Australian Competition & Consumer Commission

# Telstra's exemption application in respect of the Optus HFC network

## Final decision

**November 2008**

**Public version**

# Contents

# List of shortened forms

| | |
|---|---|
| ABS | Australian Bureau of Statistics |
| ACCC | Australian Competition and Consumer Commission |
| ACMA | Australian Communications and Media Authority |
| ADSL | asymmetric digital subscriber line |
| ARCEP | Autorité de régulation des communications électroniques et des postes |
| CAN | customer access network |
| CAU | customer access unit |
| CBD | central business district |
| c-i-c | commercial-in-confidence |
| CMTS | cable modem termination system |
| CPE | customer premises equipment |
| CSA | content supply agreement |
| DOCSIS | data over cable service interface specification |
| DSL | digital subscriber line |
| DSLAM | digital subscriber line access multiplexers |
| EBITDA | Earnings before interest, tax, depreciation and amortisation |
| ESA | exchange service area |
| FSR2 | second position paper in *Fixed Services Review* |
| FTTH | Fibre-to-the-home |
| FTTN | fibre-to-the-node |
| HFC | hybrid fibre-coaxial cable |
| IAD | internet access device |
| IIA | Internet Industry Association |
| IP | internet protocol |
| IPTV | internet protocol television |
| ISP | internet service provider |
| LCS | local carriage service |
| LSS | line sharing service |
| LTIE | long-term interests of end-users |
| MDF | main distribution frame |
| MDU | multi dwelling unit |

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|---|---|
| MSAN | multi-service access node |
| NBN | National Broadband Network |
| NGN | next generation network |
| NPV | net present value |
| OECD | Organisation of Economic Cooperation and Development |
| PSTN | public switched telephone network |
| PSTN OA | public switched telephone network originating access |
| PSTN TA | public switched telephone network terminating access |
| POTS | plain old telephone service |
| RFP | Request for Proposals |
| RKR | record keeping rule |
| SAO | standard access obligation |
| SDU | Single dwelling unit |
| SIO | service in operation |
| SME | small and medium enterprises |
| SSNIP | small but significant non-transitory increase in price |
| TPA | *Trade Practices Act 1974* (Cth) |
| ULLS | unconditioned local loop service |
| USS | Upper spectrum sharing |
| VoB | Voice over Broadband |
| VoIP | Voice over Internet Protocol |
| VPN | virtual private network |
| WLR | wholesale line rental |
| xDSL | Refers to the ‘family of digital subscriber line services (e.g. ADSL, HDSL etc.) |

# Summary

On 18 December 2007, the Australian Competition and Consumer Commission (ACCC) received an application (the HFC exemption application) from Telstra Corporation Limited (Telstra) seeking an individual exemption from the standard access obligations (SAOs) under section 152AT of the *Trade Practices Act 1974* (TPA). The exemption sought by Telstra relates to the supply of the following declared services to Singtel Optus (Optus) within a defined geographic area:

- local carriage service (LCS) — a wholesale local call service, involving the carriage of a telephone call from one end user to another end user in the same standard zone.
- wholesale line rental (WLR) — the provision of a basic line rental service that allows the end user to connect to the access provider's public switched telephone network (PSTN). It provides the end user with the ability to make and receive standard PSTN voice calls; and a telephone number.
- public switched telephone network originating access (PSTN OA) — domestic PSTN originating access is the carriage of telephone calls from the calling party (the A-party) to a point of interconnection with an access-seeker's network.
- unconditioned local loop service (ULLS) — the unconditioned local loop service is the use of unconditioned communications wire between the end-user's premises and a point on the telecommunications network that is a point of interconnection located at the customer access module on the end-user side.
- line sharing service (LSS) — the line-sharing service allows similar functionality to a competitor to that provided by a ULLS, but the voice service is provided by another party.

In relation to the supply of LCS, WLR and PSTN OA, Telstra's application states that the exemption is sought 'to the extent not covered by another exemption under section 152AT(1) of the TPA'.[1] This reflects that, at the time of lodging the HFC exemption application, Telstra had already lodged a number of other exemption applications relating to these three services.

Telstra specifies the defined geographic area for the exemption application to be the area including customer premises that lie wholly or partly within 75 metres of the network distribution lines of Optus' hybrid-fibre-coax (HFC) network in Sydney, Melbourne and Brisbane. The Optus HFC network is an end-to-end network that can provide fixed voice, broadband and pay TV services to end users. Telstra proposes a 12 month transition period for the exemptions to take effect if granted, including a staggered implementation for differently sized end-user premises.

