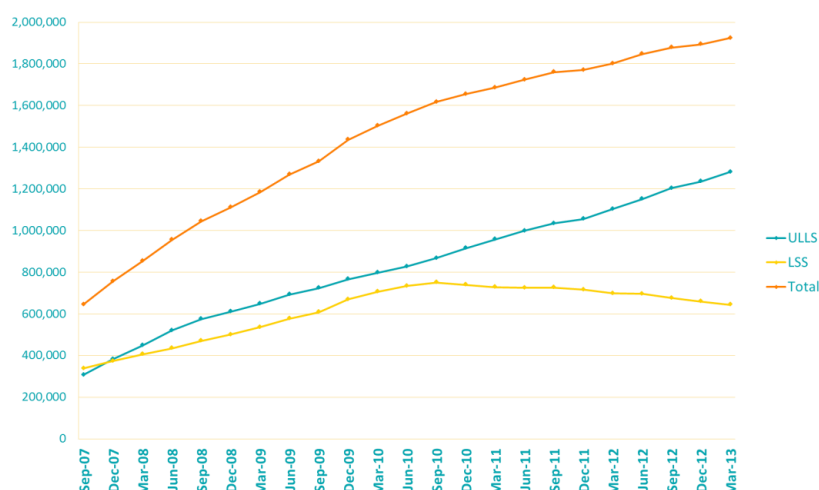
Source: ACCC

2.14   Absent declaration of the various fixed-line services, competition in the related markets would be reduced. Optus finds that it would be near impossible to use alternative fixed-line infrastructure to compete in the related national markets. While Optus could use its HFC network to compete for access to the 1.4 million serviceable premises, it is unlikely that the number of subscribers would increase from the current level of 490,000, and its ability to compete will be further limited by the network's lack of geographical reach. No other competitor in the fixed-line market would be able to compete against Telstra due to a lack of fixed-line networks. Therefore, only continued regulation of the current declared fixed-line services will be in the LTIE.

Defining the related relevant markets

2.15   Access to the Telstra CAN promotes competition in several related fixed-line markets. In particular, the ACCC has noted that *"the key to defining relevant markets is determining the substitutability of services."*[16] For example;

(a)   In terms of voice substitutability, fixed voice services generally refer to voice services provided over a dedicated access line on a fixed network and include the provision of various calling functions.

(b)   In terms of broadband substitutability, Optus notes that while it recognises the existence of alternative platforms for the delivery of broadband services, the use of these alternative platform technologies cannot serve as an effective substitute with the entirety of Telstra's copper fixed-line network.

2.16   As such, competition in both the fixed voice and broadband downstream markets has largely been facilitated through regulated access to the underlying ubiquitous copper fixed-line network (i.e. Telstra's CAN). Even so, Telstra still maintains an overall market dominance, particularly in the downstream markets. As reported in the ACCC's telecommunications report;

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[16] ACCC, *Fixed Services Review – Discussion paper on the Declaration Inquiry*, July 2013, p.14

Telstra retail is still dominant in relation to retail SIOs, despite the slight decline at June 2012. Losses from Telstra retail appear to come from the increase in ULLS SIOs rather than wholesale customers.[17] [emphasis added]

Figure 3 Types of services provided over Telstra's CAN from 2007-08 to 2012-13

Type of service	June 08	June 09	June 10	June 11	June 12	June 13
Telstra retail SIOs	79%	80%	78%	76%	75%	72%
Telstra wholesale SIOs	15%	13%	13%	13%	13%	14%
Access seeker SIOs using the ULLS	5%	7%	9%	11%	12%	14%

Source: ACCC; Telstra annual reports

2.17   Furthermore, the ACCC has also noted that:

> *In relation to the number of fixed and mobile wireless networks that are available… it is doubtful that these networks can provide effective substitutes for the ULLS in terms of quality, functionality and price, particularly on the demand side, as compared to Telstra's CAN.*[18]

2.18   Continued access to the ULLS enables Access Seekers to compete across all retail dimensions of fixed broadband and fixed voice supply. The ACCC has acknowledged that the recognition that *"At a wholesale and retail level, Telstra only provisions ADSL services where there is also a PSTN service on the line."*[19] This is significant given that Telstra reports there are 7.8 million PSTN lines[20] in operation, and notes that recent growth in its own *"Customer base growth has been driven by our range of competitive bundled offers. There are now 1.6 million bundled customers compared to 1.4 million customers at the end of FY12."*[21]

2.19   Optus therefore submits that the relevant markets for this declaration inquiry continue to include:

(a)   The retail and wholesale provision of voice services;

(b)   The retail and wholesale provision of broadband services; and

(c)   The retail and wholesale provision of bundled voice and broadband services.

2.20   In all these markets, Telstra has a dominant position. Figure 3 shows that Telstra has a 86% market share of fixed voice services over the PSTN. This reduces slightly to 81.6% including HFC SIOs. Latest annual report data shows that Telstra has a 52% of retail broadband subscribers, compared to 18% for Optus and 16% for iiNet. Similarly, Telstra is also dominant in the market for double and triple play bundles given its dominance in the retail mobile

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[17] ACCC, *Telecommunications reports 2011-12: Report 1*, p.15

[18] ACCC, *Fixed Service Review Declaration Inquiry for the ULLS, LSS, PSTN OA, PSTN TA, LCS and WLR*, Final Decision, July 2009, p.57

[19] ACCC, *Declaration of the wholesale ADSL service under Part XIC of the Competition and Consumer Act 2010*, Final Decision, February 2012, p.13

[20] Total number of PSTN lines excludes the number of ULL services in operation.

[21] Telstra Annual Report 2013, p.13

market (50% subscriber share) and the retail Pay TV market, including IPTV (96% subscriber share). Absent declaration, given Telstra's ownership of the monopoly copper CAN and its integration and dominance in *all* related markets, Telstra has the ability and strong incentive to further damage competition.

2.21   Optus also submits there are several key sub-markets which will impact on the declaration of certain fixed-line services — including the corporate market where Telstra has a market share around 75%. These are discussed in more details in later sections. The impact of network access services and resale services on competition in related markets are discussed in the relevant sections below.

2.22   The remainder of this section looks at whether the deployment of VoIP impacts on the definition of relevant markets; and whether mobile broadband services should be included in the fixed-line broadband market.

VoIP does not change the need for access regulation

2.23   VoIP provides basic voice communication services over a broadband connection. The three main types of VoIP services available to consumers include:

(a)   'POTS emulation' – using soft-switching and the ULLS;

(b)   Carrier Grade VoIP – using internet access device (IAD) and the ULLS/LSS; and

(c)   Application layer VoIP – using VoIP and the ULLS/LSS.

2.24   In terms of substitutability, the ACCC considered that VoIP via POTS emulation was likely to be substitutable for a PSTN voice services since the user experience and *"the costs involved for end-users in acquiring a POTS emulation voice service are unlikely to vary significantly from traditional fixed voice services."*[22]   In contrast, the ACCC considered carrier grade VoIP and application layer VoIP were not likely to be substitutable for a PSTN voice service at the current time. The ACCC therefore concluded that:

> *VoIP services are unlikely to be effective substitutes for fixed voice services. Depending on the type of service being used, there can be limitations concerning the quality characteristics of VoIP services, the requirement for switching customer premises equipment and also the necessity to acquire a fixed broadband service in conjunction with the VoIP service. The ACCC also notes that LSS-based VoIP would always be a second line service, which would clearly be a complementary service to the traditional fixed-line.*
>
> *Therefore, ACCC does not consider that the availability of VoIP services would be sufficient to prevent a SSNIP in relation to fixed voice services within the foreseeable future.*[23]

2.25   The ACCC previously acknowledged *"that WLR and LCS along with PSTN OTA are currently the predominant inputs used by providers other than Telstra to supply fixed voice services* to end-

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[22] ACCC, *Fixed Service Review Declaration Inquiry for the ULLS, LSS, PSTN OA, PSTN TA, LCS and WLR*, Final Decision, July 2009, p.19

[23] ACCC, *Fixed Service Review Declaration Inquiry for the ULLS, LSS, PSTN OA, PSTN TA, LCS and WLR*, Final Decision, July 2009, p.20

users."[24] The ACCC also noted the availability of two alternative services but concluded that *"the relevant product dimension at the downstream level is for fixed voice services (excluding VoIP and mobile services)."*[25]

2.26   Optus concurs with this view and considers that VoIP services are unlikely to be effective substitutes for fixed voice services. Optus reiterates its previous views that carrier grade VoIP services is not a significant substitute that can provide an effective competitive constraint on Telstra's pricing in the fixed-line market due to technical limitations, such as in terms of quality of service, call routing, terminal location and interoperability.

2.27   Irrespective of whether VoIP is a close enough substitute for PSTN voice calls to be included in the same voice market, Optus notes that the provision of VoIP services is only possible through access to the Telstra CAN. That is, VoIP can be provided by Access Seekers by using ULLS/LSS and their own DSLAM equipment. The use of VoIP is therefore irrelevant to the decision whether to continue regulation of the network access services.

2.28   Optus acknowledges that the deployment of VoIP using Access Seekers' DSLAM equipment may have the potential to influence whether resale services need to be declared. But this is only possible in ESAs where there are competitive DSLAMs and extra ports are available. In June 2013, of the 9.1 million total SIOs on Telstra's CAN, only 1.3 million were ULLS SIOs.[26] The vast majority are still serviced directly through Telstra or through re-sale arrangements.

2.29   Where it is not possible to deploy DSLAMs it is not efficient to solely rely on VoIP services. Optus notes that outside the DSLAM footprint, broadband can only be provided through the WADSL resale service. The recent WADSL Declaration concluded that the WADSL service can only be provided with an active PSTN line.

2.30   The relevant question therefore is whether it best promotes the LTIE to enable Access Seekers to utilise this active phone service for voice or to leave it unused. Optus submits that the decision to deliver a voice service using the voice spectrum or through the broadband spectrum of a copper line would be a question of economics. Therefore, the removal of LCS and PSTN OTA may force Access Seekers to utilise VoIP where it would be more efficient to utilise the active phone line.

2.31   Telstra's position that the increased take-up of naked DSL services that include carrier grade IP telephony, suggest carrier grade VoIP is a substitutive for voice services may have merit if it was possible to provide WADSL without the need to also acquire an active phone line. However, since WLR is mandatory for a wholesale broadband service, the efficient use of infrastructure is best promoted through continued access to LCS and PSTN OTA.

2.32   Optus also notes the observations from the ACMA that VoIP services:

> *… are largely used as a complement to either a mobile phone or a traditional fixed-line 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.*[27]

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[24] ACCC, *Fixed Service Review Declaration Inquiry for the ULLS, LSS, PSTN OA, PSTN TA, LCS and WLR*, Final Decision, July 2009, p.19

[25] ACCC, *Fixed Services Review – Declaration inquiry for the ULLS, LSS, PSTN OA, PSTN TA, LCS and WLR*, Discussion Paper, November 2008, p.26

[26] Telstra, 2013, *2013 Full Year Results Supporting Material*, 5 Year KPIs

[27] ACMA, 2013, *Communications Report 2011–12*, p.13

2.33   Optus concludes, therefore, that the use of VoIP by end-users does not impact on the declaration of any of the fixed-line services. Continued access to both network and resale services enable efficient use of infrastructure by permitting Access Seekers to utilise VoIP or PSTN voice services where it is more efficient to do so.

Should the fixed broadband market include mobile broadband?

2.34   While there are alternative platforms for the delivery of broadband services, the use of these alternative platform technologies do not serve as an effective substitute with the entirety of Telstra's copper CAN. The ACCC has previously concluded on several occasions that mobile broadband is a complimentary service to fixed broadband.[28] The vast majority of end-users will most likely subscribe to both services. The ACMA highlighted that:

> *… of Australians using the internet via their mobile handset in the six months to May 2012, 99 per cent also used a workstation or a portable computer to go online.* [29]

2.35   The ABS reports that while xDSL is no longer the dominant broadband service medium used in Australia, the volume of data downloaded by fixed-line subscribers is significantly greater than for any wireless alternative platform. As at December 2012, fixed-line subscribers accounted for 47.3% of total subscribers in Australia and 95% the total volume of data downloaded for the three months prior (compared to 49.7% by mobile and wireless subscribers accounting for 5% of total downloads over the same period).[30] ACMA research shows that while 3.3 million Australian adults replaced their fixed voice phone with mobile, only around 480,000 were without any fixed internet connection and relied solely on mobile for voice and internet access.[31] This research relates to adult population and does not reflect the number of premises that are without any fixed connection. The ACMA research implies that the number of households without any fixed connections is around 184,000, or approximately 2% of private dwellings.[32]

2.36   Despite the observed decline in traditional fixed voice services, there still remains strong demand for fixed broadband, as evidenced by the growth in fixed broadband subscriptions (increase of 19% since FY2009) and the total aggregate demand for fixed broadband data. This similarly supports the ACCC's observation that *"consumers still predominantly used fixed broadband rather than mobile internet for content that requires higher data rates."[33]*

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[28] ACCC, 2012, *Telecommunications Reports 2010–11*; ACCC, 2013, *Telecommunications Reports 2011–12*; ACCC, 2009, *Final Report on reviewing the declaration of the mobile terminating access service*, p.19.

[29] ACMA, 2012, *Communications Report 2011–12*, p.27.

[30] ABS, *8153.0 – Internet Activity, Australia, December 2012*, published 9 April 2013

[31] ACMA, 2013, Research Bulletin: Australians on the move – becoming mobile-only.

