



TELSTRA CORPORATION LIMITED

**Submission to the Australian Competition
and Consumer Commission**

**Telstra Response to Questions from
ACCC Discussion Paper of August 2007**

PUBLIC VERSION

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Overview

Telstra applied to the Commission in July seeking exemption from the applicable standard access obligations (“SAOs”) in relation to its supply of the Local Carriage Service (“LCS”) and Wholesale Line Rental (“WLR”) services within 371 exchange services areas (“ESAs” and collectively the “Exemption Area”). This submission responds to issues raised by the Commission’s Discussion Paper (“Discussion Paper”) of August 2007 in relation to Telstra’s applications.

Within the Exemption Area, the LCS and WLR no longer constitute the kind of “enduring bottleneck” to which the SAOs intended to apply. Continuing to regulate access to the LCS and WLR in the Exemption Area:

- ignores the existence of other declared services such as the Unbundled Local Loop Service (ULLS) that enable the provision of equivalent services to those offered via the LCS and WLR (in effect regulating the same bottleneck twice);
- ignores the presence of significant alternative infrastructure (primarily Digital Subscriber Line Access Multiplexers (DSLAMs), but also HFC and wireless networks), which provide a competitive platform for the delivery of substitute services, and which indicate that the relevant markets are workably competitive; and
- ignores the competitive environment made possible by the deployment of this infrastructure, and in particular the ability of competitors to provide efficient facilities-based competition.

Even in the period of a few short months since Telstra filed its exemption applications in July, competitor DSLAM expansion in the Exemption Area (and beyond) has continued to accelerate and deepen. The rich and dynamic nature of competitive activity in the Exemption Area in the form of new services (eg: naked DSL) and pricing packages (eg: Optus Fusion) is tangible proof that the market and competitive forces are doing their jobs – in a way a regulator can only imperfectly and reactively attempt to mimic.

There is no place in this environment for the stifling effects of access regulation of resale services and the additional costs imposed on service providers associated with regulation. Indeed removal of access regulation in the Exemption Area at the earliest possible date will only intensify the vibrant forces of workable competition in these areas and provide more certainty for current and potential new infrastructure-based players in which to operate.

Telstra considers that most, if not all, of the important matters relevant to the Commission’s assessment of its Exemption Applications have already been addressed in its submissions to date. In response to the questions posed in the Discussion Paper, Telstra has summarized the views it has

already expressed. In addition, Telstra has obtained the advice of experts to answer specific questions raised by the Commission. Telstra has also provided some additional views and material, in order to enhance and clarify its previous responses.

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Introduction

This submission responds to issues raised by the Commission's Discussion Paper ("**Discussion Paper**") of August 2007 in relation to Telstra's applications for exemption ("**Exemption Applications**") from the standard access obligations applicable to Telstra in respect of the declared local carriage service and the declared wholesale line rental service dated 9 July 2007. Terms used in this submission have the meanings defined by Telstra in its earlier submissions on this matter.

In responding to these questions, Telstra relies on material it has already lodged in support of its application. Specifically, Telstra relies on the following documents which have been provided to the Commission in support of the Exemption applications:

- (i) Telstra Supporting Submission on Local Carriage Service and Wholesale Line Rental Service Exemption Applications ("**Telstra Supporting Submission**");
- (ii) Statement by Dr Paul Paterson of CRAI on the Economic Considerations for LCS and WLR Exemptions ("**Paterson Statement**");
- (iii) Annexure B - [c-i-c];
- (iv) Annexure C - [c-i-c];
- (v) Annexure D - [c-i-c];
- (vi) Annexure E - [c-i-c];
- (vii) Annexure H - [c-i-c];
- (viii) Annexure I - c-i-c];
- (ix) Annexure J - [c-i-c];

Telstra also provided a supplementary submission to the Commission during August 2007 ("**Telstra Supplementary Submission**") and provided the following additional materials on 11 October 2007:

- (i) Further submission from Dr Paul Paterson ("**Supplementary Paterson Statement**");
- (ii) Explanatory Statement to Annexure I;
- (iii) [c-i-c];

- (iv) [c-i-c]; and
- (v) [c-i-c].

The present submission in response to the Discussion Paper includes the following attachments:

- (i) Further statement of Dr Paul Paterson (“**Paterson Statement 1 November 2007**”);
- (ii) Statement of Craig Lordan from Evans & Peck Engineering Consultants (“**Lordan Statement**”);
- (iii) Report from Market Clarity (“**Market Clarity Report**”);
- (v) [c-i-c].

This remainder of this submission is structured as a response to the specific questions posed by the Commission to interested parties in the Discussion Paper. Where appropriate and to ensure succinctness, Telstra refers to responses it has made to other sections of the document in instances where the Commission has requested substantially similar information in multiple questions.

Confidentiality

This submission has all confidential information deleted and may thus be disclosed publicly. Telstra will provide the confidential version of this submission and the information contained in it to interested parties subject to those parties signing appropriate confidentiality undertakings.

The confidentiality undertakings do not limit the extent to which interested parties, and the Commission, may analyse and comment on the content of this submission. Rather they are intended to prevent the distribution and use of the confidential material contained in this submission for purposes other than participating in the Commission’s public inquiry relating to the exemptions.

Response to Commission Questions

For ease of reference, Telstra has adopted the Commission's numbering scheme for its responses. These commence at 5.1.

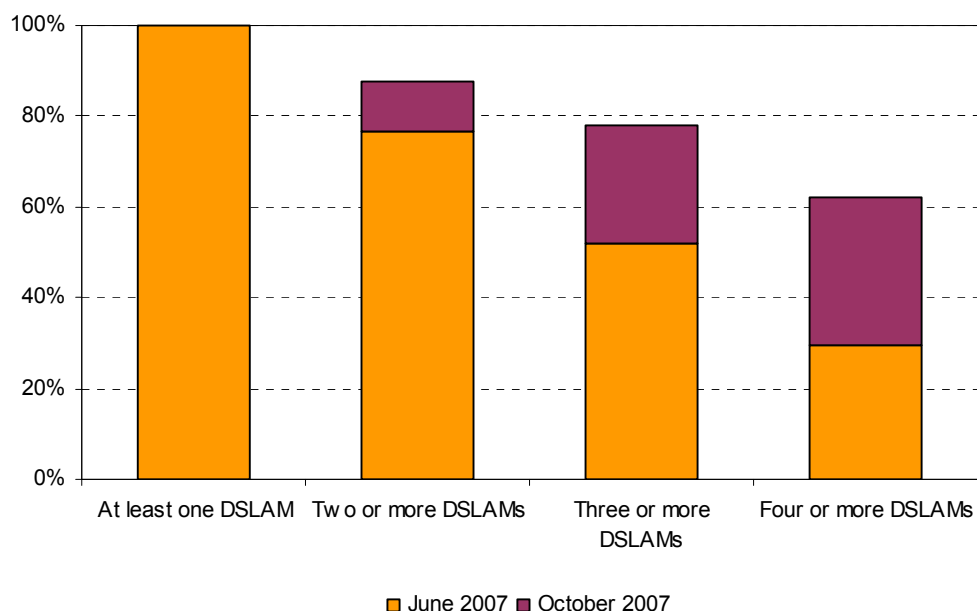
5.1 Enduring bottlenecks

5.1.1 Should the LCS and WLR be considered enduring bottlenecks?

The LCS and WLR can no longer be considered 'bottlenecks' in the Exemption Area. Indeed it is questionable whether they ever were. The downstream outputs of these services can be delivered to consumers over a wide array of alternative technology platforms, either by themselves or in conjunction with broadband services.

First, they may be provided via either the ULLS or the LSS, with the assistance of DSLAM-based infrastructure (see 5.1.2 below). As of October 2007, over 1400 DSLAMs have been installed throughout the 371 ESAs in the Exemption Area. As of October 2007, more than 60 per cent of the 371 ESAs in the Exemption Area were served by *at least 4* competitive DSLAM operators. This percentage has doubled since the time Telstra's Exemption Applications were lodged with the Commission (see figure 1).

Figure 1: Deployment of Multiple DSLAMs in Band 2 ESAs



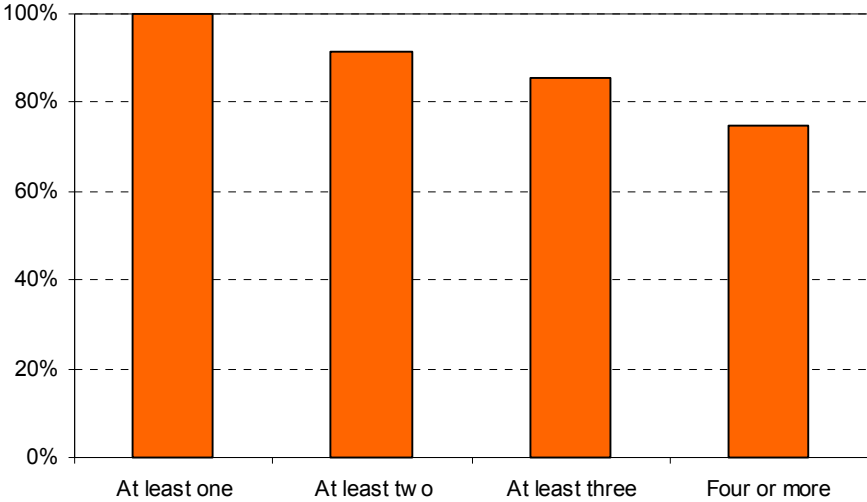
Second, alternative fixed platforms exist, such as the HFC networks of Optus, TransACT and

Neighbourhood Cable (see 5.1.2 below). There are currently four fixed-line networks capable of providing voice telephony and high speed broadband services to consumers in the Exemption Area.¹ For example, the Optus HFC network passes 2 million living units throughout 195 ESAs in the Exemption Area and currently delivers voice and high speed broadband services as well as Foxtel pay TV content.

Third, increased rollouts of fixed wireless networks, and the advancing capability of 3G mobile networks, provide further alternatives.

Considering DSLAM-based infrastructure, competitor HFC-based networks and fixed-wireless networks together, more than 91 per cent of ESAs (and the end-users therein) in the Exemption Area are served by at least two alternative infrastructure operators capable of delivering voice and high-speed broadband services (Figure 2). Furthermore, 75 per cent of ESAs are served by four or more competitive infrastructure providers. When this is considered, in conjunction with the existence of multiple 3G mobile-wireless networks (which are also capable of providing voice and high speed broadband services), it is clear that WLR and LCS are not enduring bottlenecks.

Figure 2: Exemption Area ESAs which are reached by at least one alternative infrastructure network



¹ Operated by AAPT/Powertel, Optus, Soul and Telstra; see p. 15, Market Clarity Report.

5.1.2 *Are PSTN voice services replicable through the use of:*

- (a) DSLAMs?
- (b) traditional voice switching equipment?
- (c) Soft switches?
- (d) VoIP?
- (e) alternative infrastructure such as fixed wireless or HFC?

The Commission's questions (5.1.2(a) through 5.1.2(e)) are best answered together, as the options given for potential technologies are a mix of substitutable and potentially substitutable technologies which may be able to provide PSTN-equivalent voice services depending on how they are utilized. As outlined above, WLR and LCS are not enduring bottlenecks as, within the Exemption Area, multiple access networks (DSLAM, HFC and fixed wireless based) exist which are capable, in conjunction with switching and transmission infrastructure of providing substitute voice services to those provided via WLR and LCS.

Voice services which have traditionally been provided over the PSTN (and which can be provided by means of the LCS and WLR services) can also be provided to end users via the ULLS or LSS, with the use of DSLAM technology (see Telstra Supporting Submission, Box 2 p. 16 and Paterson Statement, p. 17). This has previously been recognized by the Commission (see Telstra Supporting Submission, p. 23). ULLS access seekers can employ circuit-switched voice services utilizing the voice spectrum provided for on a ULLS line. LSS access seekers can also provide PSTN-equivalent voice services.

A ULLS access seeker can deliver calls from a customer connected to its ULLS network using standard switching technology: see pp. 17-18 of statement of Telstra's Technical Statement, and the Paterson Statement, pp. 85-87. A voice service delivered in this manner is similar to the standard telephone service supplied by Telstra to its customers (see Telstra Technical Statement, p. 18).

Using technology known as "POTS emulation", a ULLS access seeker is able to deliver a voice service that is functionally equivalent to that delivered using circuit switching technology (see further pp. 19-20 of Telstra Technical Statement, and the Paterson Statement, pp. 85-87).