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[1] Telstra, *Application for exemption from standard access obligations in respect of the Singtel Optus HFC network*, 17 December 2007, p. 2.

Telstra is not seeking in the HFC exemption application that Optus expand its HFC network footprint, but submits that granting the exemption would encourage Optus to invest in its existing HFC network within its existing geographic footprint.

The ACCC declared the LCS and WLR in 2006 as part of its Local Services Review.[2] The LCS had previously been declared by the ACCC in July 1999.[3] The ACCC declared the ULLS and PSTN OA in 2006 as part of its Fixed Services Review.[4] The ULLS was first declared in 1999, while PSTN OA was originally deemed to be declared in 1997.[5] The LSS was most recently declared in October 2007, having originally been declared in August 2002.[6]

In this final decision, the ACCC has largely focused its analysis on the likely outcomes were an exemption for the ULLS granted. This approach reflects the emphasis placed on the ULLS in Telstra's submissions, the exemptions already granted by the ACCC in relation to LCS, WLR and PSTN OA and the fact that Optus has announced it is moving from supply via resale products (i.e. WLR, LCS and PSTN OA) in favour of supply by ULLS.[7] Except where otherwise stated, the ACCC considers that, in deciding whether to grant the exemption, the same analysis applies to the consideration of the exemption application in relation to all five declared services.

Under section 152AT of the TPA the ACCC has the power to make an order exempting a carrier or carriage service provider from the SAOs that apply in respect of a declared service. The ACCC also has the power under section 152AS of the TPA to determine that the members of a specified class of carriers/carriage service providers are exempt from the SAOs that apply in respect of a declared service. The ACCC must not make such an exemption order under section 152AT or determination under section 152AS unless it is satisfied that making the exemption order or determination will promote the long-term interests of end-users (LTIE), as defined in section 152AB of the TPA. An exemption order or determination may be unconditional or subject to such conditions or limitations as are specified in the order or determination.[8]

The HFC exemption application differs from others recently submitted by Telstra—which related to the LCS, WLR, PSTN OA and transmission services—in that it seeks an exemption from the SAOs only in respect of supply to Optus (or to any carrier who acquires the service from Telstra and resupplies it to Optus). Existing access rights of other carriers would not be affected by this exemption application (except to the extent they resupply services to Optus). Comparatively, the other exemption applications referred to above seek an exemption from the SAOs in respect of supply to all access seekers.

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2 ACCC, *Local services review—final decision*, July 2006.

3 ACCC, *Declaration of local telecommunications services*, July 1999.

4 ACCC, *Declaration inquiry for the ULLS, PSTN OTA and CLLS—final determination*, July 2006.

5 ACCC, *Declaration of local telecommunications services*, July 1999; ACCC, *Deeming of telecommunications services*, 30 June 1997.

6 ACCC, *Review of the Line Sharing Service Declaration—final decision*, October 2007; ACCC, *Line sharing service—final decision*, August 2002.

7 Optus, Response to ACCC Discussion Paper, March 2008, p. 6

8 TPA subsections 152AS(2) and 152AT(5).

On 29 January 2008, the ACCC published a discussion paper seeking comments from interested parties on the HFC exemption application. In response, Optus, Telstra and a third party provided the ACCC with one submission each. Both Optus and Telstra then provided the ACCC with supplementary submissions in May and June respectively. Public versions of these documents are available on the ACCC website.

On 6 August 2008, the ACCC extended the time for consideration of the HFC exemption application by three months under subsection 152AT(12) of the TPA.

On 22 September 2008, the ACCC issued a draft decision not to grant Telstra's HFC exemption application and sought comments from interested parties. In response, Optus, Telstra and Foxtel provided the ACCC with one submission each.

Parties making submissions to the ACCC's consultation process also provided a number of attachments to their submissions, including reports from consultants and material referenced in their submissions.

**Would granting the exemption promote the long-term interests of end-users?**

The ACCC has applied the test set out in section 152AT of the TPA to the HFC exemption application – namely, whether the ACCC is satisfied that the granting of the exemption will promote the LTIE of carriage services or of services provided by means of carriage services. In doing so, as mandated by subsection 152AB(3), the ACCC has had regard only to the LTIE objectives set out in subsection 152AB(2). These objectives are:

- the objective of promoting competition in markets for listed services
- the objective of achieving any to any connectivity
- the objective of encouraging the economically efficient use of, and the economically efficient investment in infrastructure.

The ACCC notes that the objectives related to the promotion of competition and the economically efficient use of and investment in infrastructure are closely related. The ACCC's analysis is set out below.