[32] ABS, Census 2011 Quickstats, Available at:
http://www.censusdata.abs.gov.au/census_services/getproduct/census/2011/quickstat/0

[33] ACCC, *Fixed Services Review – Discussion paper on the Declaration Inquiry*, July 2013, p.18

Figure 4 Comparison of broadband service share (%) and volume of data downloaded (TB)
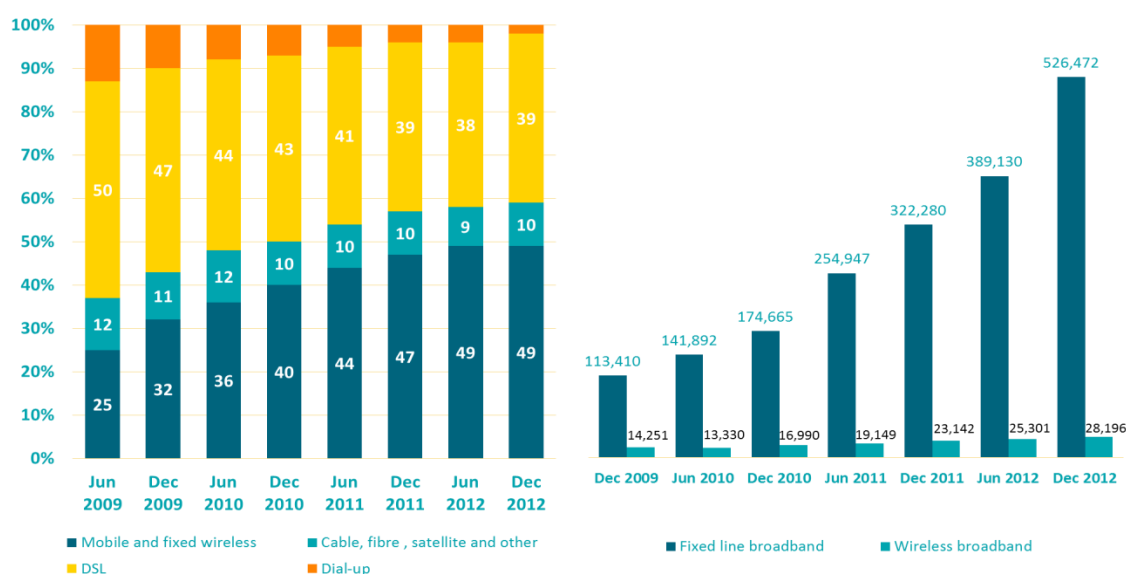
Source: ABS, Internet Activity

2.37   As highlighted above, the use of alternative platform technologies (such as wireless) do not serve as an effective competitive constraint with the entirety of Telstra's ubiquitous copper fixed-line network. Mobile and fixed broadband services are complimentary with the vast majority of households having both types of connections. Notwithstanding the high penetration of mobile devices, only around 2% of households have chosen to forsake all fixed-line connections.[34]

Fixed-line services should continue to be regulated for the next five years

2.38   Optus notes that while there have been significant industry changes that have taken place in the communications sector in recent years, the enduring bottleneck that is the fixed-line service access network still remains. This fact is not disputed, with the ACCC also acknowledging:

> *Over the next regulatory period, the majority of end-users are expected to continue to receive their fixed-line services over Telstra's copper network while NBN is being rolled out.*[35]

2.39   The ACCC's rationale for the declaration of fixed-line services in 2009 continues to remain relevant in today's environment.[36] In particular, that:

(a)   Telstra's CAN and in particular the ULLS remains an enduring bottleneck service;

(b)   Continued declaration will promote competition in the markets for fixed voice services, and bundled fixed voice and fixed broadband services; and

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[34] ACMA, 2013, *Research Bulletin: Australians on the move*.

[35] ACCC, *Fixed Services Review – Discussion paper on the Declaration Inquiry*, July 2013, p.26

[36] ACCC, *Fixed Service Review Declaration Inquiry for the ULLS, LSS, PSTN OA, PSTN TA, LCS and WLR*, Final Decision, July 2009

(c) There are no currently sufficient competitive constraints on Telstra to ensure that alternative services or an effective substitute would be available on a national basis on reasonable terms and conditions to Access Seekers absent declaration.

2.40 Notably,

> *The ACCC has consistently held the view that where the market for the supply of an eligible service is not effectively competitive, then declaration (or continued declaration) of the service is likely to lead to improved terms and conditions of access relative to what would otherwise be the case.[37]*

2.41 Optus therefore supports the continued declaration of the six fixed-line services currently within the scope of this inquiry. Optus also submits that the fixed-line service declarations should continue to be regulated for a further five years. Issues relating to the NBN roll-out are discussed in Section 3.

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[37] ACCC, *Local Services Review*, Final Decision, July 2006, p.48

Section 3. Competition during the transition to NBN

3.1   The Government's announcement of the NBN and subsequent establishment of NBN Co is a potential game-changer for the future of competition in the fixed telecommunications sector. The NBN is intended to provide a fibre-based network to deliver high data rate broadband services to all Australians. As a national wholesale-only provider, this means that in the near future, NBN Co will become the only provider of fixed access network infrastructure.

3.2   In this section, Optus will summarise some of the key impacts NBN will have on the future regulation of fixed-line services over legacy networks:

(a)   Timeframe of the deployment of NBN;

(b)   Timing of Telstra's structural separation obligations;

(c)   Competition during the transition to NBN; and

(d)   NBN Co infrastructure services agreement will distort competition during the transition to NBN.

3.3   Optus submits that these factors combine to show that ongoing regulation of access to Telstra's CAN is warranted during the NBN roll-out, which will continue for most of the next decade.

3.4   Optus submits that the fixed-line services should be re-declared for a further five year period.

Deployment timeframe of NBN

3.5   Regulation of fixed-line services should continue until the switch over to NBN is complete. This does not happen until NBN is fully rolled-out to all households in Australia. The official target for completion of the NBN roll-out is around 2021.

3.6   NBN Co describes the replacement of the NBN fibre network as effectively shutting down of the copper-based services within 18 month period following the roll-out of NBN within a given serving area. In particular, it highlights in the first three dot points, the current suite of services offered over the Telstra CAN by both Telstra and Access Seekers:

> *After an NBN fibre region has been declared "ready for service", residents will be given 18 months notice that a number of services in their area will be switched off. This includes:*
>
> * *Telstra landline phone services (except some Telstra Velocity lines)*
>
> * *Landlines phone services from all other phone companies, where the service is provided over Telstra's copper phone lines*
>
> * *All ADSL, ADSL2 and ADSL2+ internet services from all providers*
>
> * *Telstra BigPond cable internet services*
>
> * *Optus cable internet and cable phone services (switch-off date yet to be determined)*

The switch-off only affects the above services. If your phone or internet is already provided over fibre, or through a network provided by your building owner, or through a cable network that's not owned by Telstra or Optus (such as TransACT, OptiComm or others), they will continue operating unless your provider advises otherwise.[38]

3.7   According to the latest NBN Co roll-out plan, a forecast which is likely to have significant downside risk, there will remain a sizeable number of households that would remain dependent on the existing CAN for their fixed-line connections during the next five years. Given recent delays in the NBN roll-out, it is possible that copper-based connections will be higher than anticipated and remain for a longer period. For example, in 2015 according to NBN Co figures there is likely to be around 9 million total connections, of which only 1.6 million will be NBN connections. By 2019, there is likely to still be 2 million households that are not connected to the NBN.

Figure 5 Total fixed-line network and NBN connections
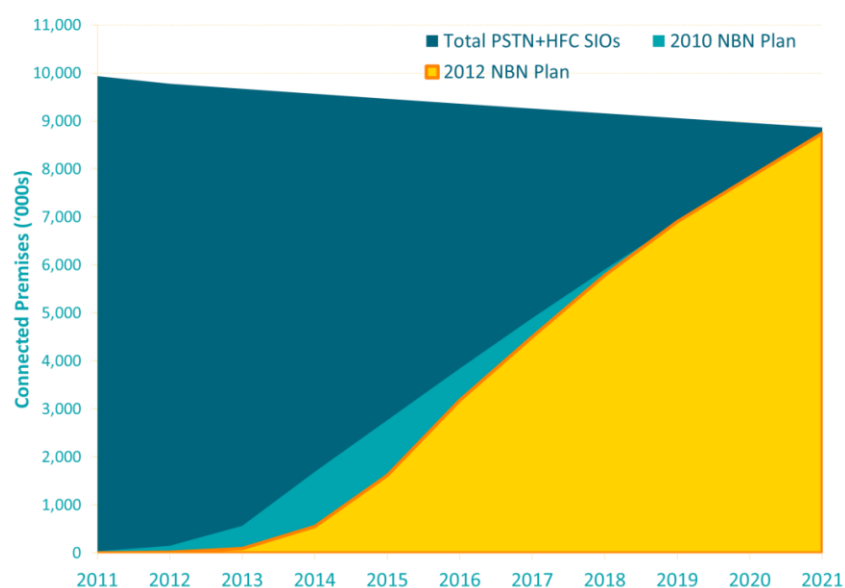
Source: NBN Co, Telstra, Optus. Total current SIOs decrease at the same rate as observed over recent years. This reflects the growing trend of mobile only households and the removal of multiple lines from premises.

3.8   Optus submits that the fixed-line services declaration should continue for the maximum five year period until 2019. The ACCC will be in a better position to assess the impact of NBN on the CAN closer to 2019. Should it be clear that regulation of the CAN is no longer needed before the expiry in 2019 the ACCC could vary the terms of the declarations. But the NBN deployment is not at a sufficiently mature stage to make these decisions, which would remove access to the national Telstra CAN without access to a national NBN.

Timing of structural separation of Telstra

3.9   A number of policy driven activities have been initiated to facilitate the smooth transition to the NBN environment. Legislation was introduced to create a framework for reforming the telecommunications industry, which came into effect on 1 January 2011. In addition to replacing the previous negotiate-arbitrate framework, a key pillar of this reform package was to address the recognition that:

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[38] NBN Co, *What is the NBN fibre network replacing?*, http://www.nbnco.com.au/get-an-nbn-connection/home-and-business/nbn-services/switch-off.html [viewed 16/8/13].

Telstra, as the vertically integrated access provider of the ubiquitous copper network, operates at all levels of the supply chain and competes with retail service providers to which it supplies wholesale services. Telstra's vertical integration has given rise to longstanding competition concerns around Telstra's ability and incentive to favour its retail business over other service providers accessing its network, to the detriment of consumers.[39]

3.10   As such, Telstra was required to enter into a voluntary structural separation arrangement, which included the submission of a Structural Separation Undertaking (SSU) and draft Migration Plan (MP) for the progressive migration of Telstra's fixed-line access services to the NBN. The ACCC accepted Telstra's SSU and MP in February 2012,[40] and this commenced operation in March 2012.

3.11   Most importantly, full structural separation is not due to occur until 2018. Optus submits that until that point Telstra will remain the vertically integrated owner of the CAN. As explained below, the transition to NBN will most likely increase the incentive for Telstra to utilise its ownership of the CAN to prevent other RSPs from gaining retail market share during the 'land-grab' of subscribers during NBN roll-out.

3.12   Optus concludes that while the SSU is a step in the right direction, the timing of full compliance means that declaring fixed-line services for a further five years would best promote the LTIE.

Industry structure moving towards scale for NBN

3.13   In an industry characterised by high barriers to infrastructure based competition in fixed-line services, Telstra has long been and remains the dominant player in the provision of retail fixed-line services:

For instance, the economies of scale associated with telecommunications networks suggest that competitors need to invest on a large scale in order to achieve per unit network costs that could potentially rival Telstra's.[41]

3.14   However during the transition period to NBN, Access Seekers who have already made the significant DSLAM investments in recent years in order to self-supply, will continue to rely on access to the declared wholesale inputs (such as ULLS) to provide services to their end-users. Once the roll-out of NBN in a serving area is completed, this will be accompanied by the decommissioning of Telstra's CAN, and this means that any DSLAM investments in those areas will effectively be made redundant, resulting in an accumulation of stranded assets.

3.15   This may lead to a number of implications for competition:

(a)   Efficient use of and investment in new DSLAM infrastructure will be limited;

(b)   The incentives for footprint expansion will likely be driven by improving operational and deployment efficiencies; and

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[39] ACCC, *Fixed Services Review – Discussion paper on the Declaration Inquiry*, July 2013, p.22

[40] ACCC, "ACCC accepts Telstra's structural separation undertaking," Media Release, 28 February 2012

[41] ACCC, *Fixed Services Review Declaration Inquiry for the ULLS, LSS, PSTN OA, PSTN TA, LCS and WLR*, Final Decision, July 2009, p.40

(c)   The deployment timeframe and roll-out schedule of the NBN will lead to a patchwork of access networks operating at the same time.

3.16   The accumulation of these conditions will lead to a competitive dynamic based on Access Seekers striving to achieve scale and a national subscriber base. This may involve greater incentives to build and strengthen their reputations and customer bases ahead of the NBN roll-out. Access Seekers are also likely to use an increasing mixture of CAN access (ULLS) and resale (WLR and WADSL) services as deployment of NBN emphasises the need to build a national presence outside the ULLS footprint of Access Seekers. On the other hand, Telstra has an incentive to maintain and expand its retail base in order to maximise migration payments from NBN Co. This can be achieved by limiting access to its CAN.

Achieving scale during the transition to NBN

3.17   Access Seekers face incentives to build and strengthen their reputations and customer bases ahead of the NBN roll-out in recent years. This would ensure that they are in a stronger position to take advantage of economies of scale and new opportunities to provide services to retail customers. Notably, this has led to a common theme of market consolidation (and increasing adoption of strategies for cost synergies and operational efficiencies – i.e. market reach, scale and capability). The NBN Co pricing model results in the drive for scale so that the costs to RSPs are minimised. It is expected that RSPs with a large subscriber based would have significantly lower costs (and hence a competitive advantage) over smaller RSPs.