Access seekers may deliver a VoIP service to end-users using either a ULLS or LSS connection. Carriers can ensure their service is 'carrier grade' and of equivalent quality to traditional services by implementing 'quality of service' protocols for the carriage of VoIP calls on their network; see pp. 21-22 of Telstra's Technical Statement; pp. 26-28 of Telstra's Supporting Submission; pp. 17-22 of the Paterson Statement; and Telstra's Supplementary Submission, pp. 9-11.

Alternative fixed line, fixed wireless and mobile wireless networks

PSTN voice services (and high speed broadband services) can also be replicated on alternative access networks.

The most extensive alternative fixed-line network to Telstra's is Optus's hybrid fibre coaxial (HFC) network, which can reach 195 ESAs in New South Wales, Victoria and Queensland (Paterson Statement, p. 26). Other alternative fixed network providers include TransACT, Neighbourhood Cable, PowerTel, Soul Pattison Telecommunications and E-Wire (see Paterson Statement, p. 27). The Paterson Statement says of these networks (at p. 18) that:

"It is self-evident that alternative fixed line networks (such as the Optus HFC network) enable network providers to offer voice and broadband services which potentially act as a constraint to Telstra's retail and wholesale fixed line service offers".

Fixed wireless networks, which now cover a large part of metropolitan Australia, represent another means of replicating PSTN voice services. Businesses such as Unwired are increasingly offering competitive packages to business and residential customers that include VoIP as part of a voice-broadband bundle (see Paterson Statement, p. 30). Unwired's recent profit announcements revealed that its subscriber base had grown to over 73,000 customers within the Exemption Area.²

Mobile wireless networks can also deliver an equivalent service (see response 5.3.1(t) below). Consumers are increasingly abandoning their fixed line connections and choosing to rely on mobile telephony instead. This is reflected in mobile subscription rates that are reaching saturation (see Telstra Supporting Submission, p. 28). In fact, a mobile call is superior in some respects to a fixed line call, since it provides the added quality of mobility.

5.1.3 Are Telstra's statements about the ease of access to traditional voice switching and soft switches accurate?

The switching technologies outlined above and described in some detail in the Telstra Technical Statement (at pp. 17-20) are readily available to access seekers.

Traditional or circuit-switching based voice switches are currently operated by several carriers, including Optus, Primus, AAPT, Soul and Telstra, for the provision of voice services throughout Australia. ULLS-based access seekers can purchase services from these existing network operators (see Paterson Statement, p. 33).

² Unwired, ASX Announcement dated 16 July 2007 available at http://www.unwired.com.au/display_file.php?itemId=181.

Soft switching technology has also been employed by several carriers in Australia, primarily as part of the provision of carrier-grade VoIP services. For example, Agile/Internode and iiNet both have deployed soft switch infrastructure. Managing Director of Internode Simon Hackett noted on his company's *Whirlpool* Forum:

*“NodePhone is not a best effort cross-the-Internode VoIP service. Its [sic] a carrier grade PSTN emulation service which runs over a totally end to end QoS controlled private network.”*³

The carrier-grade VoIP offerings from companies such as iiNet and Internode can be developed into POTS emulation utilizing the same soft switches and PSTN Gateway infrastructure as carrier-grade VoIP service. This means that service providers such as iiNet and Internode, could switch to POTS emulation by installing POTS line cards into their DSLAMs to enable customers to use their traditional POTS handsets without requiring additional CPE. Furthermore, these carrier would not require additional switching equipment (Paterson Statement, p. 33). Indeed, this transition has been publicly envisaged by iiNet in numerous statements to the Australian Stock Exchange.⁴

Access seekers can also acquire a wholesale switching, and/or interconnection services from companies such as Optus (Paterson Statement, p. 33). These options are clearly commercially viable, as evidenced by new VoIP offerings from Engin, BigAir and MyNetFone (see Paterson Statement, pp. 85-87). In addition to switching and interconnection services, access seekers can also acquire access to transmission backhaul services from third parties. For example, Pipe Networks currently provides backhaul transmission services to several companies throughout the Exemption Area.⁵

5.1.4 Does the fact that an access seeker has a DSLAM in an exchange mean that it is capable of providing a voice service to end-users?

As discussed above, in addition to a DSLAM, an access seeker would also require access to transmission capacity and voice switching equipment. Options for access seekers to acquire transmission services are detailed at response 5.3.2(o). The availability of switching equipment is discussed above at 5.1.3.

³ Hackett, Simon available at, <http://forums.whirlpool.net.au/forum-replies-archive.cfm/646746.html>, 22 December 2006

⁴ See further, iiNet *Investor Roadshow*, November 2006, p. 15 available at http://www.iinet.com.au/about/investor/20061031_investor_presentation.pdf and, iiNet, *Unconditioned Local Loop*, February 2006, p. 5 available at http://www.iinet.com.au/about/investor/ull_briefing.pdf.

⁵ These companies include Westnet, iiNet and Internode (amongst several others), see further; *PIPE Dark Fibre Accelerates Internode ADSL2+ Rollout*, available at http://www.pipenetworks.com.au/docs/media/05_06_27_Internode_Fibre.pdf and, *iiNet Announcement of ADSL2+ rollout*, available at http://www.pipenetworks.com.au/docs/media/ASX_06_03_09_iiNet.pdf.

5.1.5 *What are the technical and cost differences in DSLAMs that can be used to provide voice and those that can only be used to provide xDSL?*

There are a great variety of DSLAMs available on the market today, which are capable of providing a variety of residential and business grade voice and data services. As far back as 2003, as part of the Department of Communications, Information Technology & the Arts, *Broadband Technology Rollout Costing Study*, Clear Advantage and Associates revealed:

“Highlights of global vendor developments with respect to the DSL technology platforms are:

- first generation Digital Subscriber Loop Access Multiplexers (DSLAM) catered for data services only, whereas next generation DSLAMs support telephony, VOIP and broadcast video;*
- support for asymmetric DSL (ADSL), very high-speed DSL (VDSL), high-speed DSL (HDSL), Integrated Services Digital Network (ISDN), SDH, Fast Ethernet (FE), Gigabit Ethernet (GbE) and Plain Old Telephone Service (POTS) services;*
- a range of chassis sizes to support a small community of users or a high-density building; and*
- a range of port densities (the number of subscribers supported by each card) ranging from one or two (in the case of high-speed interfaces) to 16, 32, 64 or more (in the case of subscriber interfaces)”.*⁶

Telstra has also provided evidence on the technical differences among DSLAMs as part of the Telstra Technical Statement (pp. 15-16). In order to provide the Commission further information on the cost differences among different classes of DSLAMs, notably between those DSLAMs which are voice-service capable and those which are not, Telstra has obtained an engineering opinion from Mr Craig Lordan of Evans and Peck (“**Lordan Statement**”). According to the Lordan Statement, the major technical difference between a DSLAM capable of delivering only broadband services and an integrated solution providing both voice and broadband services in the inclusion of functionality to terminate the standard voice service within the same device (Lordan Statement, p. 7).

The Lordan Statement also indicates that the purchase cost of DSLAM equipment is dependent on numerous factors including the number of ports, location of the installation, nature of existing backhaul transmission and network equipment and the network operator’s architecture (p. 8). Based on several assumptions (see pp. 8-9) and based on Mr Lordan’s knowledge, experience and market

⁶ Clear Advantage and Associates, *Broadband Technology Rollout Costing Study*, p. 18, available at http://www.dcita.gov.au/_data/assets/pdf_file/20439/Broadband_Technology_Rollout_Costing_Study.pdf

enquiries, he considered that an appropriate benchmark rate for the purchase of DSL only capable equipment is \$30 per port, excluding the cost of installation and support infrastructure (p. 9). The Lordan Statement also indicates that this might rise to \$60 per port for the purchase of a voice and DSL capable sub-rack partially equipped with line cards (e.g. 50 ports).

The Lordan Statement considered that the equipment cost of acquiring DSLAMs capable of providing voice services would be approximately \$70 per customer, due to the need for two separate ports to terminate voice and data services (p. 9).⁷

Finally, it should be noted that, a DSLAM can be used to deliver VoIP services over a ULLS or LSS connection; see Telstra Technical Statement, pp. 21-22.

5.1.6 What percentage of DSLAMs currently deployed would be capable of providing PSTN voice services?

Telstra does not have data on the precise percentage of deployed DSLAMs that are currently capable of providing PSTN voice services. However, the fact that access seekers are currently providing voice and data services utilizing ULLS (for example, Optus, AAPT/PowerTel and Primus) indicates that many of the DSLAMs currently deployed are capable of providing PSTN-equivalent voice services. The Market Clarity Report indicated that four voice network owners currently offer facilities-based PSTN services, and two (AAPT-PowerTel and Optus) offer facilities-based VoDSL services (p. 15).

In any case, even if a particular deployed DSLAM were incapable of delivering PSTN voice services, the fact that DSLAMs are low cost, have a relatively short economic life, and are easily replaceable and redeployable means that an access seeker would not face a significant barrier to the provision of PSTN voice services due to a lack of voice functionality in their current DSLAM assets (see response to 5.1.7, 5.3.1(o) and 5.3.1(p)).

Furthermore, in determining whether the Exemptions are in the LTIE, the Commission should also consider the capability of carrier grade VoIP services — services that can be provided from any xDSL capable DSLAM.

5.1.7 Are the upgrade costs (e.g. addition of line cards) to enable provision of PSTN voice services

⁷ As further evidence, one can observe recent statements by internode. On 15 October 2007, Internode unveiled plans to install a further 90 DSLAMs in ESAs at a capital cost of \$9 million dollars (see, ZDNet, *Internode exchanges \$9m for ADSL2+*, 15 October 2007, available at <http://www.zdnet.com.au/news/communications/soa/Internode-exchanges-9m-for-ADSL2-/0,130061791,339282941,00.htm>) This equates to around \$100 000 per ESA. When other costs, such as the acquisition of transmission are taken into account, the cost per DSLAM must be substantially less than \$100,000 per unit. Internode have stated that they provision their metropolitan DSLAMs for being able to serve over 500 customers each (see, John Lindsay, *Connecting Rural Australia*, presented at the 2007 AFR Broadband Conference, 21 August, p. 5). Taken these factors together, it means that the capex required to serve a new customer is likely to be less than \$200. In no way could the Commission consider this cost to be significant.

significant?

The costs of installing a DSLAM, or upgrading an existing DSLAM (such as with the provision of POTS line cards) are not significant. For example, Telecom New Zealand has stated:

“... DSLAMs do not represent any form of bottleneck today. They are clearly not an access bottleneck, as they are freely available to access seekers and incumbents alike from a number of suppliers, in a number of sizes. Nor are they an economic bottleneck. The cost of a DSLAM has progressively fallen over the past decade due to technological advancements and the economies of scale that the US and European carriers have driven, to the point where it cannot be argued that these costs represent any sort of barrier to entry.”⁸

Telstra sought expert advice from Mr Lordan on this issue. The Lordan Statement considers that DSLAM equipment operators have two options if they wish to provide voice services using their own equipment. The first option is, provided that the existing DSLAM equipment is capable and has spare capacity, to install voice ports within the current device. The second option is to install additional equipment to provide voice capability in parallel with the existing DSLAM equipment (at p. 10 of the Lordan Statement). For existing installed DSLAMs with the capability and capacity to deliver voice services, Mr Lordan considered the equipment cost of supplying voice capability to the DSLAM would be likely to be the same as discussed in response 5.1.5. And in Mr Lordan’s opinion the equipment cost required to add voice capability to an existing DSLAM installation is likely to be \$35 per voice service (also p. 10).

It is important to emphasize that the cost of converting DSLAMs to enable this capability is not significant, for the reasons set out in the response 5.1.5 above, particularly when amortized over the useable life of the asset. Furthermore, the Commission needs to consider that the cost of a DSLAM is such that replacing an existing unit with an entirely new unit should not be considered significant.

5.2 Market definition

Telstra reiterates that in defining the relevant market, a purposive approach must be adopted. The choice of the relevant market(s) to be considered must not only be descriptive, but also evaluative and purposive (see Telstra Supporting Submission, p. 54).

In the present case, the purpose of the inquiry is the assessment of whether granting the Exemptions

⁸ Telecom New Zealand, *TELECOM'S RESPONSE TO THE COMMERCE COMMISSION'S DRAFT REPORT*, 29 October 2003 public version, p. 255. available at http://www.telecom.co.nz/binarys/llu_comcom_draft_report_issues_paper1.pdf

would be in the LTIE. Accordingly, it should be borne in mind that a wide range of downstream markets are likely to be affected by the Commission's decision. Similarly, it is important to remember that the LCS and WLR are merely two of a number of services, including broadband data services, long distance and international calling services, and fixed-to-mobile calling services, that can be provided via xDSL enabled lines.

Telstra also notes the Commission's view that the delineation of the relevant markets in one dimension may affect other dimensions (Discussion Paper. p. 22). However, given that the Commission acknowledges:

- that the relationship between ULLS and resale-based LCS/WLR services is a relevant consideration to defining the relevant functional markets; and
- that the exchange level is the appropriate geographic unit;

this issue is not material for the purposes of assessing the Exemption applications (Paterson Statement, 1 November 2007, p. 4).

5.2.1 What are the relevant markets that would be affected by the granting of the exemption?

As discussed in Telstra's Supporting Submission at pp. 53-58 and the Paterson Statement at pp. 6-15 and 16-39, the Commission should consider the impact of the proposed Exemptions on the markets within which the WLR and LCS are provided, as well as a range of related downstream markets. These include wholesale and retail markets, for both voice and data services.

5.2.2 How should these markets be defined? What evidence of demand and supply-side substitutability supports that market definition?

Subject to the comments above about the relevance of market definition to Part XIC enquiries, Telstra proposes the following market definitions for the purposes of the Commission's assessment of the Exemption applications.

(a) Functional markets

Given the absence of overwhelming efficiencies from vertical integration, it is appropriate to distinguish between wholesale and retail markets (Telstra Supporting Submission, p. 57).

(b) Product markets

(i) Wholesale markets

As set out in the Paterson Statement, customer preferences at the retail level require the ability to

obtain the capacity to supply the full suite of retail fixed voice services, and increasingly, broadband internet services as well (see Paterson Statement, pp. 10-11). Against this backdrop, the Paterson Statement addresses the key issue of whether, in the absence of the existing WLR/LCS declarations, Telstra's retail competitors could continue to access the necessary wholesale inputs to meet their retail customers' preferences (Paterson Statement, p. 11). The Paterson Statement concludes that a wide array of upstream substitutes exist, as discussed above in response 5.1. This means that the relevant wholesale market is broad, and includes at least the ULLS and other competing fixed line networks (see Paterson Statement, p. 12).⁹

(ii) Retail markets

Telstra considers that a retail product market that includes (at a minimum) the full bundle of retail fixed voice services is appropriate for the purposes of this inquiry (see Paterson Statement, p. 7). The delineation of a retail cluster is justified by the presence of significant costs of unbundling (see Paterson Statement, pp. 7-8). For customers, these include the inconvenience of dealing with multiple fixed-line service providers. On the supply-side, unbundling is likely to lead to the loss of customer-specific economies of scope associated with billing, as well as customer acquisition and retention costs. Actual patterns of customer behaviour reinforce the existence of a cluster (Paterson Statement, p. 8).

A retail market that includes the full bundle of fixed-voice services is also appropriate on the grounds of commercial reality. Telstra and all of its closest competitors sell and market the full range of fixed voice services (Paterson Statement, p. 9). In particular, the principal retailers have an incentive to maximize the total fixed-voice minutes sold to each customer, in order to defray the considerable fixed and common costs associated with retail voice services as a whole (Paterson Statement, p. 9).

Finally, Telstra's proposed retail market definition can be supported by the potential for supply side substitution. Once a retailer has developed the functions (such as customer support, billing, marketing) necessary to supply a particular fixed voice service, it can readily extend them to the provision of other fixed voice services (see Paterson Statement, p. 10).

(c) Geographical markets

In its Fixed Services Review - Second Position Paper of 2007, the Commission commented:

"The uneven roll-out of competing infrastructure, and the uneven development of full-facilities

⁹ An exception may occur where an access seeker uses the LSS to supply the end customer with broadband plus IP voice services over that broadband connection (see Paterson Statement of 30 October 2007, p. 4).

and quasi-infrastructure competition in parts of Australia, raises the possibility that the competitive dynamics differ in discrete geographic regions” (p. 34).

Observing that factors such as population density, demographic factors and technical supply-side issues affected the uneven development of infrastructure-based competition, the Commission flagged the possibility of more granular approaches. After considering different alternatives, it concluded:

“...the Commission considers that the most desirable and analytically meaningful approach in relation to the fixed-line sector would be to consider geographic units at the exchange level. This is particularly because a main driver for a shift in competitive dynamics across discrete geographic regions is likely to be the take-up (and potential for take-up) of ULLS and/or LSS services, and that the strategies of access seekers in terms of the areas they target is likely to be heavily influenced by the characteristics of an exchange...” (p. 39).

The Paterson Statement concluded that, although a broader market definition might be appropriate in some circumstances, an exchange-based approach is more appropriate for the purposes of this inquiry. Dr Paterson provided three reasons for his conclusions (at pp. 14-15):

- *“First, it is consistent with the context of the current enquiry, in the sense that exemption orders would not reasonably be capable of implementation in an area defined any more narrowly;*
- *Second, it reflects the topology of the incumbent network, and hence the units that the incumbent is likely to see as being at direct risk of stranding; and*
- *Third, it minimises the risk that the choice of too-broad a geographical market definition will inappropriately lead to a decision not to forbear, when forbearance would have been desirable”.*

Telstra agrees.

(d) Temporal market

Telstra believes that a period of three years, commencing on 1 July 2006, represents a period over which the likely development of future competition and new infrastructure deployment can usefully be assessed for the purposes of the Exemption application (see Telstra Supporting Submission, pp. 57-58).

5.2.3 *The ACCC concluded in its Local services review that there were separate wholesale markets for the provision of wholesale line rental and the provision of wholesale local calls. It also concluded that*

retail markets at their narrowest could be defined as separate retail markets for line rental and local calls or more widely as a market for retail fixed voice services which necessarily includes both retail line rental and local calls services. Are the ACCC's conclusions still correct?

For the purposes of its Final Decision of July 2006 in the Local Services Review, the Commission concluded that, for areas outside the five main CBDs (Sydney, Melbourne, Brisbane, Perth and Adelaide), separate wholesale WLR and LCS markets were appropriate, and separate WLR and LCS retail markets might be appropriate (see p. 30). However the Commission also acknowledged that, in CBD areas, the presence of effective substitutes, such as competing fibre networks, placed a competitive constraint on Telstra's pricing of the WLR and LCS services. Furthermore, the ACCC noted (in July 2006) that considerable uncertainty existed surrounding the likely future deployment of competitive infrastructure platforms and services, including VoIP, wireless access, and fixed-to-mobile substitution, and that this uncertainty might be resolved within two years.

Telstra considers that new infrastructure developments since July 2006 have conclusively debunked the myth of any such uncertainty, as outlined in Telstra's Supporting Submission at pp. 15-25. As a result of the rapid deployment of DSLAM-based technologies, as well as the presence of other alternative infrastructure, effective and viable alternatives now exist to the WLR and LCS in the Exemption Area. Accordingly, it is appropriate to revisit the market definition issue in the light of these new developments.

5.2.4 Are there any other wholesale or retail markets that the ACCC should consider? Is Telstra's approach to defining its Exemption Area an appropriate one?

It is important for the Commission to bear in mind that granting the proposed Exemptions will engender benefits for consumers beyond the relevant voice services markets. In particular, competition and efficient use of, and investment in, infrastructure is also likely to be promoted in broadband services markets (see Telstra Supporting Submission, p. 54). Consideration of these benefits is also required for an assessment of whether the Exemptions are in the LTIE because of the breadth of the reference to "listed carriage services" in section 152AB of the TPA.

5.2.5 Does Telstra's rule, based on the presence of competitor DSLAMs, represent an appropriate way of grouping together the ESAs in its Exemption Area?

Telstra's proposed rule represents a practical and cogent means of identifying the proper geographic scope of the proposed Exemption orders. In particular, Telstra relies on the Paterson Statement to support this conclusion.

Dr Paterson considers that grouping together ESAs on the basis of the existence of competitor DSLAMs is more useful than examining the competitive conditions in each ESA individually. First, he states that examining the conditions in each ESA separately is not realistic (see Paterson Statement, p. 40). Secondly, he considers that the proposed decision rule would not compromise the quality of regulatory decision making; because the decision rule reflects the underlying characteristics of each ESA in an indirect way (see p. 40).

In particular, Dr Paterson notes that the presence of active alternatives to LCS/WLR within the Exemption Area is a concrete proxy for examining the underlying market characteristics of the ESA (see p. 40).

Dr Paterson also considers that the primacy of ULLS as an alternative to LCS/WLR means that a decision rule based on DSLAMs is the most useful manner in which to proceed (see p. 40).

5.2.6 Is the data that Telstra uses, based on publicly available information, sufficiently robust to allow the ACCC to be confident about the deployment of DSLAMs in the proposed Exemption Area?

Telstra has gone to considerable lengths to develop robust estimates of current DSLAM deployment, including by harnessing its considerable corporate resources (while observing its confidentiality obligations to its wholesale customers), and obtaining the opinions of independent experts.

Furthermore, these estimates are likely to be conservative. For example, Dr Paterson has been careful not to double count DSLAM infrastructure that is utilised by resellers. Telstra has also been careful to take account of recent takeover and resale developments among telecommunications providers, once again to avoid double counting (see Telstra Supporting Submission, p. 16).

On that basis, and given the opportunity afforded access seekers to scrutinize these estimates in this public inquiry, Telstra considers that the Commission can confidently make its decision on the basis of them. Nevertheless, the Commission has the power to corroborate these estimates, either by conducting its own research, or by making use of its information gathering powers to elicit information from Telstra and other carriers and carriage service providers (see Telstra Supporting Submission, p. 16). The Commission will also have the benefit of examining the data contained in its recently issued *Telstra CAN RKR*.

5.2.7 What further data, if any, would the ACCC need to determine the deployment of DSLAMs in the proposed Exemption Area?

For the reasons set out in response 5.2.6 above, the ACCC can be confident in making its decision on

the basis of these estimates. Nevertheless, Telstra invites the Commission to corroborate its estimates, either by conducting its own research, or by making use of its information gathering powers to elicit information from Telstra and other carriers and carriage service providers (see Telstra Supporting Submission, p. 16).

5.3 Promotion of competition

Introductory comments

In assessing whether the Exemptions should be granted, ACCC should not overstep the bounds of the discretion which is provided to it by section 152AT(4) of the TPA, which draws in turn on section 152AB. Rather, the ACCC should be mindful of the High Court of Australia's recent decision in *EAPL v ACCC*¹⁰, which overturned the Commission's regulatory decision on the Moomba to Sydney Pipeline, on the grounds that the Commission had exceeded the bounds of the discretion granted to it by the relevant legislative instrument, the *National Third Party Access Code for Natural Gas Pipeline Systems* ("**Gas Code**").

In particular, the Court found that the Commission had failed to give proper regard to the meaning of the words contained in section 8.10 of the Gas Code regarding the calculation of the initial capital base ("ICB") of the pipeline. This integer directly affected the financial returns that East Australian Pipeline Limited, was permitted to recover from operating the pipeline. Commenting on the discretion implied by the grant of a decision-making power in the form of a list of factors to be considered, the High Court (per Gleeson CJ, Heydon and Crennan JJ) noted:

*"It is clear that a range of well recognised asset valuation methodologies can be considered and within that range a choice of value may be made. The discretion permitted is wide but limited."*¹¹

Under section 8.10 of the Gas Code, the Commission was required to consider a discrete list of eleven elements in calculating an ICB for the Moomba to Sydney Pipeline. However, the first three elements, which referred to well-recognized valuation methodologies, and the fourth, concerning the relative advantages and disadvantages of each methodology, were noted by the Court to be particularly relevant:

¹⁰ *EAPL v. ACCC* [2007] 81 ALJR 1868.

¹¹ § 51.

“The primary and natural significance of the words used in, and the structure of, s 8.10(a)-(d) mandates consideration of values derived from well recognised asset valuation methodologies followed by a comparative weighing up of these approaches to valuation.”