3.18   The Discussion Paper highlights a number of market consolidation activities that have occurred in recent years, which have largely seen the consolidation of ISPs (such as iiNet, TPG and M2) increasing their market shares at the expense of smaller ISPs. Some of these are highlighted below.

iiNet's acquisition of Adam Internet in 2013; Internode in 2012; TransACT in 2011; and AAPT's consumer division and Netspace in 2010

3.19   iiNet has completed a number of acquisitions, including: Netspace, AAPT's consumer division, TransACT and Internode in recent years. It has also recently reached an agreement to sell its TransACT FTTP network in the ACT region to NBN Co.[42] Furthermore, iiNet is currently in the process of acquiring Adam Internet which it expects to be completed by end August 2013.[43]

3.20   At the time of the acquisitions, iiNet acknowledged a number of synergies it expects to realise, including:

(a)   Increasing scale/footprint expansion – the Netspace transaction increased number of DSLAMs up 17 to 343[44]; the TransACT transaction included acquisition of a FTTP network in the ACT region[45]; the Internode transaction will extend iiNet's existing footprint by over 36 DSLAMs as part of the 202 active exchanges[46]; the Adam

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[42] iiNet, "iiNet reaches agreement with NBN Co for sale of TransACT FTTP network," ASX Release, 22 May 2013

[43] iiNet, "iiNet to acquire Adam Internet," ASX Release, 5 August 2013

[44] iiNet, *Acquisition of Netspace*, Investor Presentation, 29 March 2010, p.3

[45] iiNet, *Acquisition of TransACT Communications*, Investor Presentation, 21 November 2011

[46] iiNet, *Acquisition of Internode*, Investor Presentation, 22 December 2011, p.4

Internet transaction will encompass additional DSLAM and fibre network infrastructure;

(b) Geographical reach – originally a Perth-based ISP, the acquisitions have allowed iiNet to expand into other markets: Netscape (Victoria and Tasmania), TransACT (ACT and regional Victoria), Internode (SA), Adam Internet (SA and NT); and

(c) Consolidation of market position, with "*synergies available from on-net migration, bandwidth, backhaul inter-capital transmission and the integration of systems and suppliers.*" [47]

M2's acquisitions of Dodo and Eftel in 2013; and Primus in 2012

3.21 M2 Telecommunications Group Ltd (M2) recently completed its acquisition of Dodo and Eftel Limited in 2013. At the time of its announcement, M2 acknowledged that the acquisitions would provide benefits such as:

(a) Complementary customer base – "*a large, profitable and organically growing consumer telecom business which is highly complementary to M2's existing sizable consumer division*";

(b) Low-cost brand to lead in the transition to NBN – "*a nationally recognised low-cost brand (Dodo) which is well positioned to grow market share in the transition to an NBN world*"; and

(c) Economies of scale and operational synergies – "*delivery of considerable scale to M2's business, with combined FY14 revenues in excess of $1 billion, providing numerous opportunities for both short and long term cost synergies and operational efficiencies.*" [48]

3.22 This followed M2's similar acquisition of Primus in 2012, and in which it noted:

*M2's acquisition of Primus is a strategic and highly complementary transaction which, **in addition to adding significant scale**, will contribute next generation sales and support capability, **ensuring that M2 is well prepared for the opportunities presented by the deployment of the National Broadband Network ("NBN").**[49]* [emphasis added]

Telstra's attempted acquisition of Adam Internet in 2012

3.23 Acquisitions are not just limited to the smaller fixed-line RSPs. In 2012, Telstra attempted to acquire Adam Internet. The benefit to Telstra of the acquisition was Adam Internet's low cost business model, which Telstra planned to expand nationally.[50]

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[47] iiNet, *Acquisition of Internode*, Investor Presentation, 22 December 2011, p.5

[48] M2 Telecommunications Group Ltd, "M2 announces acquisition of Dodo and recommended takeover offer for Eftel Limited," ASX Release, 18 March 2013, pp.1-2

[49] M2 Telecommunications Group Ltd, "M2 announces acquisition of Primus Telecom Holdings and fully underwritten renounceable entitlement offer," ASX Release, 16 April 2012, p.2

[50] Telstra, "National expansion plan for Adam Internet following Telstra acquisition", Media Release, 24 August 2012.

3.24   The ACCC raised concerns with the acquisition. Specifically, the acquisition had the potential to enable Telstra to foreclose competition in the market for fixed-line services, and found that the SSU would not effectively constrain Telstra.[51]

The ACCC should take account of the Infrastructure Services Agreement

3.25   The Infrastructure Services Agreement (ISA) within the Definitive Agreement between Telstra and NBN Co sets out the money to be paid by NBN Co to Telstra for access to and purchase of key elements of the CAN. During the period of the next declarations, Telstra will recover the costs of the CAN from three sources: Telstra's self-supply; regulated services under the fixed-line services FAD; and NBN Co. The total value of the CAN is included in the regulated RAB. A proportion of the RAB is allocated to regulated fixed-line service and recovered from Access Seekers. The RAB approach does not currently include any NBN Co payments. Optus is concerned that ducts and conduits used by NBN Co are also used to provide connectivity for the copper CAN. As such, that there is potential for double recovery of costs under the fixed-line services FAD.

Figure 6 Telstra cashflow from NBN
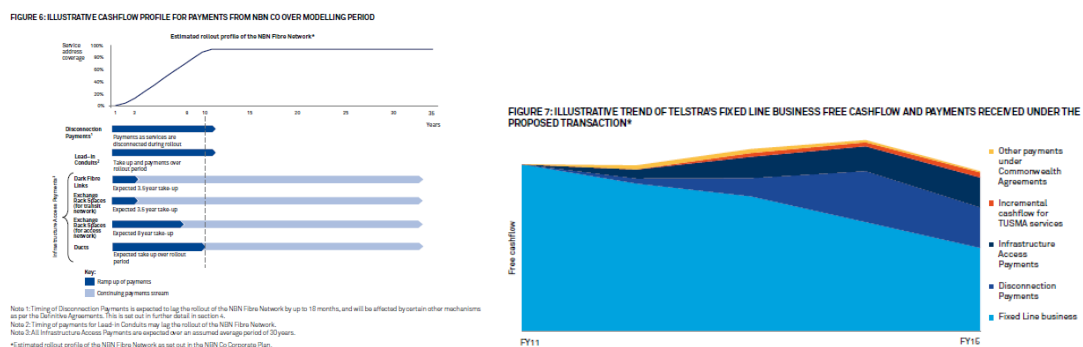
Source: Telstra

3.26   The figure above shows Telstra's expectation about the cash flow received from NBN Co. It can be seen that while the timing of payments are dependent on the roll-out of NBN, the payments are expected to more than compensate Telstra for any losses in future PSTN revenue.

3.27   Telstra will provide NBN Co with large scale access to certain infrastructure (dark fibre, exchange space, lead-in conduits and ducts) at prices based on committed large volume levels of usage and availability. The term of the ISA will be between 35 and 40 years from commencement, plus two 10 year options to extend to be exercised by NBN Co. In return, Telstra will receive infrastructure payments of approximately $5 billion (post-tax NPV in 2010) for leasing access to NBN Co to be paid over an average 30 year period. Telstra will also receive $4 billion (post-tax NPV in 2010) for disconnection payments and the sale of lead-in conduits over a 10 year period. Additionally, Telstra will retain ownership of all infrastructure assets, with the exception of lead-in conduits which will be transferred to NBN Co upon use. In summary:

   Under the agreement, Telstra will provide much of the infrastructure required to build the network including:

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[51] ACCC, *Telstra Corporation Limited - proposed acquisition of Adam Internet Pty Ltd*, Statement of Issues, 20 December 2012.

- *Lead-in conduits through which the NBN fibre will be connected to each premise;*

- *Underground ducts and pits through which the NBN fibre will run;*

- *Dark fibre; and*

- *Rack spaces in Telstra exchanges.*[52]

3.28 Access to particular infrastructure and payments for use will commence progressively, in line with the NBN roll-out schedule. This means that total annual payments will increase over the 10 year roll-out period then increase with CPI for the remainder of the infrastructure access period. Additionally, Telstra also expects to incur approximately $0.6 billion (post-tax NPV in 2010) for necessary work on infrastructure and maintenance activities (covered within existing operational expenses) and approximately $0.5 billion (post-tax NPV in 2010) for incremental operational expenses to be spread over 10 years, for the necessary migration and infrastructure and maintenance costs which have been brought forward as a result of the NBN roll-out (however, these will absorbed within existing expenditure profiles).[53]

3.29 Optus submits that the agreement with NBN Co covers many of the same assets that are included in the Telstra CAN, the costs of which are recovered from Access Seekers.

3.30 However, there is a lack of transparency over the details of the agreement regarding the actual assets to be purchased or leased by NBN Co and the timeframe at which this is expected to occur. Optus recommends that the ACCC issue detailed information requests so that it can forensically analyse the Definitive Agreements and identify where it overlaps with the assets included in the fixed-line services RAB. For example, with respect to the sale of lead-in conduits to NBN Co, the Definitive Agreement states that Telstra will receive an agreed payment per lead-in conduit transferred to NBN Co, with the per conduit payment increasing in line with the CPI.[54] Optus submits that the ACCC request that Telstra provide information on the agreed payment per lead-in conduit over time and its forecast of revenue to be received over the 10 year period.

3.31 A yearly break-down of the expected infrastructure cash flows is shown below in Figure 7. The data from Grant Samuel is attached to Telstra's explanatory memorandum to its 2011 AGM approval of the agreement. It shows that during the period of this declaration (2014-2019), Telstra will receive around $3.3 billion from NBN Co in revenue for fixed-line services assets. The latest financial results show that Telstra received $89 million in NBN Infrastructure Services Agreement payments for FY2013, which included rental income associated with access to network infrastructure and the sale of lead in conduits.[55]

3.32 The significance of this amount can be seen against the required annual revenue for the CAN as determined in the ACCC's fixed-line services model (FLSM). **[CiC]** The NBN payment therefore represents a large component of the revenue required under the RAB over the next five years.

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[52] NBN Co, "NBN Co and Telstra sign binding Definitive Agreements," Media Release, 23 June 2011

[53] Telstra, "Telstra signs NBN Definitive Agreements," ASX Release, 23 June 2013

[54] Telstra, *Telstra's participation in the roll-out of the National Broadband Network*, Explanatory Memorandum for the resolution under item 2 at the annual general meeting on 19 October 2011, p.38.

[55] Telstra, Full Year Results Announcement 2013, p.13

Figure 7 Telstra cashflow from NBN

Infrastructure Cash Flows
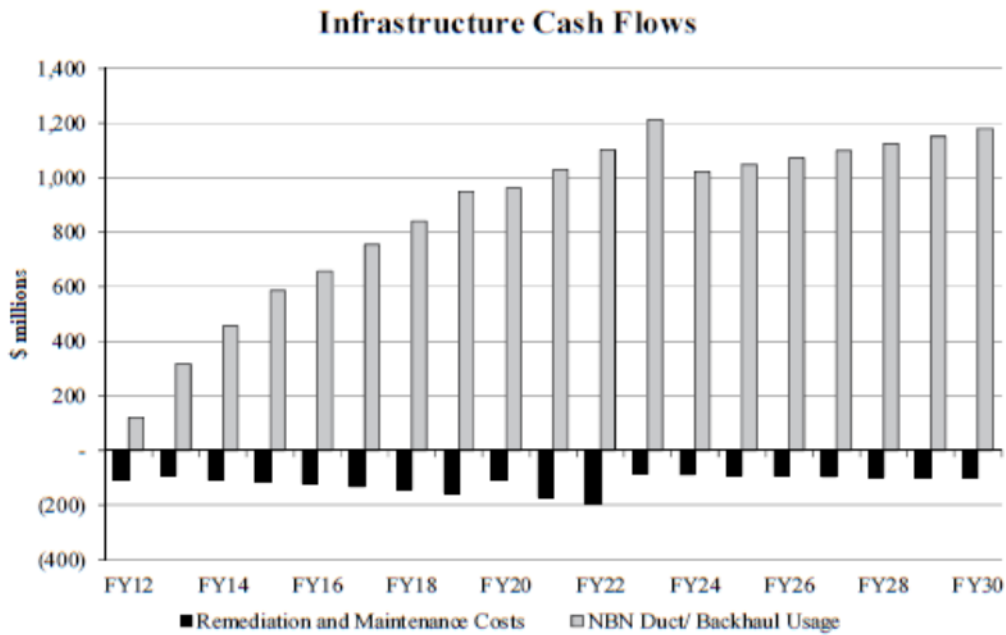
Source: Telstra

3.33   **[CiC]**

Figure 8 **[CiC]**

3.34   **[CiC]**

3.35   As noted above, the details of the agreement remain confidential. There is much uncertainty as to the expected payments due to problems with the NBN roll-out. Optus strongly recommends that the ACCC request the Telstra-NBN Co agreement so it can assess the true impact on Telstra's fixed-line revenue. The ACCC can then estimate the likely payments to Telstra using the latest official NBN Co Corporate Plan. These payments should then be deducted from the RAB of the Telstra CAN.

Section 4.   Network access services

4.1   The declaration of two network access services – the ULLS and the LSS have been an important enabler of infrastructure-based competition in recent years. It has allowed Access Seekers to purchase the ULLS and install their own equipment in Telstra's exchanges to provide telephony and broadband services.

4.2   In particular, the ACCC has highlighted four key industry changes that are relevant to its current consideration for the declaration of network access services:[56]

(a)   First, the roll-out of NBN that will, over time, replace Telstra's CAN and the HFC networks as customers on those networks are migrated onto the NBN;

(b)   Second, Access Seekers have installed more equipment in Telstra's exchanges for the provision of voice and broadband services. As at March 2013, there were 574 exchanges with equipment owned by at least one ULLS Access Seeker;[57]

(c)   Third, more end-users are now being supplied using Access Seekers' equipment; and

(d)   Fourth, all operators of HFC cable networks have upgraded to the DOCSIS 3.0 standard.

4.3   Of these, the impact of the NBN roll-out will be significant since "*the closure of the Telstra copper network will also result in the removal of the ULLS-based networks operated by Access Seekers.*"[58] This will consequently lead to the potential stranding of network infrastructure and investment by Access Seekers.

4.4   In this section, Optus will argue for the continued regulation of the ULLS service and proposes that the ULLS service description be amended to clarify that the provision of the ULLS includes the interconnection cable service.

Continued declaration of the ULLS would promote competition

4.5   The continued regulation of the ULLS service is vital to the continuation of sustainable competition in the provision of fixed voice, fixed broadband, and bundled services. As discussed in Section 2, the relevant markets for the network access services include the markets for standalone fixed voice; standalone fixed broadband; and double and triple play bundled services.

4.6   Notably, the significant investments in DSLAMs and associated infrastructure by Access Seekers are being used to serve a significant customer base, stimulating competition, and delivering important benefits to consumers – such as lower prices, improved service and greater innovation.

[56] ACCC, *Fixed Services Review – Discussion paper on the Declaration Inquiry*, July 2013, pp.25-26

[57] This is compared to 524 exchanges with equipment owned by at least one ULLS Access Seeker in March 2009. ACCC, *Snapshot of Telstra's customer access network*, various years.

[58] ACCC, *Assessment of Telstra's Structural Separation Undertaking and draft Migration Plan*, Final Decision, February 2012, p.31

4.7   However while there has been a positive trend in the take-up of ULLS since 2007, the majority of this take-up has largely only occurred in Band 2 areas. Even as at June 2012, only 79.5% of Band 2 ESAs had Access Seeker *and* Telstra DSLAM presence (compared with 99.8% of ESAs with Telstra-only DSLAM presence).[59] As at June 2013, there were 1.322 million ULLS SIOs, or 14.5% of the total PSTN SIOs reported by Telstra.[60] Outside these areas, it is likely that any competition in downstream market is being facilitated through access to the regulated resale services (discussed further in Section 5).