However the ACCC in its Final Approval Decision on the Moomba to Sydney Pipeline System chose to value the ICB by reference to a “novel” or “idiosyncratic” approach which used, as its starting point, a methodology not supported by subparagraphs (a) to (c), and proceeded to adjust it by reference to methods that could, at best, be justified by the final subparagraph (k). This approach was criticized harshly by the Court:

“There is nothing in the primary and natural significance of the words used to describe the individual factors set out in pars(a) to (k), or in the structure of s 8.10, which supports the conclusion that an implied step or element of s. 8.10(b)...can be blended with a factor referred to in s. 8.10(f) to set an ICB.”¹²

Similarly, Telstra considers that the Commission should restrict itself to the “primary and natural significance” of the words of sections 152AT(4) and 152AB in assessing the Exemption applications.

The key question to be considered by the Commission in each of the present cases is whether granting the Exemption applications would further each of the objectives that make up the LTIE (see Telstra Supporting Submission, p. 52). These are:

- (a) The objective of promoting competition in markets for carriage services and services supplied by means of carriage services;
- (b) The objective of achieving any-to-any connectivity for carriage services involving communication between end-users; and
- (c) The objective of encouraging the economically efficient use of, and economically efficient investment in, the infrastructure by which carriage services and services provided by means of carriage services are supplied.

The meaning of the terms “end-users”, “interests” and “long-term” have been carefully considered by the Australian Competition Tribunal (see Telstra Supporting Submission, p. 51). In particular, the Tribunal’s view about the meaning of ‘long term’ has particular significance for the present assessment. The Tribunal noted that, while there may be conflict in the short term between promoting competition (through, for example, lower access prices) and encouraging efficient

¹² Ibid. at § 58.

investment, there is unlikely to be in the long term. Rather, by encouraging facilities-based investment, the long term prospects for competition are likely to be enhanced (see Telstra Supporting Submission, p. 52).

Telstra also considers that while it may be helpful for the Commission to assess the likely future “with and without” the proposed Exemptions, this test cannot provide the ultimate answer to whether the LCS and WLR should be exempted (see Telstra Supporting Submission, p. 53). In particular, the Commission should not use the “future with and without test” to focus on potential short-term or medium term detrimental consequences, where exemption would create the conditions or environment for an overall increase in the interests of end users over the long term.

5.3.1 Structural factors

(a) *In the absence of a declared LCS and WLR, would competition in downstream retail markets for relevant services be effective?*

Telstra considers that competition in the relevant downstream markets would not be compromised by the grant of the Exemptions. Telstra bases this conclusion upon analysis provided by the Paterson Statement.

Dr Paterson concludes that competition in the retail market for fixed voice telephony or bundled voice and broadband services would not be compromised by the effective withdrawal of LCS/WLR regulation in the proposed Exemption Area through LCS/WLR exemption orders (p. 47).

In particular, Dr Paterson considers whether Telstra would attempt to engage in anti-competitive pricing practices if the Exemption orders were granted. He concluded that Telstra would not have the incentive to do so, because of the existence of readily-available upstream inputs (see Paterson Statement, p. 44).

Telstra considers that the existence of supply-side substitutes is evidenced by the number of ESAs which may currently be reached by ULLS-based competitor infrastructure (see Paterson Statement, p. 22, and Supplementary Paterson Statement, p. 4), and is also demonstrated by reductions in Telstra’s basic access SIOs in the Exemption Area since March 2004 (see Paterson Statement, p. 44).

Dr Paterson also gives careful consideration to whether granting the proposed Exemption orders would affect competition in the voice-only customer segment. He concludes that, *prima facie*, they would not (see p. 45). Rather, Telstra would be constrained from raising its wholesale prices by the presence of at least one wholesale competitor in each ESA. For example, Dr Paterson notes that

PowerTel is currently able to provide wholesale unbundled voice and data services (see p. 45).

In addition, Dr Paterson conducted high level economic modelling to determine whether it would remain profitable for ULLS-based operators to target voice only customers. This modelling indicates that the supply of voice-only services over the ULLS would be viable for the majority [c-i-c] per cent of SIOs in the Exemption Area (see Paterson Statement, p. 45). Dr Paterson also noted the presence of other constraints (such as the current HomeLine Part price cap) on Telstra (p. 46).

(b) Is competition in downstream markets currently effective?

The markets in which the LCS and WLR are supplied are currently contestable and workably competitive. Three main factors provide evidence of this: changes in market shares; the existence of viable substitution possibilities; and the lack of meaningful barriers to entry.

Regarding market shares, Telstra has a lower retail market share of [c-i-c] per cent in fixed line services within the Exemption Area (see Telstra Supporting Submission, p. 25). Furthermore, the total number of SIOs serviced by Telstra's PSTN has fallen more significantly in the Exemption Area than for the rest of Telstra's network (also at p. 25).

Second, as discussed in section 5.1 above, there are a number of effective substitutes to providing the WLR and LCS in the Exemption Area.

Third, barriers to infrastructure based entry within the Exemption Area are low. Not only are the sunk costs of new entry no higher than Telstra's (see pp. 30-31), but MES issues cannot be considered a barrier to entry. This is because DSLAMs are becoming increasingly scalable over time, and also because they can also be used to supply data services to the growing retail broadband market (see Telstra Supporting Submission, p. 31). Nor are there technical constraints to providing a standard telephone service equivalent to Telstra using DSLAM-based infrastructure (Telstra Supporting Submission, p. 32; see also Telstra's Employee Statement on Technical Matters, pp. 17-20). Neither backhaul requirements (p. 32 of Telstra Supporting Submission) nor other non-price issues (see pp. 32-33) give rise to meaningful barriers to entry.

Given these findings, it is appropriate to conclude that workable competition currently exists in the Exemption Areas in relation to both the WLR and LCS.

(c) *What alternative providers to Telstra of LCS and WLR currently operate in the wholesale market?*

While DSLAM based infrastructure provides the most common alternative to Telstra's PSTN for the supply of the relevant services, other sources of infrastructure-based competition exist, including cable networks and fixed-wireless networks; see Telstra Supporting Submission, pp. 15-34 and Paterson Statement, pp. 19-31. The significant penetration of mobile services across Australia provides a further layer of competition; see Telstra Supporting Submission, pp. 28-29 and Paterson Statement pp, 28-29. Telstra also refers the Commission to its response at 5.1.1.

To provide further detail to the Commission on this issue, Telstra sought the advice of an independent expert, Market Clarity. Based on its extensive database of Australia's voice service providers, Market Clarity considers that five PSTN network owners offer national voice network coverage, including support for regional customers (see Table 1, p. 15 of Market Clarity Report). Of these, four offer facilities-based PSTN services, and two offer facilities-based VoDSL services. In addition, ten carriers currently offer wholesale VoIP services based on their own facilities.

(d) *Do these providers offer, any significant competitive constraint on the pricing of the LCS and WLR?*

DSLAM-based voice and data services constrain Telstra's pricing of its WLR and LCS products (see Telstra Supporting Submission, pp. 25-28; Telstra Supplementary Submission pp. 2-4). Alternative fixed-line networks (such as Optus's HFC network) also potentially act as a constraint to Telstra's retail and wholesale fixed line service offers (Paterson Statement, p. 18). Fixed wireless and mobile wireless networks also place some constraint on Telstra's pricing practices (Telstra Supporting Submission, pp. 28-29). In this regard, Telstra relies on the statement of Dr Paul Paterson. Dr Paterson states in relation to fixed wireless networks:

"I nevertheless believe that the scope to supply VoIP over fixed wireless networks provides some constraint on Telstra's pricing practices" (p. 18).

Likewise regarding mobile services:

"I nevertheless consider it unarguable that mobile services place some constraint on the price of fixed telephony services" (p. 18).

(e) *In the absence of access to a declared LCS and WLR in the proposed Exemption Area would such*

firms provide a meaningful constraint on: the pricing of the LCS and WLR or, equivalent services?

The Commission appears to be concerned that if the Exemption applications were granted, Telstra would have the incentive or ability to raise its wholesale or retail WLR and/or LCS prices.

However, this concern can be allayed by the existence of the declared ULLS. If Telstra sought to raise its wholesale WLR or LCS prices, its wholesale customers could turn to DSLAM-based sources of supply instead (see Paterson Report 1 November 2007, p. 7, and Paterson Statement, pp. 44-47). Since the regulated ULLS price is based on TSLRIC, whereas the WLR and LCS prices are set on a retail-minus basis, access seekers would face a clear incentive and ability to switch sources of supply in this way (see Paterson Statement 1 November 2007, p. 9). And if Telstra attempted to raise retail prices, it would lose retail market share to ULLS-based or full-facilities based rivals (Paterson Statement 1 November 2007, p. 7).

Furthermore, alternative sources of supply would exist for voice-only resellers, since there is at least one alternative DSLAM-based service provider in every ESA (Paterson Statement, p. 45). Detailed economic modelling conducted by Dr Paterson suggests that it would be profitable for DSLAM-based operators to target voice-only customers in the Exemption Area (see Paterson Statement, pp. 45-47, supplemented by Appendix E, pp. 92-93).

A further issue to be considered is the impact of granting the Exemption orders on the supply by Telstra's competitors of bundled offerings that include local call services. Two issues can be raised here. First, once an access seeker has already acquired ULLS services, the incremental cost of supplying voice services would be trivial compared to the cost of acquiring wholesale WLR or LCS services. This is because the ULLS is currently priced on a TSLRIC basis, whereas the LCS and WLR are priced on a retail minus basis (see Paterson Statement 1 November 2007, p. 9). Second, switching to ULLS-based local calls would permit access seekers to differentiate their services from Telstra's, both in terms of price and call functionality (see Paterson Statement 1 November 2007).

Thus, the existence of the ULLS (and full facilities-based) alternatives would place a more binding constraint on Telstra than would resale competition.

(f) Would Telstra be likely to continue to supply the LCS and WLR if the exemption applications were granted?

Telstra notes that there are considerable economies of scope to be gained from supplying the full bundle of voice and, increasingly, data services (Paterson Statement 1 November 2007, p. 6). Nevertheless, if efficient demand for resale services continues to exist, Telstra and its rivals would supply such demand, whether via the WLR/LCS, or by other means. However, such wholesale supply might not be efficient, due to the economies to be gained from vertical integration (such as ULLS-based supply). Carriers may be able to take advantage of these economies to undercut retail suppliers

that are not vertically integrated, which would mean that the LCS and WLR were no longer provided (Paterson Statement 1 November 2007, p. 7). However, this would not represent the exercise of market power (which Telstra does not have in the relevant markets). Rather, it would represent market pressure eliminating an inefficient form of supply (Paterson Statement 1 November 2007, p. 7).

(g) *What infrastructure do alternative wholesale providers use?*

Alternative wholesale providers use a combination of DSLAM-based infrastructure and other technologies such as HFC and to a lesser extent fixed wireless . The most important recent development from the perspective of the Exemptions is the rollout of competitor DSLAMs in 371 ESAs (see Table 1, Telstra Supplementary Submission). Over 1400 DSLAMs have now been installed in Band 2 ESAs. Alternative fixed-line networks such as Optus's HFC network (see Paterson Statement, p. 18) also exist, and are in some instances being used in conjunction with Optus's DSLAM-based infrastructure (see Telstra Supplementary Submission, pp. 9-11). In addition, fixed wireless networks also provide a potential alternative wholesale source (see Paterson Statement, p. 18 and Telstra Supplementary Submission, pp. 12-13).

Market Clarity approached this question from the perspective of whether infrastructure-based providers employ time delay multiplexing (TDM) to route voice signals, or whether they rely instead on IP networks. TDM-based services are provided using PSTN, ISDN and VoDSL formats (Table 3, p. 18). Likewise, IP-based voice providers employ a variety of voice switching platforms (see Table 2, p. 17 and Table 4, p. 20). Table 2 makes clear that IP-based providers are able to obtain switching and gateway technology from a wide variety of technology vendors.

(h) *Are DSLAMs a 'significant competitive presence for the provision. of wholesale and retail basic access and local calls'?*

DSLAM-based infrastructure and other fixed networks (such as the Optus HFC) provide alternative means of providing downstream services supplied via the LCS and WLR.

Besides Telstra, three network operators (AATP-PowerTel, Optus and Soul) offer DSLAM-based TDM voice services (Market Clarity report, Table 3 p. 18). According to Market Clarity, as many as ten IP-based voice operators offer a substitute for LCS, and up to seven offer a substitute for WLR (Table 4, p. 20). Further, there is a range of alternative access technologies available such as mobile wireless networks that are already providing directly substitutable services and are likely to constrain Telstra's pricing and supply of the LCS and WLR (see Telstra Supporting Submission, pp. 25-34). The Paterson Statement concludes (in relation to ULLS-based services):

"In short, competing services are in place which act (or could readily act) as direct substitutes

to the LCS/WLR service” (p. 19).

(i) *What percentage of DSLAMs currently would be capable of providing traditional voice services as opposed to only DSL broadband?*

Telstra refers the Commission to response 5.1.6.

(j) *Do cable and fixed wireless networks provide meaningful constraint, on the pricing of the LCS and WLR?*

Cable and fixed wireless networks indeed provide a meaningful constraint on the prices of LCS and WLR services. Dr Paterson considers that alternative fixed-line networks act as a constraint to Telstra’s retail and wholesale fixed-line service offers (see p. 18). He also considers that fixed wireless and mobile wireless services provide some constraint on the price of fixed voice telephony services (see p. 18).

Dr Paterson also notes the Commission’s comments regarding the extent of the competitive constraint currently provided by cable networks. He considers that these comments reflect an excessive reliance on static indicators of competition. Further, the historical availability of regulated services such as WLR and LCS may have discouraged efficient facilities-based entry (see Paterson Statement, p. 23). Granting the Exemption Applications will encourage a migration to greater facilities-based competition.

(k) *What are the relevant trends in retail markets for PSTN voice services? Is there evidence of end-users switching away from PSTN basic access, local calls and related services?*

Retail customers within the Exemption Area are already taking advantage of substitutes to traditional PSTN services. Since March 2004, the number of PSTN SIOs in the Exemption Area has fallen by almost [c-i-c] per cent, compared to [ci-ic] per cent for the rest of the network (see Telstra Supporting Submission, p. 25). Furthermore, customer take-up of direct PSTN substitutes such as VoIP is prima facie evidence of a shift away from the PSTN. It is estimated that there are over 260 VoIP providers throughout Australia, with almost 100,000 paid VoIP services in operation,¹³ which is estimated to climb to more than 2.8 million services by 2011 (see Telstra Supporting Submission, p. 26).

(l) *Is there any significant difference in competitive conditions between an ESA with one competitive DSLAM and an ESA with two or more competitive DSLAMs?*

Telstra considers that the presence of a single DSLAM in an ESA provides a sufficient competitive constraint on Telstra's WLR and LCS products (Telstra Supporting Submission, p. 23). To support this conclusion, Telstra relies on several factors outlined at pp. 41-43 of the Paterson Statement and pp. 2-4 of the Supplementary Paterson Statement.

For example, the entry of one DSLAM-based operator demonstrates that there are no material barriers to further entry. As a result, the threat of further entry is likely to constrain Telstra's pricing practices in any given ESA. This conclusion is reinforced by the observation that the deployment of a single DSLAM in an ESA is often soon followed by further deployment (see Telstra Supporting Submission, p. 22). Furthermore, since almost 90% of ESAs within the Exemption Area now have more than one competitor DSLAM, the 'single DSLAM' rule is only relevant to a modest portion of ESAs. Finally, alternative fixed-line networks (such as Optus's HFC network) and emerging fixed wireless networks place an additional constraint on Telstra (see Paterson Statement, p. 42). Based on these findings, Dr Paterson concludes in his Supplementary Statement:

"The increase in the number of ESAs in the exemption area with two or more competitor DSLAMs provides substantiation of one of the main points made in my Statement. This is that the presence of at least one competitor DSLAM in an ESA is evidence that material barriers to entry do not exist, and that further entry could be expected if Telstra attempted to increase prices above competitive levels in downstream markets. For this reason I maintain my belief that the presence of one competitor DSLAM in an ESA - as an indicator of underlying competitive conditions - should be the trigger for regulatory forbearance." (p. 5)

(m) *Does the ACCC also need information on the number of ULLS and LSS lines taken by access*

¹³ According to the Paterson Statement of 30 October 2007, there may be as many as 200,000 VoIP SIOs: p. 3.

seekers to appropriately gauge competitive conditions in an ESA? For the purpose of assessing the exemption applications, does it require historical data?

While the number of ULLS and LSS lines currently used by access seekers provides sufficient evidence that workable competition for the relevant services is currently occurring in the Exemption Area, a more important consideration is the scope for potential entrants to constrain Telstra's pricing (Paterson Statement 1 November 2007, p. 12). That is, since barriers to entry are low, the actual number of lines currently in use becomes a lesser consideration. In fact, it may well reflect the fact that the existence of declared access to WLR/LCS services has discouraged facilities-based entry (see Paterson Statement 1 November 2007).

While it is open to the ACCC to review historical data, the relevant telecommunication markets are dynamic and historical data may not reveal emerging trends. For example, the growth in the number of DSLAMs deployed in the Exemption Area has continued to accelerate, such that estimates of current deployment numbers based on historical trends would significantly underestimate the depth of DSLAM-based competition in the Exemption Area.

[c-i-c]

The continuing marked increase in the takeup of ULLS and the deployment of DSLAMs (deepening and broadening the competitive footprint) means that the Commission must be cautious in relying on historical trends to inform themselves of the likely future level of competition in the Exemption Area. In such a dynamic environment, looking forward into a rear-view mirror is unlikely to lead to well-informed decision making in the long term interest of end users.

(n) Do access seekers tend to follow deployment by other DSLAM operators into ESAs?

Yes. The deployment of a single DSLAM in an ESA is generally soon followed by subsequent DSLAM deployments by other operators (Telstra Supporting Submission, pp. 18, 22). For example, between September 2005 and August 2007, 149 ESAs in the Exemption Area went from having no competitor DSLAMs installed to having an initial competitor DSLAM, followed by at least one other competitive build. Of these, 50 per cent added another competitive DSLAM within seven months, 80 per cent within ten months and 90 per cent within twelve months (see Telstra Supplementary Submission, pp. 7-8). This indicates that once the conditions for the deployment of a single non-Telstra DSLAM are met, it is relatively easy for additional DSLAM-based operators to enter the same ESA.

(o) Are access seekers likely to purchase the infrastructure of a DSLAM operator that exits the market?

DSLAMs may be relocated or resold (Paterson Statement, p. 32; see also Telstra Technical Submission, p. 16). In addition, Dr Paterson considers that if a ULLS-based competitor exits the relevant market, their assets (and possibly their customer base) are likely to be purchased by another ULLS-based operator (see Paterson Statement, p. 42).

(p) *What are the costs of installing a DSLAM?*

Telstra refers to the Lordan Statement to the Commission, where Mr Lordan states:

“Based on my knowledge of current market rates for telecommunications construction activities, in my opinion the installation of up to a 300 port sub-rack is likely to cost approximately \$2,500. For a larger installation of 1200 ports, in my opinion, the cost to complete the installation is likely to be in the order of \$9,000. Both estimates exclude the cost of equipment.” (p. 11).

(q) *Are these costs prohibitive or significant?*

These costs are not prohibitive or significant when amortized over the economic life of the asset in question. For example based on Mr Lordan’s estimates, a carrier intending to install a DSLAM to service 50 SIOs would incur a monthly cost per SIO of approximately \$50 per SIO. Assuming straight-line depreciation and an effective life of four years, this would amount to a monthly per SIO cost of just \$1.04. When considered in the context of Dr Paterson’s MES estimates (see Response 5.3.2(f)), this cost is trifling.

In addition, since DSLAMs have a relatively short lifespan, expenses relating to their redeployment cannot be considered sunk costs over a timeframe longer than their lifespan (see Paterson Report, p. 32).

(r) *What customer base is required to justify building a DSLAM in a particular ESA?*

In Band 2 ESAs, the minimum number of retail ADSL services-in-operation (SIOs) at which ULLS entry becomes viable is less than [c-i-c] SIOs, given current retail prices (Paterson Statement, p. 34). The Paterson Statement also considers minimum efficient scale considerations in the event of retail price fluctuations (pp. 34-35), and for the specific case of providing services to voice-only customers (pp. 45-47). For example, PowerTel is a ULLS-based service provider supplying unbundled wholesale voice and data products, as well as self-supplying these services (see Paterson Report, p. 45).

(s) *Does VoIP have a significant effect in the wholesale and retail markets for basic access and*

local calls in the proposed Exemption Area?

VoIP is an emerging competitive substitute to traditional voice services. There are an estimated 260 VoIP providers throughout Australia, with almost 100,000 paid services in operation,¹⁴ which is expected to climb to 2.8 million by 2011 (see Telstra Supporting Submission, p. 26). Ten providers currently offer wholesale VoIP services based on their own facilities (Market Clarity, p. 15).

A VoIP service may be provided using either ULLS or LSS technology (Telstra Supplementary Submission, p. 17); VoIP services are offered by several companies utilising DSLAM infrastructure throughout the Exemption Area, including AAPT, Primus, Optus, iiNet, Soul and Internode (Telstra Supplementary Submission, p. 26). Fixed wireless networks may also be used to provide VoIP services which potentially act as a constraint to Telstra's retail and wholesale fixed line service offers (Paterson Statement, p. 18). For example, a VoIP service is currently being offered via a fixed wireless platform by BigAir.¹⁵ In addition, Hutchison and Skype recently announced a deal to make VoIP services available on 3G mobile handsets.¹⁶

In every ESA in the Exemption Area there is at least one provider (in addition to Telstra) with DSLAM-based infrastructure that is capable of supplying VoIP to end customers (Telstra Supplementary Submission, p. 18). Thus, VoIP technology may be regarded as having a significant effect in these wholesale and retail markets.

(t) *To what extent can mobile calls be considered a substitute for fixed line basic access and local calls, as suggested by Telstra?*

With mobile subscription penetration reaching saturation point (see report by the Commission's consultant, wik-Consult GmbH, of 3 November 2005, in relation to the mobile terminating access service, pp. 48-49), mobile services are becoming increasingly substitutable for fixed-line services (see Telstra Supporting Submission, pp. 28-29). Although the Paterson Statement does not contend that mobile services are fully substitutable alternative means of providing downstream services supplied on LCS/WLR, it does consider that mobile services place some constraint on the price of fixed voice telephony services (Paterson Statement, p. 18).

(u) *Is competition in the market for wholesale and retail line rental and local call services largely driven by price?*

¹⁴ This figure may be as high as 200,000: see Paterson Report 30 October 2007, n 5.

¹⁵ "Big Air's High Speed Broadband Internet and VoIP Spreads Across Sydney's West", *Linux World*, 20 October 2005.

¹⁶ See VOIP News, Mobile VOIP phones soon, (22 February 2006). Available at: www.voipnews.com.au/content/view/full/1038/107/ and Wireless Carrier Offers Wholesale VoIP, (4 May 2006).

While Telstra will continue to supply WLR/LCS to service providers who wish to resell Telstra's PSTN voice service, going forward Telstra is likely to face increasing competition from facilities-based competitors with bundled voice/broadband offers. Dr Paterson notes that competition from alternatives to WLR and LCS, such as ULLS-based supply, offers scope for product differentiation in areas such as call quality, the nature of the service offered, and the extent of bundling (see Paterson Statement 1 November 2007, pp. 9-10).

Significant product differentiation, such as would be expected to occur in a workably competitive market, may already be observed in the retail markets in which line rental and local calls are supplied. This includes the launch of Optus's 'Fusion' product (Telstra Supplementary Submission, pp. 9-11), and the imminent arrival of several 'naked DSL' offerings (Telstra Supplementary Submission, pp. 11-12).

- Optus's Fusion Product offers unlimited landline calls and broadband internet access, to customers for a fixed price per month. It is only offered to customers with access to Optus's DSLAM or HFC network, and appears to be aimed squarely at attracting Telstra's fixed voice customers with competitive ULL-based broadband offerings.
- In addition, several companies are promoting their plans for a 'naked DSL' service, based on the ULLS but without traditional voice switching (see Telstra Supplementary Submission, pp. 11-12). Press reports suggest iiNet will begin offering such a service next month, with Engin to follow during the first quarter of next year and TPG and Internode also planning to unveil their plans shortly.¹⁷ Indeed, Adelaide-based ISP Amcom launched their naked DSL product on 29 October 2007.¹⁸

(v) *Is there any significant product differentiation and/or would significant product differentiation be likely to occur if the exemption was granted?*

The current extent of product differentiation in the Exemption Areas is dealt with in Telstra's response at paragraph (t) above.