Figure 9 Take up of ULLS SIOs by geographic area
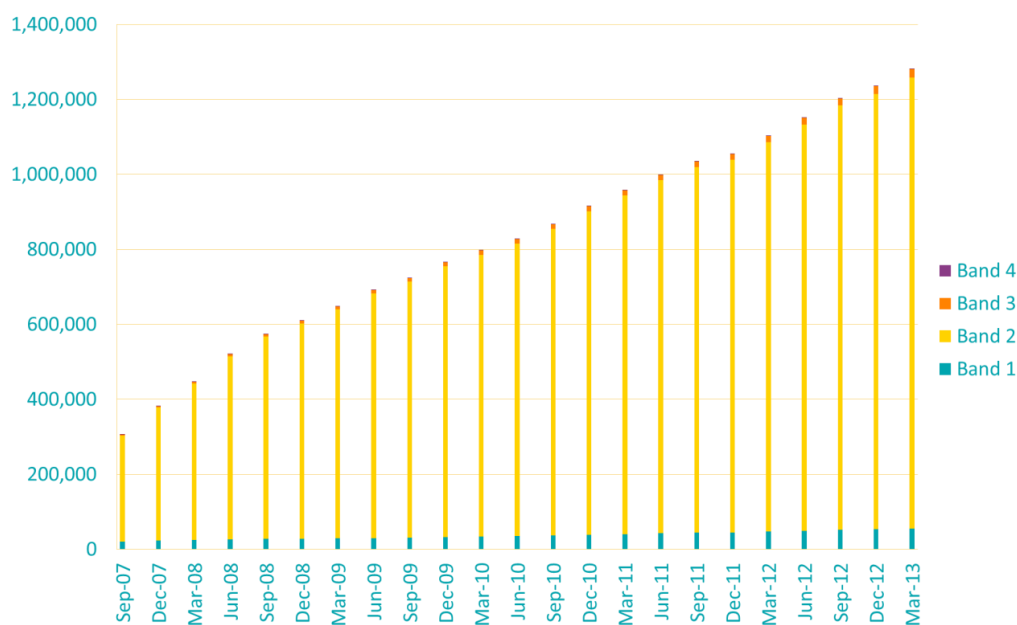
Source: ACCC

4.8   There has also been a positive trend in the take-up of LSS since 2007; however this has plateaued in recent years. In some cases, it is likely that this may have been a result of LSS to ULLS migration by other ISPs – unlike ULLS, which can deliver both a voice and/or broadband services, LSS only allows ISPs to deliver a broadband service to end-users and does not allow the bundling of services. At the end of FY2013, there were 631,000 LSS SIOs, or 6.9% of the total PSTN SIOs reported by Telstra.[61]

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[59] ACCC, *Telecommunications reports 2011-12: Report 1*, p.20

[60] Telstra, 2013, *2013 Full Year Results, Additional Material*, 5 Year KPIs

[61] Telstra, 2013, *2013 Full Year Results, Additional Material*, 5 Year KPIs

Figure 10 Take up of LSS SIOs by geographic area
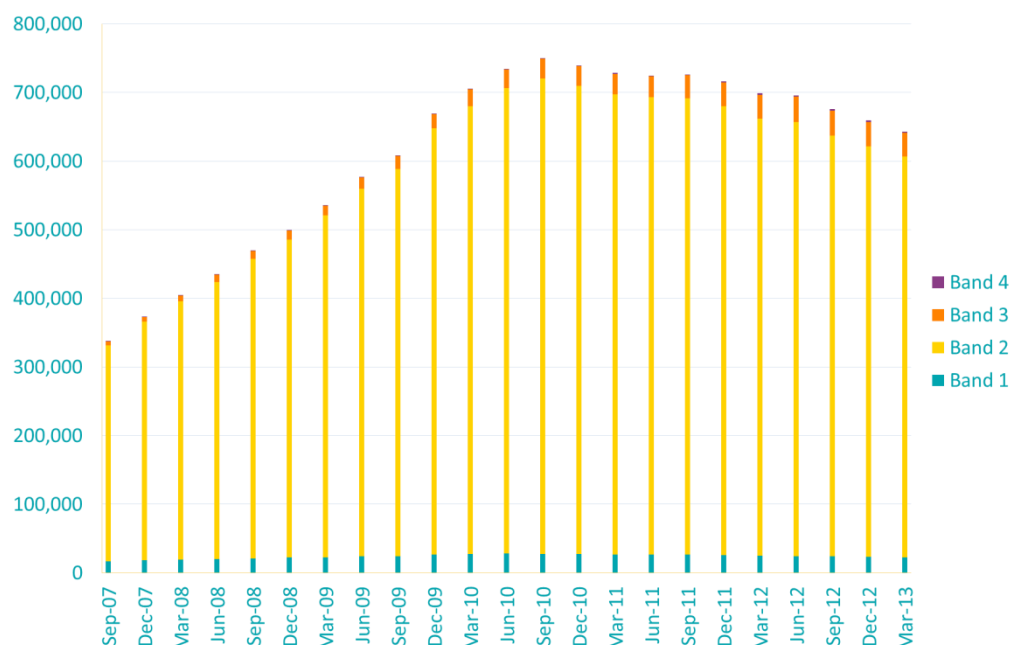
Source: ACCC

4.9   Despite the improvement in ULLS-based competition in recent years, ULLS is not necessarily always the most efficient or viable form of entry for Access Seekers for all geographic areas. The focus of ULLS on Band 2 emphasises the need for other forms of CAN access so Access Seekers can develop a national presence in order to compete in an NBN market.

4.10   It follows that without access to Telstra's underlying copper network; there would still be little (if any) competition in the downstream market for the provision of fixed voice, broadband or bundled services.

Declaration encourages efficient use of and investment in infrastructure

4.11   The declaration of the ULLS has played an important role in encouraging facilities-based investment and stimulation of competition in fixed-line communications. In particular, the ACCC accepts that declaration of the ULLS and LSS has contributed to both a drop in the average price of broadband services; as well as contributed to the industry's upgrade from ADSL to ADSL2+ broadband services earlier than it would otherwise have occurred.[62]

Barriers to entry

4.12   Access Seekers face high barriers to effective and sustainable competition in the fixed-line markets. Effective investment remains a challenging process for Access Seekers. However, with regards to facilities-based competition, the ACCC has considered that continued access to ULLS is regarded as the preferred means, in both practical and economic terms, for Access Seekers to compete in the provision of fixed-line services.

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[62] ACCC, *Fixed Services Review – Discussion paper on the Declaration Inquiry*, July 2013, p.55

…direct access to the local loop enabled competitors to bypass large sections of Telstra's network, making the deployment of new infrastructure (such as DSLAMs for xDSL provision) more economic and practical, thereby promoting ULLS-based competition.[63]

4.13   Even with ULLS declaration, and the presence of some alternatives to the ULLS for providing downstream services, the ACCC concluded:

*…these supply options do not currently provide an effective substitute for the ULLS in terms of underlying functionality and/or geographic coverage. Even where competitors have developed their own facility based networks, the ACCC considers **that access to Telstra's ubiquitous network is essential due to Telstra's market power and advantages in terms of economies of scale and scope from being vertically integrated.**[64] [emphasis added]*

4.14   Optus notes that this situation remains unchanged (i.e. Telstra's market power and advantages in terms of geographic reach).

4.15   Regulated access has contributed towards the take up of ULLS-based competition. Optus' ULL subscriber base for both fixed voice and fixed broadband has increased in recent years. **[CiC]**

Figure 11 Optus' ULL subscribers
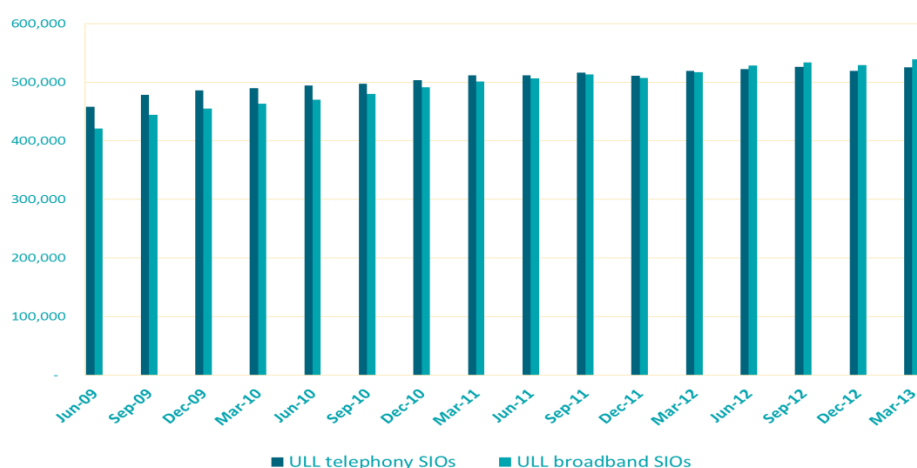
Source: Optus

4.16   Comparatively, and mostly as a result of market consolidations (refer to Section 3), Access Seekers have also increased their DSLAM footprint – iiNet currently has DSLAM presence in 450 exchanges; TPG has 409; and M2 has 297.[65] Even so, it appears clear that Telstra has and will continue to retain a dominant position in the supply of wholesale fixed-line broadband services – as at March 2013, Telstra had 2,277 ADSL2+ enabled exchanges.

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[63] ACCC, *Fixed Services Review – Declaration inquiry for the ULLS, LSS, PSTN OA, PSTN TA, LCS and WLR*, Discussion Paper, November 2008, p.49

[64] ACCC, *Fixed Service Review Declaration Inquiry for the ULLS, LSS, PSTN OA, PSTN TA, LCS and WLR*, Final Decision, July 2009, p.60

[65] Operator websites, as at 6 August 2013

Impact from impending deployment of NBN

4.17   As NBN roll-out continues, this will subsequently be accompanied by the gradual decommissioning of Telstra's copper network in those areas where the NBN Access Service is declared 'Ready for Service'. This impending deployment therefore raises some serious issues for emergent competition in the local loop, particularly within the context of efficient use of and investment in infrastructure.

4.18   Optus considers that removing regulated access to fixed-line services would not encourage Access Seekers from expanding their DSLAM footprint through investment in their own infrastructure. Furthermore, this also raises the risk of stranded assets for Access Seekers who have invested in their own infrastructure in recent years.

Proposed amendments to the service description

The LSS service description

4.19   The current LSS service description is defined as:

> *The High Frequency 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.*

4.20   The LSS is a line sharing service that allows end-users the ability to acquire their voice and broadband services from two different access providers over the same copper line. However the LSS service can only be provided to Access Seekers if, and only if, the end-user is also connected to an active copper line (i.e. voiceband frequency spectrum of unconditioned communications wire), or the associated WLR service. This requirement effectively also constrains the ability to acquire a 'naked DSL' service.

4.21   Optus **[CiC]** therefore does not propose any changes to the LSS service description.

The ULLS service description

4.22   The current ULLS service description is defined as:

> *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.*

4.23   The ULLS is a service for access to the unconditioned cable, usually a copper wire pair, between an end-user premise and a telephone exchange. This is illustrated by the ACCC as follows, where the network demarcation occurs at the DSLAM from the network side and the 'splitter' on the end-user premises. However as will be highlighted in Optus's discussion on ULLS provisioning, this approach may be overly simplistic and fails to capture the full ULLS service (i.e. that a ULLS service cannot be provided without the associated internal interconnection cable (IIC) component).

Figure 12 Diagram of the customer access network (CAN) infrastructure
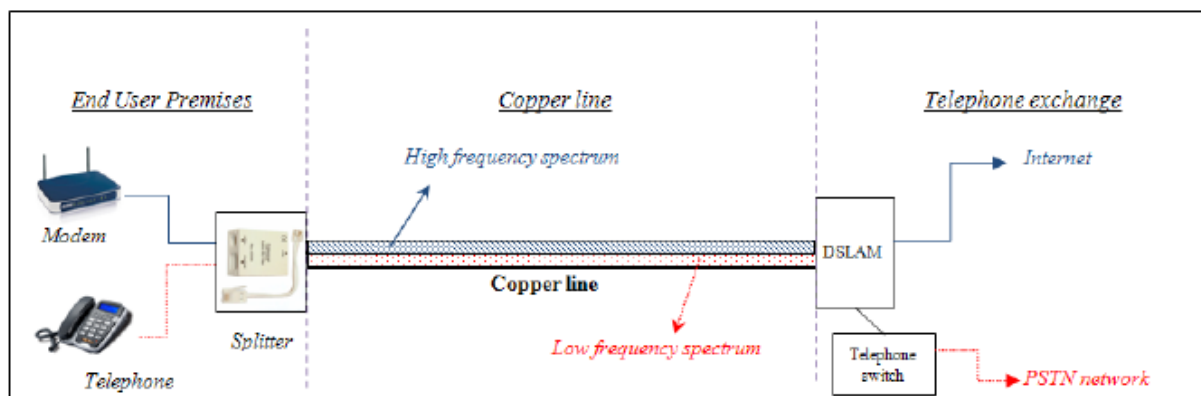
Source: ACCC

4.24   Optus therefore proposes that the ULLS service description be clarified and reflect the inclusion of the IIC service as part of the ULLS service description and that the ULLS is unable to be acquired without the IIC component. This issue was similarly raised within the 2012 arbitration proceedings between a number of Access Seekers and Telstra concerning access to facilities, specifically over the monthly price for the internal interconnection cable in Telstra exchanges.[66]

Enduring bottlenecks in relation to ULLS provisioning

4.25   Access Seekers are required to procure access to the ULLS from Telstra in order to provide the downstream service to end-users. A similar provisioning service is required for LSS. Underlying the ULLS provisioning processes are a number of planning, deployment and maintenance issues, such as gaining access to different types facility access services. These undeclared services are often bottleneck services that can also pose potential barriers to entry and competitive constraints.

Ancillary services required for the supply of the ULLS

4.26   Optus proposes that the ACCC consider the declaration of Internal Interconnect Cable (IIC) as a separate ancillary service for the supply of ULLS and LSS.

4.27   The IIC service is required to allow Access Seekers to connect between their equipment (e.g. DSLAM) from their point of interconnection at the Intermediate Distribution Frame (IDF) to the Telstra's Main Distribution Frame (MDF) located within the Telstra exchange. The entirety of this service is located within the Telstra exchange building and is generally included within the suite of TEBA access charges.