As outlined in section 5.3 below, granting the Exemption would promote facilities based competition in the Exemption Area. As the Paterson Statement points out, facilities-based competitors can make choices about technology deployment that allow them to offer differentiated products to customers (see p. 49). This allows them to go beyond merely replicating the service of the access provider. As Dr Paterson discusses:

Available at: www.voipnews.com.au/content/view/1038/107/.

¹⁷ See "Web Browsing with No Strings Attached", Sydney Morning Herald, 16 October 2007.

“In contrast, a ULLS or full facility-based competitor can substantially differentiate its service from Telstra, in terms of quality, the nature of its service offerings and the extent of bundling (including services like call waiting, forwarding, integration with the customer’s computer applications, etc) and pricing structures...” (Statement 1 November 2007, pp. 9-10).

Thus, granting the Exemptions can be expected to lead to a greater variety of differentiated products within the Exemption Area.

5.3.2 Potential for competition

(a) Should the ACCC regard these planned investments as being representative of the likely deployment of DSLAMs in the proposed Exemption Area by the end of 2007?

Telstra’s competitors have installed DSLAMs in the Exemption Area at an average rate of 49 DSLAMs per month between June and August 2007 (Telstra Supplementary Submission, p. 5). The number of DSLAMs deployed in the Exemption Area now exceeds 1400; as of October 2007, more than 60 per cent of the 371 ESAs in the Exemption Area were served by at least 4 competitive DSLAM operators. This percentage has doubled since the time Telstra’s Exemption Applications were lodged with the Commission.

(b) How cautiously should the ACCC regard these planned deployments?

In order to gauge the meaningfulness of planned DSLAM investments (and the likelihood of their materialising), the ACCC should consider the relationship between planned and actual DSLAM rollout in 2007. Based on plans announced in January, competitors had committed to deploy additional DSLAM-based infrastructure in 194 ESAs. By August, these plans had been met or exceeded in 61% of those ESAs (Telstra Supplementary Submission, p. 6). By October 2007, these plans had been met or exceeded in 83% of ESAs, with announced deployment plans having been exceeded in 53% of ESAs.

Given this, the Commission, rather than regarding planned deployments with caution, should consider the recent planned announcements of further recently announced DSLAM deployments by Primus, Internode and Optus to be conservative indicators of future DSLAM-based infrastructure deployment.

(c) Would new DSLAMs all have the capacity to provide voice services, or would some of the DSLAMs only be capable of providing DSL broadband?

¹⁸ See <http://www.amcom.com.au/default.aspx?MenuID=158>

Not all currently available DSLAMs have the integrated capability to deliver a standard telephone service (Lordan Statement, p. 12). Although equipment with multi service integrated voice and DSL functionality is available, DSL only equipment is still provided by some major suppliers (also p. 12).

However, Telstra considers that, in a facilities-based competitive environment, the onus is on its competitors to make efficient investment decisions, including on the issue of whether to install voice-capable DSLAM technology (see Paterson Statement, pp. 48-59). In any case, the lifespan of DSLAMs is relatively short (see Lordan Statement, pp. 13-14 and Telstra Technical Statement, p. 16), and there are few if any MES concerns with DSLAM deployment (Paterson Statement, pp. 34-35). Therefore nothing is preventing Telstra's competitors from making efficient choices about which DSLAMs to install.

(d) Do the Band 2 ESAs in Telstra's proposed Exemption Area have a significant enough addressable market to allow access seekers to achieve sufficient economies of scale or density to provide effective competition?

With the rapid growth of, and demand for, retail broadband services, it is unlikely that Telstra's competitors will face prohibitive difficulties in achieving sufficient economies of scale in the Exemption Area (see Telstra Supporting Submission, p. 31). Furthermore, the addressable markets within each ESA are sufficiently large (measured in terms of current SIOs) to allow entrants to attain sufficient scale. On average, ESAs in the Exemption Area contain more than 14,000 SIOs. The smallest ESA in the Exemption Area contains more than 1,300 SIOs. Based on Telstra's economic modeling of the MES (which it estimates at [c-i-c] SIOs for ULLS and [c-i-c] SIOs for LSS) (see Paterson Statement pp. 32-34, 93), it is clear that access seekers could viably enter any ESA in the Exemption Area.

(e) Is Telstra's internal estimation of the minimum efficient scale needed for competitive DSLAM entry accurate and realistic?

Telstra considers its estimate of the MES for competitive DSLAM entry to be accurate and realistic.

(f) Does an access seeker only need to have an amount less than [c-i-c] SIOs for ULLS and DSLAM-based entry to be viable?

Yes. Telstra relies on detailed economic modelling carried out by Dr Paul Paterson and detailed in the Paterson Statement at pp. 34-35. Dr Paterson based his analysis on information supplied by Telstra relating to monthly per SIO revenues of customers purchasing the bundle of ADSL and voice services.

Dr Paterson also estimated the monthly per SIO cost of supplying this bundle, by band, for three levels of SIOs: [c-i-c]. His analysis concludes that in Band 2, the average revenue per user (ARPU) is likely to exceed the cost of providing a ULLS-based bundle of voice and data services, where more than [c-i-c] SIOs are supplied (see Paterson Statement p. 33). [c-i-c]

(g) Are Telstra's submissions about the level of sunk costs accurate? Are DSLAMs easily capable of redeployment?

The cost of deploying DSLAMs cannot be regarded as sunk over any period longer than their relatively short economic life of DSLAMs (see Lordan Statement, pp. 13-14, and Paterson Statement p. 32). Furthermore since DSLAM shelf, voice and ADSL cards can be reinstalled in another exchange; these costs cannot be regarded as sunk even over a relatively brief time horizon (Paterson Statement, p. 32). Installation costs, which might be regarded as sunk in the short term, are negligible (see response 5.3.1(p) and (q) above, in reliance on the Lordan Statement, p. 11).

The second category relates to the costs of switching and transmission. The Paterson Statement concludes that these are only likely to include a sunk element if an access seeker chooses to provide its own switching equipment, which is not necessary, given the availability of wholesale switching services (see Paterson Statement, p. 33). Furthermore, competitive entrants that use POTS emulation technology may deploy the same switching architecture used for LSS-based VoIP. This means that, for firms already providing LSS-based VoIP, no further switching equipment need be purchased (see Paterson Statement, p. 33).

Third, the Paterson Statement considers whether competitive entrants would encounter sunk costs in relation to marketing, and concludes that these are unlikely to differ from marketing costs associated with providing local calls or basic access (see Paterson Statement, p. 33).

Accordingly, the Paterson Statement concludes that any sunk costs associated with ULLS-based supply are unlikely to give rise to material barriers for ULLS-based entrants (see Paterson Statement, p. 33).

(h) Are DSLAMs best characterised as a short-lived asset?

Yes; principally due to the fast moving nature of the technology involved, rather than 'wear and tear' on the particular assets involved. For example, the number of ports that can be included on a single card within a DSLAM is increasing rapidly. As another example, xDSL technology is changing rapidly, permitting faster transmission speeds. Each technological advance renders existing DSLAMs obsolete, and requires them to be replaced (see Telstra Technical Statement, pp. 16-17).

Similarly, Mr Lordan considers:

“The current DSLAM equipment will need to be either replaced or relocated in order to deliver the generally expected growth in data bandwidth requirements.

Due to the rate of change in service and functional requirements, I would expect that the economic life of most telecommunication assets, including DSLAMs, would be significantly shorter than the physical life.” (p. 13).

Mr Lordan also considers that the current service capacity of the present generation of DSLAMs is likely to be exceeded within five years (p. 13).

Finally, access seekers themselves have stated publicly that the payback period for a DSLAM investment is less than two years, further reinforcing the notion that DSLAMs are relatively short-term investments.¹⁹

Given all this, DSLAMs should be considered to be short-lived assets.

(i) *Is it accurate to say that 'switching and transmission infrastructure for voice services can be readily acquired?*

Yes, refer to answer to response 5.1.3.

(j) *The ACCC notes that CRAI says that it is 'technically feasible' to acquire this technology. Is such acquisition commercially feasible?*

Since traditional switching services may be purchased from existing operators, such costs cannot be regarded as sunk (see Paterson Statement, p. 33). Likewise regarding POTS emulation, there will be no additional costs for firms already providing LSS-based VoIP services. See further Telstra's responses 5.1.3 and 5.3.1(o).

(k) *Does voice emulation and the use of soft-switching infrastructure provide a low sunk cost alternative to the use of traditional voice equipment?*

Since the voice emulation (properly termed “POTS emulation”) technology relies on the same soft switches and PSTN Gateway infrastructure as carrier grade VOIP services (which can be supplied over a variety of access networks — including ULLS and LSS-based networks), firms already using this

¹⁹ See further, iiNet, *Presentation to Investors 2004*, p. 8 available at http://archive.iinet.net.au/about/investor/dsl_milestone.pdf

technology could begin deploying POTS emulation without acquiring additional switching equipment (see Paterson Statement, p. 33). To this extent, the sunk costs of acquiring such switching capability can be minimised.

(l) Is Telstra's internal estimation of the minimum efficient scale needed for competitive DSLAM entry accurate and realistic?. Does an access seeker only need to have somewhere less than [c-i-c] SIOs for ULLS and DSLAM-based entry to be viable?

Telstra refers the Commission to its responses at 5.3.2(e) and (f) above.

(m) What is a sufficient customer base for a competitor to justify building a DSLAM in an ESA?

Telstra refers the Commission to its response at 5.3.2(f) above.

(n) Would access seekers using DSLAMs and the ULLS, or providing VoIP services, be able to provide voice services of equivalent quality to Telstra's voice services?

If the access seeker chooses to acquire ULLS and a standard switching technology service, the voice service supplied will be very similar (both functionally and from a customer experience perspective) to Telstra's standard telephone service (Telstra Technical Submission, p. 18). If POTS emulation is used, the service will be the same, from an end-user's perspective, as a voice call delivered with standard switching (Telstra Technical Submission, p. 20), even though the underlying functionality is different. Finally, even if the access seeker acquires LSS and intends to deliver a VoIP service, it will not necessarily be of an inferior quality to a traditional voice service, since the Internet Protocol gives priority to voice over data packets, ensuring that call quality is not affected by network congestion: see pp. 21-22 of Telstra Technical Statement, as well as pp. 26-28 of its Telstra's Supporting Submission, pp. 17-22 of the Paterson Statement and Telstra Supplementary Submission, pp. 9-11.

(o) Would access seekers using DSLAMs and the ULLS, or providing VoIP services, be able to access competitively priced backhaul transmission in the Band 2 exchanges in the proposed Exemption Area?

In his statement, Dr Paterson considers that backhaul transmission services are either declared, or provided in a competitive market (see Paterson Statement, p. 36). This means that access seekers may shop around for a competitive price, or else notify an access dispute under Part XIC of the Act, and gain regulated access to backhaul services. Regarding the competitiveness of this market, Dr Paterson notes that Telstra, Optus, Nextgen, PIPE Networks, Powertel, Silk Telecom and Soul operate backhaul

networks in metropolitan and regional areas across Australia.²⁰ He concludes:

“On this basis, it is difficult to conceive that access to these services creates a barrier to ULLS entry.” (p. 36).

In addition, Primus has recently announced a significant upgrade in capacity to its national backhaul network.²¹

(p) What non-price barriers to entry exist for the use of DSLAMs to provide line rental and local call services?

There are no material non-price barriers to entry to the use of DSLAMs to provide WLR and LCS. In particular, Telstra would be constrained from engaging in anti-competitive conduct by Part XIB of the Act. Any attempt by Telstra to engage in anticompetitive behaviour would be relatively easy to prosecute, since Telstra’s retail and wholesale margins are closely monitored (Paterson Statement 1 November 2007, p. 14).

Furthermore, the Paterson Statement notes that Telstra has obligations under its Operational Separation Requirements to ensure that it provides equivalent notice of network upgrades to access seekers as it does to itself (see Paterson Statement, p. 37 and Paterson Statement 1 November 2007, p. 15). In addition, Dr Paterson considers that it would not be profitable for Telstra to degrade the quality of the WLR and LCS (Paterson Statement, p. 37).

(q) Does the absence of a LSS to ULLS transfer connection process provide a significant barrier to entry?

Dr Paterson considers that an existing LSS-based VoIP provider wishing to switch to a ULLS-based POTS emulation voice service would simply require disconnection of the second jumper and the installation of voice cards in an existing DSLAM. For this reason, Dr Paterson considers that for a list of LSS-based operators at Table 1 of his Statement, there are no material barriers to switching from LSS to ULLS (see p. 21).

(r) Is such a process likely to be made available in the near future?

Telstra has undertaken preliminary work on the development of a process, and, in doing so, encountered certain technical difficulties, which led Telstra to believe that in order to make LSS to

²⁰ See ACMA, “Communications Infrastructure and Services Availability in Australia 2006-2007”.

²¹ Primus, Primus Australia Boosts Fibre Optic Network Capacity, 13 September 2007, available at

ULLS transfers possible, it would need to make structural changes to some of its systems. In addition, there would need to be a co-operative process involving access seekers in order to address these problems.

In any event, demand from access seekers is not yet sufficiently strong to warrant undertaking the necessary development and consultation (bearing in mind that investment on the part of access seekers, both in time and systems, as well as from Telstra, will be required. While some Access Seekers may have expressed interest in the availability of such a process, to date none of these Access Seekers have provided firm forecasts for the migration of services, and it is far from clear that any real demand exists.

Given the aforementioned technical difficulties, the costs likely to be associated with overcoming them, and the lack of firm demand, Telstra believes that the case for establishing a transfer process cannot yet be established. Furthermore, the absence of significant demand from access seekers for such a process indicates that it is not a significant barrier to entry.

Finally, to the extent that the ACCC considers it has the power to arbitrate the terms and conditions on which such a process may be supplied, it cannot be said to form a significant barrier to entry.

(s) Are access seekers able to acquire the ULLS to provide voice services to customers who would not be capable of receiving xDSL?

Yes. ULLS access seekers can supply several types of services to their customers, including POTS voice services and xDSL services (including SHDSL, ADSL and ADSL2+). These services may be supplied individually (for example, a PSTN voice service on an ULLS line) or in certain combinations (for example, ADSL2+ and PSTN voice).

It is also possible for ULLS access seekers to potentially supply ADSL or ADSL2+ services to customers who may not be able to acquire these services from Telstra (either retail or resale).

For a customer to be provided a Telstra ADSL or ADSL2+ service via their connection to Telstra's PSTN, two conditions must be met in order for connection to meet Telstra's service qualification requirements. The customer's connection must have:

- less than or equal to [c-i-c] loss at [ci-ic] (the "voice test"); and
- less than or equal to [c-i-c] loss at [c-i-c] (the "broadband test").

If the customer's connection fails either the voice test or the broadband test, then Telstra will not supply that customer with an ADSL service. The test is the same for both retail and wholesale ADSL

services.

It should be noted that these service qualification metrics do not necessarily reflect the absolute limits at which either voice or ADSL services can be provided.

Therefore, if an ULLS access seeker wishes to supply an ADSL or ADSL2+ service to a customer connected to Telstra's PSTN, they do not have to fulfill these service qualification requirements. As such, it is possible for access seekers to provide ADSL services to customers who may not be able to receive services from Telstra (either retail or wholesale).

In practice, very few customers are not able to be provided services from Telstra due to their connections failing either voice test or broadband test elements of the service qualifications. Nationally, Telstra estimates that only [c-i-c] per cent of SIOs on the PSTN do not meet the ADSL service qualifications.

(t) *Is this an issue in the Band 2 ESAs in the proposed Exemption Area?*

As above. The percentage of lines in metropolitan Band 2 ESAs (including those in the proposed Exemption Area) that do not meet the ADSL service qualification requirements is equivalent to the national percentage (ie only [c-i-c] per cent of lines).

(u) *Are there any further barriers to entry, expansion and exit not already discussed above?*

Telstra's view is that all relevant barriers to entry have been thoroughly considered by the Paterson Statement, particularly at pp. 31-39. Dr Paterson concludes (at p. 39) that there is effective replication of Telstra's LCS and WLR services in the Exemption Area, and that there are no material barriers to retailers either commencing or increasing their use if the ULLS.

5.3.3 *Dynamic characteristics of markets*

(a) *What dynamic characteristics of the relevant markets should the ACCC consider?*

The ACCC should consider the current deployment and use of alternative technologies within the Exemption Area (see Telstra Supporting Submission pp. 20-34, Telstra Supplementary Submission, Paterson Statement, pp. 17-28 and Paterson Supplementary Statement, pp. 2-4), and the negligible barriers to future deployment of alternative infrastructure (see Telstra Supporting Submission, pp. 30-34; Paterson Statement, pp. 31-39).

The ACCC should also consider the scope for future investment in DSLAMs and other competing infrastructure (such as HFC and fixed wireless) to change the competitive dynamics of the relevant markets. As noted by the Paterson Statement, continuing WLR/LCS regulation that encourages regulatory dependence will stifle these possibilities (see Paterson Statement, pp. 52-54).

Several further dynamic factors should be considered in assessing Telstra's market power. Price trends should be considered in the context of underlying changes to costs, and to the quality of the service in question. In addition, even if it is more difficult for customers to churn, this does not reflect diminished competition to secure those customers. Rather, competition for those customers is likely to be more intense, since lower churn rates also makes it more difficult to lose a customers. It should also be borne in mind that churn rates should be assessed over the life of the relevant assets - several years in the case of DSLAMs (Paterson Statement 1 November 2007, pp. 12-13).

(b) If the ACCC grants the exemption applications, for what period should the ACCC grant the exemptions?

Telstra proposes that the Commission's exemption order regarding the LCS should expire on the earlier of:

- (i) the LCS ceasing to be an active declared service;
- (ii) a finding by a Court of competent jurisdiction that Part XIC of the TPA is invalid as it relates to the Unconditioned Local Loop Service and/or the High Frequency Unconditioned Local Loop Service; and
- (iii) 31 December 2012.

Similarly, Telstra proposes that the Commission's exemption order regarding the WLR should expire on the earlier of:

- (i) the WLR ceasing to be an active declared service;
- (ii) a finding by a Court of competent jurisdiction that Part XIC of the TPA is invalid as it relates to the Unconditioned Local Loop Service and/or the High Frequency Unconditioned Local Loop Service; and
- (iii) 31 December 2012.

(c) Should the exemptions be granted until 2012, as, sought by Telstra, or until the current expiry date of the LCS, and WLR services?

The periods sought by Telstra are preferable to simply granting exemptions until the current declarations expire, because granting exemption until the current expiry dates of the WLR and LCS services would provide insufficient certainty to all market participants as to the regulatory arrangements beyond the expiry dates. This in turn would detrimentally affect the ability of both Telstra and its competitors to make efficient investment decisions relating to telecommunications infrastructure within the ESAs.

Furthermore, granting the Exemption applications for the periods sought by Telstra would provide a clear signal to access seekers that the time has come for them to increase their investment in DSLAM-based infrastructure in order to replicate the WLR/LCS. This is consistent with the 'ladder of investment' approach advocated by Cave. As Cave notes, in the instance of services which are replicable, withdrawal of mandated access may be appropriate to implement the 'ladder'.²²

(d) If the ACCC grants the exemption applications, should the exemptions take effect immediately, or should it be deferred?

Given the speed of deployment of DSLAM-based infrastructure in the ESAs (see Telstra Supplementary Submission), Telstra considers that it would not be in the LTIE to delay the date upon which the Exemptions applications become effective. This would simply delay the benefits to be expected from greater facilities-based competition within the ESAs. Accordingly, Telstra submits that the Exemptions should take effect as of the date suggested in Attachment C to the LCS Exemption application and Attachment C to the WLR Exemption application respectively.

However, should the Commission form the view that a period of deferral is desirable, Telstra considers that it would be appropriate for the Commission to seek specific submissions on the proposed timeframe.

5.3.4 Nature and extent of vertical integration

(a) Are there any other issues relating to vertical integration relevant to the exemption applications that have not been raised above?

Dr Paterson, noting the Commission's concerns about the impact of Telstra's degree of vertical integration, considers that there is currently adequate protection in the Australian telecommunications sector from anticompetitive vertical pricing behaviour (Paterson Statement 1 November 2007, p. 15). He cites: regulatory monitoring of the margins between Telstra's retail and wholesale prices; the legal risks to Telstra of engaging in 'price squeeze' behaviour; and the

²² Martin Cave, "Encouraging Infrastructure Competition via the Ladder of Investment" (2007) 30

operational separation aspect of the telecommunications regulatory regime (Paterson Report 1 November 2007, pp. 13-15). Furthermore, Dr Paterson draws a distinction between:

“...anticompetitive actions due to substantial market power gained from vertical integration from competitive activities, even though the latter may harm less integrated and hence less efficient access seekers.” (Paterson Statement 1 November 2007, p. 13).

The Paterson Statement concludes that the proposed Exemption orders would facilitate efficient facilities-based competition; stimulating innovation and allowing for more robust price competition (see pp. 49-50). Further, to the extent that removing LCS/WLR regulation results in competitors moving to ULLS and full facilities based competition, existing competitors would be more deeply vertically integrated, which would be likely to intensify competition in retail markets and result in direct benefits for customers as vertical efficiencies are realised and passed through to consumers (see Paterson Statement, p. 59). In addition, greater vertical integration should allow rival firms to compete more vigorously in terms of both the price and non-price elements of their service offerings (see Paterson Statement, p. 49).

5.3.5 Other issues

(a) *What conditions (if any) should be placed on the granting of the exemption applications?*

Given that it is clearly in the LTIE for the Exemptions to be granted (for the reasons set out above and in Telstra Supporting Submission at p. 48), Telstra does not consider it appropriate for any conditions to be placed upon grant of the Exemptions . In Telstra’s view, any such conditions would be likely to dilute the benefits to be gained from the proposed Exemptions. However, in the event that the ACCC is minded to grant the Exemptions (or either of them) subject to any conditions, Telstra requests the opportunity to provide detailed submissions on the proposed conditions, either in the context of a draft exemption order or by way of a separate step in the consultation process.

5.4 Any-to-any connectivity

5.4.1 *Would granting the exemption applications have any effect on any-to-any connectivity?*

Telstra submits that, given the extent of available alternative infrastructure and declared services which provide or are readily capable of providing similar services to the LCS and WLR, the grant of the Exemptions will not affect the any-to-any connectivity of end-users (see Telstra Supporting Submission, p. 47).

Telecommunications Policy 223, p. 233.

5.5 Efficient use of and investment in infrastructure

By encouraging a movement away from access-based and towards facilities-based competition, granting the Exemption applications would promote both efficient use of and investment in infrastructure. Numerous economic commentators support the view that facilities based competition is preferable. Dr Paterson states:

“The form of competition which best promotes efficiency is facilities-based competition, since it allows for greater innovation and more robust price competition.” (Paterson Statement, p. 48; see also p. 49 for more detail).

In a similar vein, Professor Martin Cave recently wrote:

“Almost everyone believes that ‘competition is the best regulator’. It promotes consumer welfare by offering choice, variety, keen prices and innovation. Conversely regulation is often associated...lack of choice, uniformity, high costs and disincentives to innovate.

A corollary of the belief in the advantages of competition is that it should extend across the whole of, or as much as possible of, the value chain. So-called service or supply competition, in which competitors do little more than resell the incumbent’s services, fails to provide two of the above-noted benefits of competition, service variety and innovation. It offers choice of a sort, and where it offers keen prices it is often through regulator-promoted arbitrage which allows resellers to buy cheap at wholesale prices and attack the incumbent’s margin.”²³

Likewise, Waverman et al. state:

“We show that while access regulation may promote short-term competition based on the existing PSTN network, it does so at a substantial cost. This cost is the potential reduction in alternative infrastructure investment by both incumbents and entrants.”²⁴

By continuing to provide access seekers with regulated access to WLR/LCS services, the Commission will only encourage them to ‘buy’ rather than ‘build’. This is at clearly at odds with

²³ Cave, above n 22, p. 223.

²⁴ Leonard Waverman, Meloria Meschi, Benoit Reillier and Kalyan Dasgupta, “Access Regulation and Infrastructure Investment in the Telecommunications Sector: An Empirical Investigation” (September 2007), LECG Ltd, London, p. 4.

the regulatory approach advocated by Cave and others (which the Commission has repeatedly endorsed) - that access regulation, where contemplated, should be temporary, and should encourage access seekers to move up the 'ladder of investment' to providing services using their own facilities.²⁵ With DSLAM rollout in the Exemption Area accelerating, the time has come to kick away the lowest rung of the ladder, regulated access to the WLR/LCS, and encourage access seekers to continue expanding their infrastructure.