4.28   The ULLS network architecture is illustrated below and shows that the ULLS point of interconnection occurs at the IDF even though the ULLS network reference point occurs at the MDF. Despite this, it is clear that the ULLS service cannot be provided without the ULLS interconnection cable. As such, the network demarcation boundary at the Access Seeker side should be at the IDF which can be inferred to fall within the scope of the ULLS service description – i.e. "…*a point on a telecommunications network that is a potential point of interconnection located at or associated with a customer access module…*" Additionally, the reference to "…*located on the end-user side of the customer access module*" could be interpreted as the network boundary from which an Access Seeker no longer controls its

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[66] ACCC, *Fixed Services Review – Discussion paper on the Declaration Inquiry*, July 2013, p.83

service (i.e. at the Access Seeker's POI). However in reality this is not the case and Access Seekers continue to be subject to recurring charges for access between the IDF and MDF in order to provide an end-to-end ULLS service to its end-user.

Figure 13 Network diagram for the provisioning of the ULLS
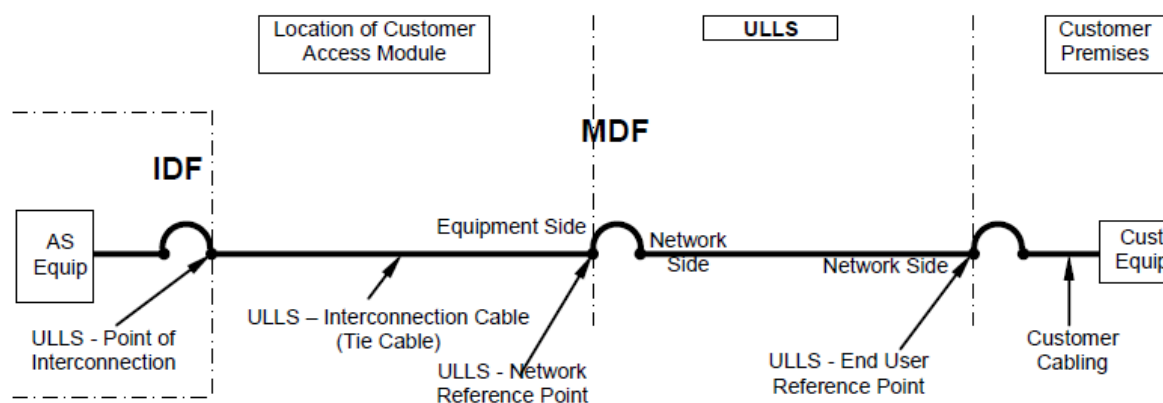
Figure 4-2
Schematic Diagram of the ULLS Reference Architecture

Source: Communications Alliance C559:2012 Part 1

4.29   Access Seekers are responsible for the material and labour costs required to connect the interconnection cable for the IIC service from the IDF frame to the equipment side of the MDF frame. Upon completion of this installation, and following handover from the Access Seeker, Telstra subsequently own this asset, and Access Seekers are required to incur a recurring charge for continued access to this interconnection cable service.

4.30   Telstra currently provides these IIC services pursuant to contractual arrangements; however Optus submits that these ancillary services increasingly represent an unavoidable cost in addition to Optus' ULL monthly access costs for the supply of ULLS. In addition to the planning and installation costs, Access Seekers are required to continually pay ongoing monthly fees for access to these IIC services. As noted by the ACCC,

> By providing the IIC service, Telstra is providing a capability that allows Access Seekers to replicate Telstra's 'Tie Cables' that connect an MDF to other communications equipment such as DSLAMs. The Access Seekers install their own cables and terminating blocks, the ownership of which subsequently passes to Telstra. The IIC charge relates to the ongoing cost "for housing, maintenance and management" of these cables.[67]

4.31   **[CiC]**

4.32   **[CiC]**

4.33   **[CiC]** [68]

4.34   **[CiC]**.[69]

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[67] ACCC, *ULLS and LSS Access Disputes between Chime Communications Pty Ltd and Telstra*, Reasons for Final Determination, November 2012, p.15

[68] ACCC, *Fixed Services Review – Discussion paper on the Declaration Inquiry*, July 2013, p.83

4.35   The ACCC has previously concluded that *"the IIC is integral to the ULLS and LSS, without which the supply of either declared services is impossible. It is the Commission's final view that the relevant markets for the supply of the IIC will be identical to the relevant markets for the supply of the ULLS and LSS."*[70]

4.36   This is not dissimilar from Telstra's description of the ULLS available on its website, which infers that the handover point occurs where Telstra delivers an active line dial tone. In this case since the CAM is owned by Telstra, and the service cannot be supplied without access to this CAM, it is therefore indifferent to an Access Seeker where in the CAM the ULLS is delivered, so long as an active tone can be received at the Access Seeker's POI (hence, the only point where handover can occur).

> *If you are a carrier, carriage service or internet service provider, Unconditioned Local Loop (ULL) enables you to develop the network capability for a range of telephony and data services. With access to an existing metallic pair, you are able to build and deploy services such as voice and xDSL to targeted end-users.*
>
> *Our Unconditioned Local Loop Service (ULLS) provides a twisted metallic pair from an end-user's premises to a Telstra exchange or remote integrated module known as a customer access module (CAM). **A CAM is the point where Telstra delivers dial and ring tones to end-users.**[71]*

4.37   Optus therefore proposes that the ACCC consider the declaration of IIC as a separate ancillary service for the supply of ULLS and LSS. In particular, the relevant service descriptions should clarify that the IIC is a necessary component for the supply of the ULLS and LSS and that any recurring charges for the IIC should only be incurred in conjunction with the supply of an active ULLS or LSS service. **[CiC]**

4.38   In light of these views, Optus considers there is sufficient scope for the declaration of the IIC as a separate ancillary service for the supply of ULLS and LSS. If there are insufficient cable pairs within an IIC, then regardless of the remaining capacity in the DSLAM, an Access Seeker would still be unable to connect a new ULLS. In addition, the relevant service descriptions should clarify that the IIC is a necessary component for the supply of the ULLS and LSS and that any recurring charges for the IIC should only be incurred in conjunction with the supply of an active ULLS or LSS service.

Non-price issues related to the provisioning of ULLS

4.39   Optus is also concerned with some of the non-price terms to acquire ULLS, such as fault rectification and service levels associated with ongoing access to these services **[CiC]**

4.40   **[CiC]**.

4.41   **[CiC]**.

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[69] ACCC, *ULLS and LSS Access Disputes between Chime Communications Pty Ltd and Telstra*, Reasons for Final Determination, November 2012

[70] ACCC, *ULLS and LSS Access Disputes between Chime Communications Pty Ltd and Telstra*, Reasons for Final Determination, November 2012, p.54

[71] Telstra Wholesale, *Unconditioned Local Loop*, http://telstrawholesale.com.au/products/facilities/unconditioned-local-loop/index.htm [accessed 19/8/13]

Service qualification issues

4.42   **[CiC]**.

4.43   **[CiC]**.

4.44   **[CiC]**.

4.45   **[CiC]**.

Provisioning issues

4.46   **[CiC]**.

4.47   **[CiC]**.

4.48   **[CiC]**.

4.49   **[CiC]**.

Figure 14 **[CiC]**

4.50   **[CiC]**.

4.51   **[CiC].**

4.52   **[CiC]**.

4.53   **[CiC]**.

Service Assurance issues

4.54   **[CiC]**.

4.55   **[CiC]**.

4.56   **[CiC]**.

Figure 15 **[CiC]**

4.57   **[CiC]**.

4.58   **[CiC].**

4.59   In summary, Optus considers that in acquiring the ULLS there should be scope for Access
        Seekers to seek further clarity on a number of non-price commitments. In particular, given
        WLR and ULLS are key wholesale inputs for the provision of downstream services for both
        residential and business customers, Access Seekers should be able to *at least* access a suite
        of enhanced service commitments equivalent to those offered for WLR. For example,

(a)   There should be closer alignment in the timing commitments (and transactional timeframes) in the provisioning process required to connect a new service and rectify faults between the ULLS and WLR services; and

(b)   Access Seekers should be able to access a wider suite of service levels for the rectification of faults, which are currently wider in scope for WLR services than ULLS. Where this is made available, Access Seekers should also have the flexibility to access this suite of enhanced services levels on reasonable terms on either a recurring or 'pay per event' basis.

4.60   Optus similarly considers that the current non-price commitments for ULLS should also be reviewed to ensure that they continue to meet the requirements of both residential and business customers.

Section 5.   Resale services

5.1   The declaration of resale services at the wholesale level – the LCS and the WLR service have been an important enabler of retail competition. It has allowed Access Seekers to compete in the downstream markets without having to install their own equipment in Telstra's exchanges to provide fixed telephony services.

5.2   Similar to the industry changes discussed in Section 4, the ACCC has highlighted a number of industry changes that are relevant to its current consideration for the declaration of resale services[72]:

(a)   First, the roll-out of NBN may have influenced a slowing of investment in equipment, with Access Seekers "*now likely to have weaker incentives to further expand and deepen the footprint where they have exchange equipment*";[73]

(b)   Second, Access Seekers have installed more equipment in Telstra's exchanges for the provision of voice and broadband services. As at March 2013, there were 594 exchanges with equipment owned by at least one ULLS/LSS Access Seeker.[74] This has led to more end-users being supplied using Access Seekers' equipment;

(c)   Third, there continues to be market entry by new retail service providers. As at June 2012, there were 212 retail service providers offering fixed voice services;[75] and

(d)   Fourth, implications arising from the recent declaration of the wholesale ADSL service for the provision of fixed broadband services.

5.3   The ACCC has also questioned "*whether similar resale services should be supplied on a declared basis when they are provided using NBN infrastructure.*"[76]

5.4   In this section, Optus will argue for the continued regulation of the WLR and LCS services for a further five year period. It also acknowledges that during the transition to NBN, it is appropriate that WLR and LCS continue to be declared on a national basis.

Continued declaration of the WLR and LCS would promote competition

5.5   Optus considers that continued regulation of the WLR and LCS service is required for the continuation of sustainable competition in the provision of voice, broadband, and bundled voice and broadband services. As discussed in Section 2, the relevant markets for the network access services include the markets for standalone fixed voice; standalone fixed broadband; and bundled fixed voice and fixed broadband services.

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[72] ACCC, *Fixed Services Review – Discussion paper on the Declaration Inquiry*, July 2013, pp.29-30

[73] ACCC, *Fixed Services Review – Discussion paper on the Declaration Inquiry*, July 2013, p.30

[74] This is compared to 540 exchanges with equipment owned by at least one ULLS/LSS Access Seeker in March 2009. ACCC, *Snapshot of Telstra's customer access network*, various years.

[75] ACMA, *Communications Report 2011-12*

[76] ACCC, *Fixed Services Review – Discussion paper on the Declaration Inquiry*, July 2013, p.30

5.6   In addition, the resale services are important to be able to offer relevant services for end-users in the corporate and government (C&G) segment. The C&G market is a separate market specially catering for business with at least 200 customers and government agencies. This market is particularly sensitive to the availability of access to Telstra telecommunications infrastructure; more so than the consumer market where needs are less complex and more localised, allowing infrastructure based competition.

5.7   The competitive drivers unique to C&G customers include:

(a)   Procurement of services on a 'whole of business' (WOB) basis with preferences for single billing, multiple services and products included on a single invoice and single point of contact for all telecommunications needs;

(b)   Requirements for ubiquitous coverage of specialised and complex features on top of basic telephony services; and

(c)   High incumbent inertia with enduring impacts due to high costs of changing providers.

5.8   For Optus and other Access Seekers to compete in this market and meet its demand for WOB offerings, there needs to be certainty of access to Telstra's underlying infrastructure and products. For example, even established operators such as Optus rely on wholesale inputs because it may not be feasible to connect all C&G customers directly via Optus infrastructure due to various technological limitations.

5.9   The requirement for certainty of access to Telstra infrastructure and products is particularly acute in the corporate market. Duplication of Telstra's network on a partial basis may be sufficient to compete profitably in the residential market, since residential consumers require connection to only a single residence. However competition by serving limited premises is not feasible in the corporate market due to its WOB and ubiquity requirements. Corporate customers may require supply to multiple premises and an entire corporate account may be lost if even one such location is inaccessible (perhaps due to the presence of a RIM or pair gain system in the exchange, or a distance limitation impeding the supply of services via the ULLS). The difficulty to compete is shown by Telstra's 75% market share in the corporate market.

5.10   Optus therefore considers that the LTIE assessment for continued declaration of the resale services should be undertaken on a national basis and that Access Seekers' competition concerns are not specific to certain ESAs, but rather relates to Telstra's overall conduct. Additionally the presence of RIMs or large pair gain system (LPGS) in many metropolitan ESAs provide a good reason for the ACCC to continue to not exclude metropolitan ESAs from the scope of the declaration.

Declaration encourages efficient use of and investment in infrastructure

5.11   Declaration of the WLR service has allowed Access Seekers to resell the basic line rental service that allows an end-user to connect to the traditional voice network to make and receive calls, as well as be assigned a telephone number. In contrast, the declaration of the LCS service allows Access Seekers to resell local calls to end-users without the need for deploying substantial alternative infrastructure and is required for the supply of an end-to-end voice grade carriage service between two points in a standard zone. Commercially, the WLR service is purchased in conjunction with the LCS service, as a bundled offer.

5.12   The ACCC has previously acknowledged that "*Although the ULLS promotes more sustainable competition this is contingent on there being no, or low barriers to ULLS entry.*"[77] This view was similarly reiterated in the context of the wholesale ADSL declaration, where the ACCC concluded that it "*does not consider there to be a substantial threat of further expansion or deepening of the competitive footprint by infrastructure-based Access Seekers due to a number of factors that create barriers to entry.*"[78]

5.13   The impact from the deployment of NBN is such that as NBN roll-out and the decommissioning of Telstra's CAN continues, this will result in the consequent gradual shrinking of the Telstra CAN footprint.

5.14   As Access Seekers grow to achieve a national footprint in preparation for NBN, it is expected there will be greater reliance on WLR with WADSL to connect SIOs outside Band 2; and when ESAs within Band 2 are starting to be migrated to NBN.

Barriers to entry

5.15   In addition to the lack of competitive backhaul, an Access Seeker's ability to utilise ULLS is fettered by a number of practical constraints on their ability to access ULLS (and hence affecting ULLS as an alternative to resale-based competition) in any given ESA. A number of these practical constraints are summarised below.