5.5.1 Economically efficient use of infrastructure

(a) Would granting the exemption applications have any effect on the efficient use of infrastructure by which listed services are provided?

Granting the Exemptions will promote facilities-based competition through encouraging greater investment in competing infrastructure (see Telstra Supporting Submission, pp. 47-48 and Paterson Statement, pp. 50-59). By contrast, preserving access regulation where workable competition exists is likely to discourage efficient infrastructure investment and use. Manifestations of this include: the truncation of returns from investment; the potential for regulatory dependence; the potential for arbitrage based on regulated access; and the asymmetry of the costs of regulation (see Paterson Statement, pp. 51-52). Granting the Exemption applications would remove these costs of regulation.

(b) What impact would granting the exemptions have on the efficient use of infrastructure in upstream products such as the ULLS?

Currently the ULLS (and to some extent the LSS) in conjunction with the deployment of DSLAMs (and to a lesser extent other competing networks such as HFC and fixed wireless) enable the replication of downstream services provided by means of the LCS and WLR in the Exemption Area. Furthermore, there are no material impediments to retailers commencing to use, or increasing their use of, these close substitutes (Paterson Statement, p. 59).

Accordingly, it is clear that the opportunity already exists for fixed telephony providers to make greater use of the ULLS within the Exemption Area. Further, should Telstra raise its WLR and LCS prices, or refuse to supply these services, retailers would have a clear incentive to substitute away from WLR and LCS and make greater use of ULLS infrastructure (Paterson Statement, p. 59).

On that basis, granting the Exemption orders can be expected to improve the efficient use of ULLS

²⁵ M. Cave, especially at pp. 232-235.

infrastructure within the Exemption Area.

5.5.2 *Economically efficient investment in infrastructure*

(a) *Would granting the exemptions significantly affect Telstra's incentives to invest in its infrastructure?*

Since an exemption order would not harm existing competition (Paterson Statement, pp. 44-50), and would also reduce the incidence of regulatory error, it would in fact promote competition (Paterson Statement, p. 56). Promoting competition is the best means of stimulating efficient investment in infrastructure, including Telstra's investment in its own infrastructure (Paterson Statement, pp. 55-58). Thus, granting the Exemptions can be expected to improve Telstra's incentives to invest in its own infrastructure. Perhaps, even more importantly, it would promote efficient investment in DSLAM infrastructure by access seekers who might otherwise be content simply to rely on the arbitrage opportunities afforded by the resale of LCS and WLR.

(b) *Would granting the exemptions affect Telstra's plans to invest in maintenance, improvement and expansion of its fixed network infrastructure?*

Given that granting the Exemptions would remove several disincentives to invest, such as the truncation of returns (Telstra Supporting Submission, p. 36) and the asymmetric impact of regulated prices (Telstra Supporting Submission, p. 39), Telstra would be likely to face enhanced incentives to maintain, improve and expand its fixed network infrastructure; see pp. 34-40 of Telstra Supporting Submission, and pp. 55-58 of the Paterson Statement. More broadly a clear signal by the ACCC that it will roll back access regulation where it no longer promotes the LTIE would be likely to enhance access providers' (including Telstra's) incentives to upgrade and invest in their infrastructure.

(c) *How realistic are the costs of regulation identified by Telstra?*

Continued regulation of the WLR and LCS in the Exemption Area is likely to impose two kinds of costs: transaction compliance and administrative costs; and the costs of regulatory error (Telstra Supplementary Submission, p. 39). Other regulatory costs included the asymmetric impact of regulatory decisions (Telstra Supplementary Submission, p. 39) and the potential for regulatory dependence (pp. 36-37).

In relation to the costs of regulatory error, that the High Court in its recent decision on *EAPL v*

ACCC,²⁶ warned of the likely adverse effects that would result from the ACCC failing to adhere to its powers as outlined in the Gas Code:

“The greater degree of uncertainty and unpredictability in the regulatory process, the greater will be the perceived risk of investment. The greater the perceived risk of investment, the higher will be the returns sought.”²⁷

In relation to regulatory dependence, recent empirical estimates have been provided by Waverman et al. (2007).²⁸ These authors used regression analysis to compare three variables: the intensity of access regulation (specifically, access to the unbundled local loop); investment in alternative access platforms; and overall impacts on the consumer uptake of broadband services. The authors sought to determine whether reductions to the regulated price of the LLU would be likely to result in decreased investment in alternative infrastructure. They also examined whether any such costs would be offset by overall increases in broadband penetration (as a result of lower prices to consumers flowing from lower regulated access to LLU).

They concluded that, other things being equal, a ten per cent reduction in the regulated access price of the LLU would result in an 18% reduction in the subscriber share of alternative infrastructure.²⁹ Furthermore, their analysis suggests that the market-stimulating effect of an LLU price reduction is not sufficient to prevent a decline in the overall number of subscriber lines served over alternative access platforms.³⁰ Having outlined the impact of regulated access to the LLU on the number of subscribers serviced by alternative infrastructure, the authors then considered how this would be likely to impact on actual investment by broadband providers. They found that such impacts were likely to be very strong.³¹ For Europe as a whole, the lost long-term investment in alternative access platforms would exceed 10 billion euros as a result of a 10 per cent LLU price reduction.³²

An earlier study by Crandall et. al. reached the similar conclusion that facilities based investment in telecommunications facilities was slower where access prices were lower.³³

(d) *Are regulators likely to set prices too low and are the impacts of doing so asymmetric?*

²⁶ [2007] 81 ALJR 1868; see above n 10

²⁷ *Ibid.* at § 50.

²⁸ Above n 24

²⁹ *Ibid.*, p. 3.

³⁰ *Ibid.*, p. 23.

³¹ *Ibid.*, p. 24.

³² *Ibid.*, p. 4.

³³ Robert W. Crandall, Allan T. Ingraham and Hal J. Singer, “Do Unbundling Policies Discourage CLEC Facilities-Based Investment” (2004) 4(1) *Berkeley Journal of Economic Analysis and Policy* 1, 3.

Regulatory structures and the incentives faced by the regulator are more than likely to lead to prices below the efficient level (Telstra Supporting Submission, p. 39). While regulatory prices set too high generally do not lead to excessive amounts of investment (given the discretion of the regulated firm to price below the maximum allowable price), regulatory prices set too low do discourage efficient investments (see Paterson Statement, p. 52). Thus, even if prices set by the Commission are able, on average, to achieve a reasonable risk-adjusted return, the errors likely to occur across a series of decisions would exert an asymmetric (and negative) impact on efficient investment (Paterson Statement 1 November 2007, p. 17).

(e) *Has declaration of the LCS and WLR discouraged investment in alternative voice infrastructure by access seekers?*

In many cases declaration of the LCS and WLR appears to have led to dependence by Telstra's competitors on continued access, rather than investing in infrastructure. For example, the Paterson Statement discusses Optus's disinclination to expand or even make full use of its existing HFC infrastructure (see Paterson Statement, pp. 52-54). However the question the Commission must consider is whether continued declaration of the LCS and WLR will lead to regulatory dependence. Telstra's response to that question is at (f) and (g) below.

Telstra refers the Commission to pp. 36-37 of its Supporting Submission and p. 53 of the Paterson Statement.

(f) *Would granting the exemption applications be likely to encourage efficient investment in alternative infrastructure by removing the scope for reliance on the declared LCS and WLR?*

Dr Paterson's statement notes that access regulation can create regulatory dependence, distorting access seekers' incentives to invest and delaying the procession to facilities based competition (Paterson Statement, p. 51).

One indication of regulatory dependence is where competitors shift their focus from self-supply to regulated products. For example, SingTel Optus has experienced negative growth in the use of its HFC network, at the same time that it has significantly increased its reliance on the declared WLR/LCS (see Paterson Statement, pp. 52-54).

From this, Dr Paterson concludes that LCS/WLR regulation is apparently leading to the inefficient

use of infrastructure, as well as creating obstacles to facilities-based competition (p. 54).

Based on Dr Paterson's findings, Telstra submits that granting the Exemption Applications would lead to efficient use of and investment in infrastructure by reducing dependence on regulated WLR/LCS services.

(g) *What implications would Telstra's exemption applications, and proposed rule for including ESAs in its exemption, area, have on investment by access seekers in DSLAM infrastructure?*

DSLAM rollout is gathering momentum throughout the Exemption Area, and is unlikely to be slowed by granting the Exemptions.

As at October 2007, over 1400 DSLAMs had been installed throughout the 371 ESAs in the Exemption Area. More than 60 per cent of the 371 ESAs in the Exemption Area were served by *at least 4* competitive DSLAM operators. This percentage has doubled since the time Telstra's Exemption Applications were lodged with the Commission (see figure 1).

In addition, new market offerings such as Optus's Fusion Product, and numerous planned 'naked DSL offerings (see response 5.3.1(u) above) have highlighted the effectiveness of DSLAM rollout in enabling Telstra's competitors to offer innovative new bundled voice and data services to customers in the Exemption Area (see Telstra Supplementary Submission, pp. 9-11).

Against this backdrop, Telstra considers that granting the Exemptions would, if anything, give access seekers greater incentive to invest in DSLAM infrastructure. If Telstra were to raise the prices of WLR and LCS (and it is by no means clear that it would, or could, although some access seekers will no doubt attest that it will), this would only encourage access seekers to switch to using the ULLS instead, by deploying DSLAMs (see Telstra Supporting Submission, p. 45).

(h) *Would an alternative rule be preferable as a result?*

No. Given that the barriers to DSLAM deployment are low, the deployment of more than one DSLAM is not necessarily more meaningful, from an economic perspective, than the deployment of a single DSLAM (see Paterson Statement, pp. 31-39 and 43). Accordingly, a more restrictive test does not materially enhance the case for granting the Exemptions.

5.5.3 *Legitimate commercial interests of access provider*

(a) *Would granting the exemption applications be likely to allow Telstra to recover more than is in its legitimate commercial interests?*

The ACCC is proposing a construction of section 152AB(6) that finds little support from the plain meaning of the words of this subsection, or any other part of section 152AB. The ACCC appears to be advocating a “novel” or “idiosyncratic” interpretation of the words of section 152AB(6), of precisely the kind that recently received strong criticism from the High Court in *EAPL v ACCC*.³⁴ The Court in this case overturned a regulatory decision of the ACCC, on the basis that the ACCC had failed to confine itself to the “primary and natural significance” of the words of section 8.10 of the Gas Code, but rather had based its decision on an “idiosyncratic” construction of the words of the section. Likewise in the present instance, the ACCC should not interpret the phrase “legitimate commercial interests of the supplier or suppliers of the services” to connote that the subsection may be relied upon to place an upper bound on the returns earned by the service provider from the service.

The proper construction of this subsection is to ask whether the service provider will be able to earn an appropriate commercial return from providing the service.

Dr Paterson in his Statement of 1 November 2007 considers that since workably competitive conditions prevail within the Exemption Area, market forces would prevent Telstra from more than a reasonable risk-adjusted return on its efficient costs (p. 18). In addition, he considers that, given the significant risks involved in providing facilities-based telecommunications services, the appropriate market returns will be higher than in less risky businesses (also p. 18).

5.6 Class exemption

5.6.1 *Should the ACCC make a class exemption in similar terms to Telstra's individual exemption applications?*

Telstra has no objection to the Commission making a class exemption in similar terms to Telstra's Exemption applications.

5.6.2 *What would an appropriate class of carrier be?*

Telstra does not express a view on this issue.

5.6.3 *.Are there any considerations for granting a class exemption that differ from those for Telstra's individual exemption applications?*

Telstra does not express a view on this issue.

5.6.4 *Should the conditions (if any) for a class exemption be different from those for the individual exemptions (if any)?*

Telstra favours an unconditional exemption, be it an individual or a class exemption.

Telstra submits that, given it is clearly in the LTIE for the Exemptions to be granted (see Telstra Supplementary Submission, p. 48), it would not be appropriate to place any conditions upon granting of the Exemptions . The granting of conditional exemption orders would be likely to dilute the benefits to be gained from the proposed Exemptions.

Telstra also requires that it be given the opportunity to make further submissions on any proposed conditions. However, as a general principle, Telstra considers that any conditions should be imposed in a uniform manner.

Telstra Corporation Limited

1 November 2007

³⁴ Above n 10.

Annexure A - Further statement of Dr Paul Paterson

Annexure B - Statement of Craig Lordan from Evans & Peck

Annexure C - Report from Market Clarity

Annexure D