5.16   Firstly, ULLS relies on the presence of a continuous copper loop. In the case where this local loop is broken, this may suggest the presence of a pair-gain system or RIM between the exchange and the customer. This constraint acts to constrain the number of customers that can be serviced via ULLS – the affected exchange would no longer provide an appropriate substitute for fixed-line service, hence may lead to a lessening of competition within the affected ESAs.

5.17   In particular, the ACCC has noted that 11% of copper lines are currently supplied using RIM/LPGS technologies and which are widely distributed throughout the CAN, with practically all ESAs subject to some RIM technologies. The limitations created through Telstra's RIM/LPGS technologies have been acknowledged by the ACCC.

> *While in many cases Telstra can provide subscribers on these lines with ADSL services, **the use of RIM/LPGS creates significant difficulties for competing ADSL network operators**. This is because Telstra's cabinets are not designed to accommodate third-party DSLAM equipment, and hence network operators would need to install their own cabinet and obtain ULLS or LSS services via a cross-connect cable. The relatively high costs associated with installing this infrastructure and the limited number of serviceable customers results in unprofitable deployment of DSLAMs.* [79] [emphasis added]

5.18   Absent regulation, there is the prospect that ULLS-based competition could be hampered with an increase in the deployment of RIM in exchanges and lead to the potential stranding of DSLAM investment by Access Seekers.

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[77] ACCC, *Fixed Service Review Declaration Inquiry for the ULLS, LSS, PSTN OA, PSTN TA, LCS and WLR*, Final Decision, July 2009, p.41

[78] ACCC, *Declaration of the wholesale ADSL service under Part XIC of the Competition and Consumer Act 2010*, Final Decision, February 2012, p.22

[79] ACCC, *Declaration of the wholesale ADSL service under Part XIC of the Competition and Consumer Act 2010*, Final Decision, February 2012, p.24

5.19   Second, access to ULLS requires Access Seekers to deploy a DSLAM in close proximity to the Telstra exchange. This typically requires the Access Seeker to rent space in a Telstra exchange, which is further subject the terms set out in relation to the TEBA agreements for access to the facilities.

5.20   Under the terms in the TEBA agreement, Telstra provides a separate room (TEBA space) within its exchange building for Access Seekers to deploy their interconnect equipment. However, since TEBA space is allocated on a first-come basis, and is required for all interconnect purposes not simply DSLAM access, this means that TEBA access is both a limited commodity and itself a bottleneck service. This means that Access Seekers may not be able to deploy sufficient future rack capacity in those exchanges to meet future demand requirements.

5.21   Without access to TEBA, Access Seekers may only ever be able to serve a small proportion of lines from certain exchanges. In effect this means that Telstra is protected from losing a certain percentage of service to competitors in these exchanges.

5.22   Third, an extension of the capacity constraint issue is the onerous process involved in gaining access to enter into an exchange, for example, queuing. The ACCC previously concluded that *"queuing can be as much of an impediment to access to the ULLS as capping – in the sense that Access Seekers are routinely required to wait in a 'queue' for months (or even years) in order to be able to enter into an exchange."[80]*

5.23   As such, the ability of an Access Seeker to engage in ULLS-based competition will be constrained in part by the timely process required to meet the TEBA ordering and provisioning processes.

These wholesale services should continue to be declared on a national basis

5.24   The ACCC has, on several occasions, considered geographic exemptions in relation to the supply of the resale services in a number of areas where competition was considered sufficiently competitive to constrain the monopoly power of the regulated access provider. The ACCC concluded in its 2011 FAD decision that:

> *The ACCC considered that setting WLR prices on a nationally averaged basis is consistent with the Government's current arrangements for setting retail prices.[81]*

5.25   This conclusion still holds, and will continue to hold during the transition to NBN. A key feature of the NBN is uniform national wholesale pricing. The retail broadband and voice market also prices on a national basis. In addition to basic voice services, the WLR is a mandatory input into resale WADSL services. Optus submits that the LTIE is best promoted by ensuring that the WLR reflects the NBN and retail price structure.

Proposed amendments to service description

The WLR service description

5.26   The current WLR service description is defined as:

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[80] ACCC, *Telstra's local carriage service and wholesale line rental exemption applications*, Final Decision and Class Exemption, August 2008, p.149

[81] ACCC, *Inquiry to make final access determinations for the declared fixed-line services*, Final Decision, July 2011, p.103

The 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.

5.27   The WLR is a service for access to only the 'lower frequency spectrum' of the unconditioned cable for the supply of fixed telephony services – i.e. the last mile access between the end-user premise and the telephone exchange.[82]

Figure 16 Diagram of the customer access network (CAN) infrastructure
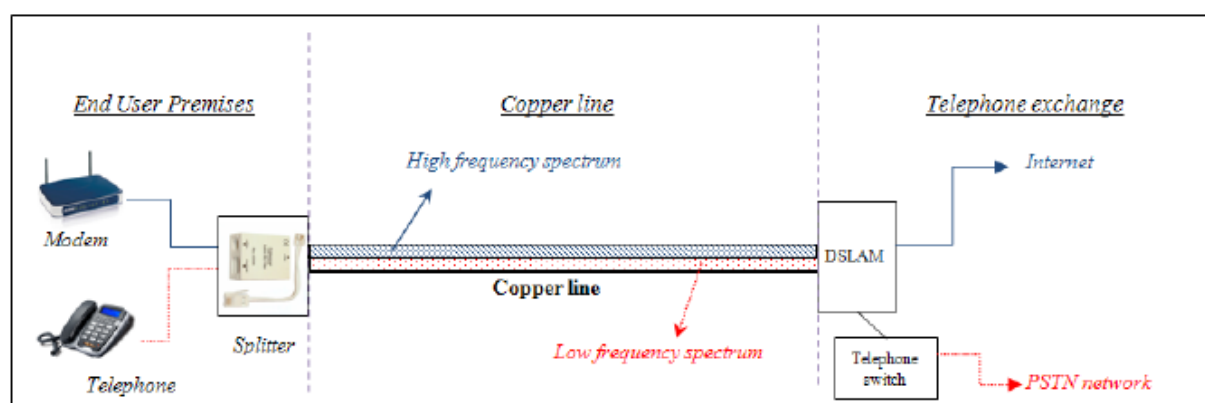
Source: ACCC

5.28   At the time WLR was first declared in 2006, a number of Access Seekers argued that the ACCC should declare an additional 'stripped down' basic access service, which would not be provisioned for any voice services or features. This was largely in response to the inflexibility in Telstra's commercial construct, which required Access Seekers to purchase basic access as part of the bundle with local calls. The ACCC, however, concluded at the time that:

> *The WLR service is declared with the intention of improving competition in the provision of calling services. However, the calls for a 'stripped down' access service appear to relate more to the current commercial requirements imposed by Telstra in its wholesale and retail ADSL products to maintain a basic access voice service. The ACCC does not consider that it would be appropriate at this point in time to declare a 'stripped down' variation of the WLR service.[83]*

5.29   However, such a conclusion is no longer valid as market situation has changed since 2006. Optus notes that the WLR is primarily used as a mandatory input together with WADSL to

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[82] In contrast, the LSS is a service for access to only the 'high frequency spectrum' of the unconditioned cable for the supply of fixed broadband services; however the ability for Access Seekers to supply fixed broadband services via LSS will be constrained as Access Seekers also need to deploy their own equipment in the telephone exchange to access the copper line between the end-user premise and the telephone exchange.

[83] ACCC, *Local services review*, Final Decision, July 2006, p.53

provide resale ADSL services to Access Seekers. A stripped down version of WLR is now merited due to the increased use of WADSL (and the expectation of increasing use during the transition to NBN). Optus recommends that the ACCC review the service description of the WLR with the aim to ensure it contains the minimum features required to provide basic connectivity to supply WADSL services. For example, it is not clear whether it is necessary for the WLR to include an ability to make and receive any 3.1kHz bandwidth calls and a telephone number in order to provide the basic wetting feature that is needed to maintain an active WADSL service.

5.30   In addition, Optus submits that the CBD exception be removed so as to facilitate competition in the C&G segment of the market – a segment where Telstra has 75% market share. As outlined above, the C&G segment has unique characteristics not present for residential or SMB end-users:

(a)   C&G customers require consistent national connectivity, requiring Access Seekers to utilise Telstra's resale services outside their network footprints;

(b)   C&G customers have large premises within the CBD areas that require Access Seekers to utilise Telstra resale services; and

(c)   Capacity constraints at CBD exchanges makes it difficult for Access Seekers to provide additional services using ULLS.

5.31   Finally, the CBD exception should be removed to make the WLR consistent with the WADSL service. The ACCC has mandated that WLR is acquired with WADSL, and as such the WADSL service cannot be provided within WLR. Optus submits that Telstra has the incentive and ability to increase WLR charges in undeclared exchanges to frustrate the ability of Access Seekers to compete using WADSL services. Should the ACCC adopt the stripped down version of the WLR, at a minimum, it should apply nationally consistent with the WADSL service.

The LCS service description

5.32   The current LCS service description is defined as:

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.

5.33   The LCS is generally purchased as part of a bundle with the WLR service, where LCS is charged on a per usage basis (i.e. per local call) while WLR is required for access and is charged on a per monthly basis. For all other calls outside the local call area, end-users would therefore rely on the PSTN OA and PSTN TA services for the any-to-any connectivity.

5.34   These defined standard zones are generally well defined and understood in Telstra's CRAs, therefore Optus does not propose any changes to the LCS service description.

Section 6.   Interconnection services

6.1   The declaration of interconnection services – the public switched telephone network originating access (PSTN OA) and the public switched telephone network terminating access (PSTN TA) services allow for the interconnection of voice services between different telecommunications network operators.

6.2   Similar to the industry changes discussed in Section 4, the ACCC has highlighted a number of industry changes that are relevant to its current consideration for the declaration of interconnection services:[84]

(a)   First, the number of fixed-line telephony SIOs has fallen while the number of mobile services have increased;

(b)   Second, there has been a decline in the number of local calls, national call minutes and FTM minutes on Telstra's network;

(c)   Third, the use of VoIP services has increased. As at June 2012, there were 212 retail service providers offering VoIP services;[85] and

(d)   Fourth, the volume of IP-based traffic on Australian networks has increased.

6.3   The ACCC has also questioned whether *"new or different interconnection services should potentially be declared…* [and] *whether the service descriptions for declared interconnection arrangements should be technology-neutral so they keep pace with developments in technology and any changes in the interconnection protocols used within the industry."*[86]

6.4   In this section, Optus will argue that the continued regulation of the PSTN OA and PSTN TA services on a national basis promotes the LTIE. Optus will also argue that the ACCC should take a watching-brief over industry developments for SIP interconnection protocols and intervene where there is evidence market failure such as an operator seeking to alter the accepted standards to limit competition between SIP and PSTN traffic.

Continued declaration of the PSTN OTA would promote competition

6.5   The PSTN OTA services are wholesale inputs used by Access Seekers for the provision of voice services to end-users at the retail level. In particular, the PSTN OA involves the carriage of telephony calls from the calling party to a POI within an Access Seeker's network, while the PSTN TA involves the carriage of telephony calls from the POI within the Access Seeker's network to the called party. Telstra continues to have 100% market share over the origination and termination of voice traffic over the PSTN.

6.6   Without regulated access to the PSTN OTA services it is likely that competition in the provision of voice services would be lessened relative to the future with declaration. The PSTN OTA is a vital input used in both the fixed-line market and mobile market. Telstra would have the incentive and ability to use OTA to damage competition in these markets.

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[84] ACCC, *Fixed Services Review – Discussion paper on the Declaration Inquiry*, July 2013, pp.33-34

[85] ACMA, *Communications Report 2011-12*

[86] ACCC, *Fixed Services Review – Discussion paper on the Declaration Inquiry*, July 2013, p.35

6.7   Continued declaration would promote competition in long distance communications services. The PSTN OTA declaration allows this market segment to be unbundled from network access, such that customers can potentially purchase line rental services from one provider and long distance calling from a separate provider. This enables competitive providers to offer long distance services to any given end-user, regardless of which carrier is providing underlying network access to that end-user.

6.8   Continued declaration would promote competition in the *national* fixed-line market. As noted throughout this submission, ULLS-based access is limited largely to Band 2 and is not expected to be expanded as a result of NBN deployment. During the transition to NBN it is also important to build national scale so as to minimise the costs of NBN access. Access to PSTN resale services, including PSTN OTA is vital to ensure that Telstra cannot foreclose competition in telecommunications markets. This is particularly important in the C&G segment, where Telstra has a dominant 75% market share.

6.9   Optus therefore considers that the LTIE assessment for continued declaration of the PSTN OTA services should be undertaken on a national basis.

Declaration encourages efficient use of and investment in infrastructure

6.10   Similar to the concerns in Section 5, continued declaration of the PSTN OTA service will enable Access Seekers to effectively compete against the dominant supplier of fixed-line services. Continued declaration will enable Access Seekers to compete in retail and wholesale telecommunications markets – including both fixed and mobile. The transition to NBN has emphasised the importance of a national footprint outside the Band 2 ULLS footprints of Access Seekers. As such, Optus expects resale services to increase in use, and so will reliance on PSTN OTA. During the transition to NBN it will be more efficient to promote the use of existing CAN rather than encouraging alternative infrastructure which would become stranded upon NBN roll-out.

6.11   Absent declaration Telstra could refuse to negotiate or impose uneconomic terms for interconnection services. It is likely that Telstra will attempt to use OTA prices to limit competition in the fixed and mobile markets. Optus highlights the recent behaviour of Telstra in relation to SMS termination rates as a likely example of its behaviour absent declaration of PSTN OTA.

6.12   There have also been developments in the efficiency of fixed voice delivery platforms. The current PSTN OTA effectively requires all voice traffic handed over to Telstra's CAN to be based on the legacy circuit-switched technologies. However, there is now increasing interest within the market for the delivery of all voice traffic via SIP based technologies. Optus sees merit in mandating technology neutrality rules for handling traffic for interconnection purposes.

Any-to-any connectivity

6.13   Declaration of the PSTN OTA would ensure that any-to-any connectivity will be maintained during the period of the declaration. There are currently no competing fixed-line networks that are comparable to Telstra's CAN on a national scale. Absent declaration of the PSTN OTA service, Telstra would have the incentive to withdraw access to the service or offer it on unreasonable terms to Access Seekers. This is due to the asymmetry between the size and reach of networks on a national scale. In addition, Telstra could also leverage its power in the PSTN OTA market across to the mobile market by limiting connectivity to Telstra mobile subscribers.

6.14   Optus finds that continued declaration of the PSTN OTA would benefit both fixed and mobile telecommunications markets.

6.15   While ULLS-based access services can be used to provide OA services, such services are predominantly limited to Band 2 areas. As explained elsewhere, it is expected that DSLAM footprints will decrease during the transition to NBN. In order to provide a national service, Access Seekers will need to rely on OA services. This is particularly true in the C&G market segment, where carrier pre-selection using OA is a key component of Access Seekers' proposals,

6.16   Optus maintains that the continued declaration of PSTN OTA will ensure that any-to-any connectivity is achieved.

The PSTN OTA services should continue to be declared on a national basis

6.17   The 2011 FAD set the PSTN OTA on a national basis. The ACCC concluded that:

> *Determining a national average price only would avoid the need to determine a pricing matrix using potentially out-dated (and inaccurate) geographic cost information obtained from the PIE II model. In addition, it would simplify the PSTN OTA pricing structure. It would also reduce the regulatory burden on Access Seekers and Telstra to submit PSTN OTA traffic and call duration information.[87]*

6.18   The ACCC therefore concluded in its 2011 FAD decision that:

> *The ACCC continues to lack confidence that the PIE II cost relativities provide an accurate measure of current geographic cost differences in providing PSTN OTA services.[88]*

6.19   Optus supports the continued practice of setting a single national OTA rate. First, the OTA is an input into the national retail telecommunications markets. No service provider in the market charges for long distance calls based on distance. Imposing a distance based OTA would discriminate against Access Seekers and favour Telstra. In addition, it also ensures consistency between termination rates for calls terminating on fixed and mobile networks.

6.20   Second, setting national call charges is consistent with the market construct that will apply under the NBN. A single national OTA charge will promote a smooth transition to NBN and remove an impediment for Access Seekers to develop a national footprint so as to compete on a lower cost basis on NBN.

SIP interconnection expected to be in use during period of the Declaration

6.21   The ACCC asks whether the increasing use of IP-based voice products would have any implications for the PSTN OTA services during the term of the declaration. The ACCC also asks whether the new declaration should contain technology neutral wording for the service description.

6.22   In this section Optus will explain its understanding of the voice IP interconnection protocols (SIP) and the current state of industry discussions. **[CiC]**

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[87] ACCC, *Public inquiry to make final access determinations for the declared fixed-line services*, Discussion Paper, April 2011, p.150

[88] ACCC, *Inquiry to make final access determinations for the declared fixed-line services*, Final Decision, July 2011, p.107

6.23   Consequently, Optus sees merit in the ACCC starting a separate Declaration Inquiry closer to the time of industry-wide implementation of SIP interconnection.

What is SIP interconnection and why is it different to data IP interconnection

6.24   The ACCC appears to assume that all forms of IP interconnection are technically the same. This is not correct. In order to allow direct voice interconnection over IP (including signalling, quality of service, interception abilities etc.), voice-specific IP interconnection is needed.

6.25   There are in effect two different forms of IP interconnections: a best-efforts IP interconnection which is currently used for data and internet traffic; and a smart IP interconnection that enables signalling and quality of service. The smart IP interconnection is SIP interconnection. Voice and voice value-add products will use the SIP interconnection interface.

Overview of SIP

6.26   Session Initiation Protocol (SIP) is an open signalling protocol standard developed by the Internet Engineering Task Force (IETF) for establishing, managing, and terminating real-time communications over IP-based networks. SIP is a text-based client-server protocol modelled after the Hypertext Transfer Protocol (http). SIP can invite parties to both unicast and multicast sessions and is independent of the type of session being established. Communications via voice, video, or text (instant messaging), may take place using any combination of SIP-enabled devices, such as a softphone on a laptop computer, a wireless handheld device or PDA, a mobile phone, an instant messaging client on a desktop PC, or an IP phone with videoconferencing capabilities.

6.27   SIP is an application layer peer-to-peer communication protocol for establishing, manipulating, and ending communication sessions. SIP allows more than just setting up telephone calls; it can accommodate video; instant messaging; and other emerging communications media and features. Using SIP, simple-to-develop and quick-to-deploy custom applications can be easily integrated into end-user communications sessions.

6.28   SIP is used to identify, locate, and join parties who want to communicate using any peer-to-peer media type. However, SIP does not transport the media itself: That is handled by codecs within the communications programs or devices.

6.29   SIP builds on a number of existing communications protocols and has rapidly become the standard for service integration (i.e., how new services and applications are created and combined) within most large fixed and wireless carrier networks.

6.30   SIP aims to reduce signalling complexity while delivering internet-like services to telecommunications users. SIP has been adopted by all major standards bodies as the core signalling protocol for Next Generation Networks predominately based on IMS protocol specifications, including, but not limited to 3GPP & 3GPP2, ITU-T and ETSI.

6.31   Thus, SIP is positioned as a single unifying protocol that will transform not only communications within an enterprise, but communications between carriers and its ecosystem of customers, clients, partners, and suppliers.

The need for SIP interconnection

6.32   While SIP technology has become the basis for transporting voice services over carriers' internal IP networks, carriers currently cannot directly send SIP traffic to other carriers. There are two different types of SIP connectivity:

(a)   **SIP Trunking**: refers to the means used to transport inbound and outbound calls between the IP end-user and other entities (including branch offices and other remotely located parties such as business partners, customers, and suppliers).

(b)   **SIP Interconnect**: refers to the SIP transport inbound and outbound calls or services between Carriers or CSP for the purpose of providing end to end communications.

6.33   Optus already provides SIP-based trunk services that can offer true data and voice convergence and extend an enterprise's SIP environment into the public network. The next step is the adoption of SIP Interconnect between carriers to reduce costs and transformation communications between carriers, further enhancing customer experience with end to end voice quality call together with multi-media services.

6.34   To ensure seamless communication between users, Optus has proposed industry stakeholders work together to produce an industry-wide SIP interconnect specification, which defines set protocols and procedures for Carriers or Carriage Service Providers (CSP) to adhere for purposes of IP network-to-network voice and multi-media Interconnect. Currently, these discussions are occurring with the Communications Alliance.

What should SIP interconnection specifications include?

6.35   Optus is of the view that the SIP interconnection specifications should contain a service-level profile, i.e., SIP/SDP interface description, between two network operators (NNI signalling profile), where the two different network operators may support different SIP/SDP profiles (i.e., they differ in terms of the SIP extensions, SIP information elements and SDP lines which are supported). Transport-level profile, e.g., RTP, is described as necessary as the media are described in the service-level signalling.

6.36   At the minimum, the specification should support the following basic capabilities:

(a)   Calls addressing E.164 numbers;

(b)   3.1 kHz audio services (i.e. narrow-band voice, analogue fax and modem data);

(c)   Wideband voice (7 kHz) based on G.722, or WB_AMR codec;

(d)   Codec Negotiation Procedure and Transcoding;

(e)   en bloc address signalling;

(f)   in-band transport of DTMF tones and information (telephone event);

(g)   T.38 fax, RFC 2833 transport of DTMF tone;

(h)   TTY service (using modem tone), Medical Alert, and Back to base Alarm;

(i)   Interworking between 3GPP SIP and RFC 3261 SIP procedure; and

(j)   IPV4 and IPV6.

6.37   Including the following supplementary services:

(a)   Calling Line Identification Presentation (CLIP);

(b)   Calling Line Identification Restriction (CLIR);

(c)   Call Forwarding;

(d)   Call Hold;

(e)   Call Waiting; and

(f)   Location based Information.

6.38   And allows for other requirements related to Interconnect Services:

(a)   Emergency calls, Interception calls; and

(b)   Performances and Measurements.

Implications for the PSTN OTA service

6.39   The ACCC asks whether the industry has developed to an extent that would warrant the ACCC investigating possible declaration of any new or different interconnection services. As noted above, Optus expects that SIP interconnection will be introduced by the industry during the period of the next fixed service declaration **[CiC]**. The ACCC should therefore consider how it will deal with SIP interconnection together with PSTN TDM interconnection, and the potential for providers to refuse to adopt SIP in order to protect legacy service revenue.

6.40   Telstra has significant market power for the termination of fixed voice traffic. Its dominance of voice traffic means that for any SIP interconnection regime to work it must connect into Telstra's network. Telstra, therefore, not only has dominance for the termination of voice traffic it also has market power in deciding what type of standard is adopted by the Australian industry. **[CiC]**

6.41   Optus is concerned that Telstra may have an incentive to delay the implementation of, or limit the features enabled by, SIP interconnection in order to protect its PSTN traffic and revenue base. Optus recommends that the ACCC take a watching-brief over the industry developments for SIP interconnection protocols and intervene where there is evidence market failure such as an operator seeking to alter the accepted standards to limit competition between SIP and PSTN traffic.

6.42   Optus sees merit in the ACCC starting a separate Declaration Inquiry closer to the time of the implementation of SIP interconnection. SIP interconnection enables next generation core networks to interconnect and deliver any-to-any connectivity for next generation voice services. However, at the current time it may premature to regulate a service which is still subject to industry negotiation.

Section 7. Facilities access services

7.1 The ACCC has not previously declared any Facilities Access Service (i.e. services that facilitate the supply of a listed carriage service). The ACCC has, however, previously made a number of decisions in relation to a number of facilities access services.

7.2 In this section, Optus considers that a number of Facilities Access Services are now increasingly becoming both an entrenched and enduring bottleneck services. Notably, facilities access services, such as the Telstra Equipment Building Access (TEBA) service will continue to exist even beyond the completion of the NBN roll-out. The effect of NBN will to move the bottleneck from the access network back to the exchange.

Facilities Access Services is an enduring bottleneck

7.3 Facilities Access Services have the potential to be enduring bottlenecks for the supply of services to downstream customers. In particular, it can inhibit the ability for Access Seekers to install their own infrastructure in order to deliver downstream services using a network access service (e.g. ULLS) and restricts the type of interconnection that is allowed within the exchange. Facilities access terms and conditions are therefore very relevant to the ULLS, LSS and to a lesser extent, PSTN OTA services. Facilities access also impacts on related mobile market and future interconnection arrangements with NBN Co.

7.4 Telstra currently provides these services pursuant to contractual arrangements. Examples of types of facilities access services which Access Seekers currently purchase in conjunction (i.e. an ancillary service) with a declared service include:

(a) Telstra Equipment Building Access service (TEBA service);

(b) External Interconnect Cable service (EIC service); and

(c) Duct access service.

7.5 The bottleneck nature of these facilities access services have also been encapsulated within the Telstra-NBN Co Definitive Agreements signed in 2011. In particular, with respect to the Infrastructure Services Agreement (ISA) component, Telstra will provide NBN Co with large scale access to certain infrastructure (dark fibre, exchange space, lead-in conduits and ducts) at prices based on committed large volume levels of usage and availability. The term of the ISA will be between 35 and 40 years from commencement, plus two 10 year options to extend to be exercised by NBN Co. In return, Telstra will receive infrastructure rental payments of approximately $5 billion (post-tax NPV in 2010) to be paid over an average 30 year period. Additionally, Telstra will retain ownership of all infrastructure assets, with the exception of lead-in conduits which will be transferred to NBN Co upon use. In summary,

> *Under the agreement, Telstra will provide much of the infrastructure required to build the network including:*
>
> - *Lead-in conduits through which the NBN fibre will be connected to each premise;*
>
> - *Underground ducts and pits through which the NBN fibre will run;*
>
> - *Dark fibre; and*

- *Rack spaces in Telstra exchanges.*[89]

7.6   The NBN will move the competitive bottleneck from the CAN to facilities access in Telstra's exchanges. Under the NBN agreement, all exchanges will remain the property of Telstra. Therefore outside the NBN-leased areas within the exchange, access will continue to be dependent on Access Seekers being able to negotiate access with Telstra on a commercial basis. This entrenches Telstra's position as the incumbent in facilities access, and further provides Telstra with the incentive and ability to limit competition through its ownership of the bottleneck infrastructure. For example, Telstra has the ability and incentive to charge Access Seekers more than what it 'charges' itself in order to gain an advantage in downstream markets. Optus considers that this incentive will be particularly strong during the next regulatory period particularly given that under NBN, Telstra faces the prospect of *real* retail competition in the fixed-line services market.

7.7   While Optus understands that some of these issues are considered under Telstra's Structural Separation Undertaking (SSU) arrangements, it is important to recognise that this excludes a number of Facilities Access Services that are inherently bottleneck facilities.

> ***Telstra is not required to structurally separate its passive infrastructure, including underground facilities such as ducts, pits and manholes, under the SSU****. The SSU contains arrangements for access to Telstra facilities, including external interconnect ducts and pits associated with those ducts (referred to as 'External Interconnect Facilities' in the SSU). The arrangements include provisions to manage ordering processes, queues and common construction works at facilities. The provisions also allow Telstra to reserve space in External Interconnection Facilities for bonafide, documented future anticipated requirements and to reject an order from a wholesale customer where such capacity has been reserved.* [90] [emphasis added]

7.8   Declaration of the Facilities Access Service would increase Access Seeker certainty in relation of ensuring continued access to these services over the longer term. As noted by the ACCC:

> *Upon declaration of an eligible service, including particular facilities access services, the ACCC would have recourse to the full complement of regulatory powers under Part XIC. This includes the power to set up-front terms and conditions of access through an access determination and/or, if necessary, a binding rule of conduct (BROC). In the event that the ACCC did decide to declare a facilities access service, such as duct access, it would be required to make an access determination. This access determination would have to set terms and conditions relating to the price of duct access or a method of ascertaining price. Further, the ACCC can already regulate some facilities through section 152AR(5) of the CCA and through related final access determinations.*[91]

7.9   Optus therefore considers that during the transition to NBN, and in particular during the NBN roll-out period, there is the potential for Telstra to impose additional barriers to entry for access to facilities access services. This would not be in the long term interest for end-users and would fail to promote the development of efficient competition in the downstream markets for fixed-line services under the future NBN paradigm.

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[89] NBN Co, "NBN Co and Telstra sign binding Definitive Agreements," Media Release, 23 June 2011

[90] ACCC, *Facilities Access* Code, Discussion paper, July 2012, p.6

[91] ACCC, *Facilities Access* Code, Discussion paper, July 2012, p.6

7.10   Optus also considers that the continual growth of mobile data usage, and the increasing need for fibre backhaul from mobile sites, will result in increasing demand for interconnection at existing Optus sites in Telstra exchanges for mobile products. Currently, access to TEBA is only permitted to be used to connect to regulated Telstra products. Telstra will have an incentive and ability to continue to discriminate against other mobile providers to maintain its dominance in the retail mobile market.

Telstra Equipment Building Access service

7.11   The Telstra Equipment Building Access (TEBA) service is required to allow Access Seekers to acquire floor space and access to facilities such as security, electricity, cable trays and interconnection cables in Telstra exchange buildings.[92] This is the minimum service Access Seekers must acquire in order to provide any downstream services to end-users, particularly if it requires any form of interconnection between the Access Seeker's own equipment and any part of Telstra's network. Access to TEBA is therefore an enduring bottleneck service for several key reasons:

(a)   Access to TEBA is required for all interconnection services – This is required for both co-location of Access Seeker equipment within a designated location and for the interconnection of Access Seeker equipment with Telstra;

(b)   Access to the TEBA service is limited – The availability of TEBA is physically constrained by the size and floor space and power capacity of each individual Telstra exchange; and access is limited to established TEBA sites as published on Telstra's website; and

(c)   Commitments under the ISA – During the transition to NBN, and as per the Telstra-NBN Co Definitive Agreements, Telstra will provide NBN Co with long-term access to infrastructure such as Exchange Rack Space and Dark Fibre in order to facilitate the roll-out and operation of the NBN Fibre Network. Furthermore *"Approximately 60% of the Exchange Rack Spaces and all of the Dark Fibre Links which Telstra will provide to NBN Co under the Infrastructure Services Agreement are required by NBN Co for its transit network."* [93] The remaining 40% of Exchange Rack Spaces are required by NBN Co for its access network.

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[92] Telstra Wholesale, *Telstra Equipment Building Access*, http://telstrawholesale.com.au/products/facilities/teba/index.htm [accessed 6/8/13]

[93] Telstra, *Telstra's participation in the roll-out of the National Broadband Network*, Explanatory Memorandum for the Resolution under Item 2 at the Annual General Meeting on 18 October 2011, p.27

Figure 17 Telstra Equipment Building Access – Facilities Access Service
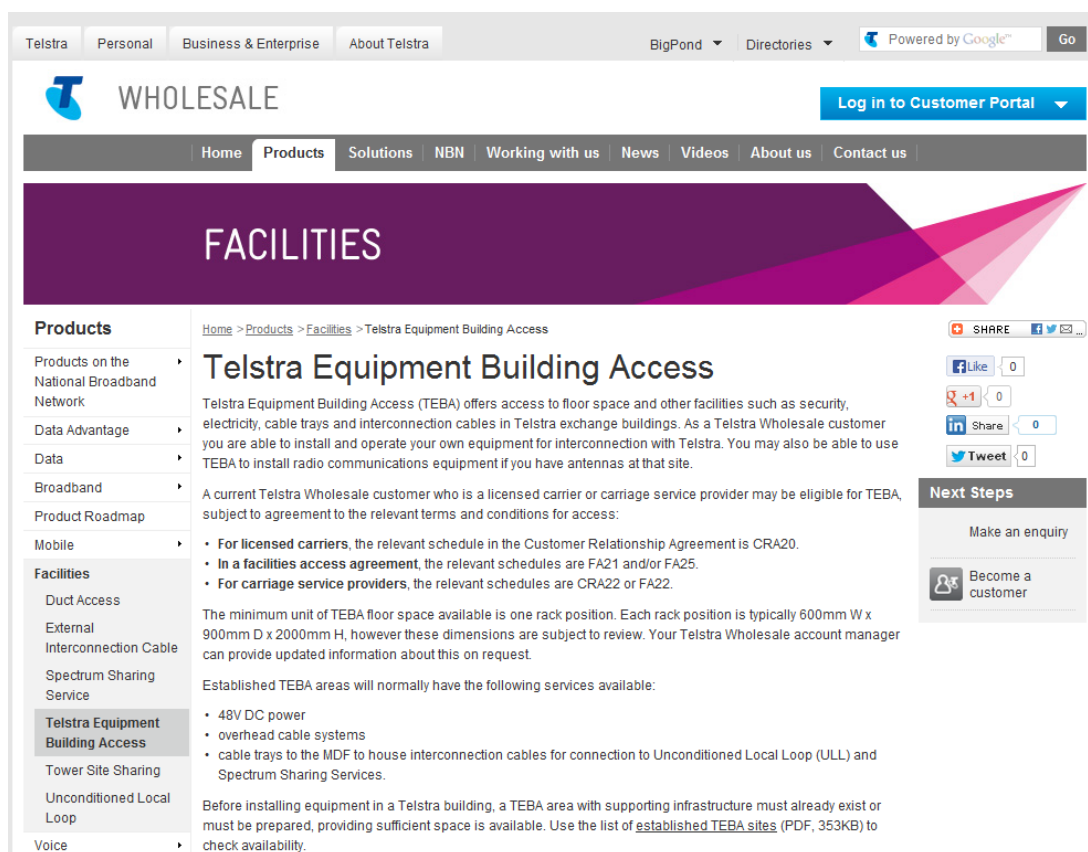
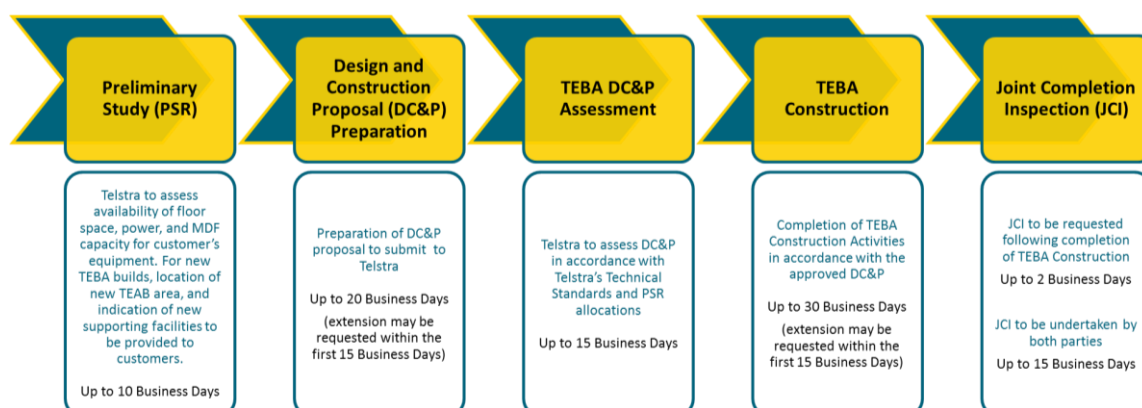*Source*: Telstra Wholesale (screenshot from TW website, viewed 6 August 2013)

7.12   Accordingly, the relevant types of facilities access services include distribution frames, space at or adjacent to the exchange building (internal or external) in which Access Seekers require access to install any equipment for interconnection services, and ancillary facilities such as DC power, security and air-conditioning.

TEBA access bottlenecks

7.13   Access to TEBA is subject to the TEBA Ordering and Provisioning process. This is a widely documented process[94] and has been described in many previous submissions to the ACCC. Under the terms of its TEBA agreement Telstra provides a separate room within its exchange building for Access Seekers to deploy their interconnect equipment. TEBA space is effectively partitioned into lots of a set size and this is allocated to Access Seekers on a first come first served basis. The space is used for all interconnect purposes, not simply DSLAM access.

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[94] See Telstra Wholesale, *TEBA Customer Information Pack*, April 2012, available from TW website.

Figure 18 TEBA Ordering and Provisioning process

Preliminary Study (PSR)	Design and Construction Proposal (DC&P) Preparation	TEBA DC&P Assessment	TEBA Construction	Joint Completion Inspection (JCI)
Telstra to assess availability of floor space, power, and MDF capacity for customer's equipment. For new TEBA builds, location of new TEAB area, and indication of new supporting facilities to be provided to customers. Up to 10 Business Days	Preparation of DC&P proposal to submit to Telstra Up to 20 Business Days (extension may be requested within the first 15 Business Days)	Telstra to assess DC&P in accordance with Telstra's Technical Standards and PSR allocations Up to 15 Business Days	Completion of TEBA Construction Activities in accordance with the approved DC&P Up to 30 Business Days (extension may be requested within the first 15 Business Days)	JCI to be requested following completion of TEBA Construction Up to 2 Business Days JCI to be undertaken by both parties Up to 15 Business Days

Source: Telstra Wholesale

7.14   As shown above, the TEBA Ordering and Provisioning process is a very timely exercise and Access Seeker costs are incurred with each of the PSR, DC&P and JCI orders submitted to Telstra. For example, in terms of installing DSLAM equipment into an exchange, Optus considers that only when the JCI is complete would an Access Seeker consider the barriers to ULLS-based competition in the relevant exchange become overcome. Telstra has also noted that *"Annual charges commence from the date a TEBA DC&P order is approved or conditionally approved."*[95]

7.15   TEBA access therefore has the potential to create enduring bottlenecks for the supply of services to downstream customers. For example,

(a)   Access Seekers, in the past, have raised concerns in relation to the potential for them to be denied access to an exchange when there is available capacity. For example, a $18.5 million fine was imposed on Telstra by the Federal Court for multiple breaches of its SAOs to permit interconnection between its facilities and those of telecommunication companies seeking access to its networks;[96]

(b)   TEBA space is a limited commodity, which means that Access Seekers may not be able to deploy sufficient future rack capacity in those exchanges to meet future requirements. Where this is the case, the exchange will become listed as 'capped' or 'potentially capped' and no further access equipment can be deployed in those exchanges;

(c)   Without access to TEBA, Access Seekers may only ever be able to serve a small proportion of lines from certain exchanges. In effect this means that Telstra is protected from losing a certain percentage of service to competitors in these exchanges.

7.16   During the transition to NBN, continued access to TEBA will be required (and is unavoidable) for the interconnection of Access Seeker equipment with Telstra's network for both existing and new service connections to provide downstream services to end-users. The NBN roll-out adds additional importance and reliance for continued access to TEBA. As at November 2012,

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[95] Telstra Wholesale, *TEBA Customer Information Pack*, April 2012, p.9

[96] Australian Competition and Consumer Commission v Telstra Corporation Limited [2010] FCA 790 (28 July 2010)

111 out of the 121 NBN Listed POIs will be co-located in existing Telstra exchanges.[97] Furthermore, *"the facilities access provisioning in the SSU only apply in respect of access for the purpose of interconnection with Telstra's active declared services. They do not apply to any supply of services of facilities by Telstra to NBN Co which are covered by the Definitive Agreements."*[98]

7.17   The ACCC has previously recognised this consequential reliance on access to Telstra's exchange buildings, in that:

> *Accordingly, Access Seekers to the NBN will require:*
>
> - ***Access to space within Telstra exchanges*** *in order to interconnect with NBN. Access Seekers will be able to obtain access to this space from either NBN Co or Telstra.*
>
> - *Access to ducts or external interconnection cables in order to interconnect transmission facilities at the NBN POIs, where these POIs are located in Telstra exchange buildings.* ***Access Seekers will be required to seek either regulated or commercial access to this facility directly from Telstra.***[99] [emphasis added]

7.18   In summary, there are no substitutes to the TEBA service and this has the potential to warrant the future declaration of TEBA. In particular, where a NBN POI will be co-located within an established TEBA site, Access Seekers should also be given the flexibility to directly interconnect with NBN Co from their existing TEBA space. Absent declaration, there is no certainty that this ability to interconnect directly to NBN Co within an existing TEBA site will be available.

7.19   It follows that in declaring the TEBA service, the SAOs should be extended to allow both the interconnection of Access Seeker equipment with both Telstra and/or NBN Co's network within an existing TEBA site. This would allow Access Seekers to continually utilise its existing equipment (i.e. for backhaul purposes) and allows for the continued efficient use of, and investment, in infrastructure where it already exists. As a result this would be a key enabler for the promotion of competition in downstream markets and is in the long-term interest of end-users.

Other types of Facilities Access Services as barriers to entry

7.20   In addition to TEBA, Telstra similarly offers a number of other Facilities Access Services that can also pose potential barriers to entry for the deployment of Access Seeker equipment. These are:

(a)   The **Duct Access Service** is required to allow Access Seekers to acquire access Telstra's network of ducts, tunnels, manholes and pits for the purposes of installing and operating their own cables and equipment.[100]

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[97] ACCC, *Listed Points of Interconnection – NBN Corporation*, 2 November 2012

[98] ACCC, *Facilities Access Code*, Discussion Paper, July 2012, p.7

[99] ACCC, *Assessment of Telstra's Structural Separation Undertaking and draft Migration Plan*, Final Decision, February 2012, p.21

[100] Telstra Wholesale, *Duct Access*, http://telstrawholesale.com.au/products/facilities/duct-access/index.htm [accessed 6/8/13]

(b)   The **External Interconnect Cable** (EIC) service is required to allow Access Seekers to connect between a remote DSLAM site to Telstra's MDF, usually located within Telstra's exchange building. Where an Access Seeker may choose to install their equipment in external housing, EIC access is therefore a necessary requirement in order to access Telstra's ULL or LSS service.[101] Similar to the Internal Interconnect Cable (IIC) service, installation of the EIC access is conducted (with costs incurred) by the Access Seeker then upon completion ownership of the asset is given to Telstra.

ACCC should investigate the Facilities Access Service

7.21   Optus acknowledges that during the transition to, and after full deployment of NBN, Telstra will retain exclusive ownership over the facilities at which telecommunications equipment will need to be located to facilitate interconnection.

7.22   This has the potential to inhibit the ability for Access Seekers to install their own infrastructure in order to deliver downstream services using a network access service (e.g. ULLS) and restricts the type of interconnection that is allowed within the exchange. Facilities access terms and conditions are therefore very relevant to the ULLS, LSS and to a lesser extent, PSTN OTA services. Facilities access also impacts on related mobile market and future interconnection arrangements with NBN Co.

7.23   Optus, therefore, sees merit in the ACCC conducting further inquiries to examine this issue.

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[101] Telstra Wholesale, *External Interconnection Cable*, http://www.telstrawholesale.com.au/products/facilities/external-interconnect/index.htm [accessed 6/8/2013]