***Major issues of concern***

The ACCC considers that there are two key reasons why it is not satisfied that making the exemption applied for by Telstra would promote the LTIE. These two reasons are equally relevant to both the LTIE objectives of the promotion of competition and the efficient use of and investment in infrastructure. The first relates to the likelihood of such an exemption having disincentive effects on investment due to the exemption relating to one particular carrier. Secondly, the ACCC is concerned that the consequences of Telstra's 50 per cent interest in Foxtel are such that the competitive benefits envisaged by Telstra if the exemption were granted would be unlikely to eventuate.

*Disincentive effects*

As noted above, a distinguishing feature of the HFC exemption application is that the exemption sought applies to the supply of declared services to only one carrier, Optus (or to other carriers that buy a service from Telstra and resupply it to Optus). The ACCC's view is that granting such an exemption could lead to significant disincentives for companies to deploy infrastructure, and therefore:

- have significant negative implications for the promotion of competition, particularly the promotion of facilities-based competition in the wider telecommunications industry
- discourage the economically efficient use of and investment in infrastructure.

The ACCC has long held the view that regulation under the TPA should be concerned with 'competition, not competitors'.[9] That is, the ACCC's major concern relates to the process of competition, rather than focusing on the role of particular competitors. Telstra's proposed approach instead focuses on a particular competitor.

The ACCC considers that granting such an exemption could lead to an investing telecommunications firm having a reasonable expectation that making investments in infrastructure will lead to it and it alone being denied access or unable to enforce the SAOs relating to various declared services, or having to negotiate for access without the possibility of arbitration, while other competitors continue to be able to get regulated access to the services. The ACCC's concern is that this could lead to a significant chilling effect on investment generally. The ACCC is concerned that this could affect deployments by other carriers of both fixed-line infrastructure, including DSLAM infrastructure, and other infrastructure such as wireless services. This disincentive can be contrasted with the circumstances that would apply when more general exemption applications are granted.

The ACCC notes that Telstra has presented submissions that it considers this concern is a minor one or can be limited.[10] However, the ACCC considers that the solutions presented by Telstra do not ameliorate the concerns.

The ACCC is also concerned that the discriminatory access approach proposed in the HFC exemption application may, if adopted, restrict the investment by companies that invest in more than one delivery platform. The approach requires the ACCC to pick the technology used by Optus and to remove or limit Optus' access to alternative technologies. The ACCC considers that this could discourage investment by firms investing or considering investing in more than one type of telecommunications infrastructure due to concerns that the regulator will then select one of those technologies as the only method of delivery. This would have implications for the promotion of competition, particularly competition deriving from new technologies.

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9 see, e.g. ACCC, 'ACCC protects competition, not competitors' (media release), 12 October 2007.

10 Cave, *Applying the ladder of investment in Australia*,, p. 14; Cave, *A note on Two Points in Optus' Submission*, June 2008, p. 2; Ergas, *Expert Report*, June 2008, p. 17, Telstra, *Response to draft decision regarding Telstra's exemption application in respect of the SingTel Optus HFC network*, 15 October 2008, p. 41.

Picking technologies contrasts with the ACCC's general approach to regulation, under which it aims to set different efficient, cost-based access prices for different services which allows firms to make productively efficient technology choices and investments as appropriate. In this vein, the ACCC notes that Telstra itself states concerns about being deterred from developing a range of facilities.[11]

As a threshold issue, the ACCC considers that the disincentives for investment that, as discussed above, will result from the discriminatory access policy proposed by Telstra would reduce the potential for the future development of competition from use of competitive infrastructure. The ACCC accordingly considers that competition will not be promoted in markets where the potential for future efficient facilities-based investment is significantly discouraged.

*Telstra's 50 per cent interest in Foxtel and its effect on investment in Optus HFC*

The ACCC has previously considered the issues relating to Telstra's 50 per cent interest in Foxtel and the Australian pay TV market structure in its June 2003 report *Emerging market structures in the communications sector*. A key recommendation of that report was that the government should introduce legislation requiring Telstra to divest its HFC network in full and divest its 50 per cent shareholding in Foxtel, unless it could be shown that the costs of such divestiture outweigh the benefits flowing from increased competition. As such divestitures did not occur, the ACCC considers that Telstra's ownership of its 50 per cent share in Foxtel, remains a significant issue affecting the likely viability of Optus' HFC network. In particular, the control over content that Telstra retains through that interest would appear to be a significant barrier to expansion.

The reason that access to content is an issue in this exemption application is because a key argument supporting Telstra's application is that granting the exemption would encourage Optus to connect most of the 800,000 premises that Optus currently regards as unserviceable (as well as making investments in the technology used over the Optus HFC network). Optus' network currently passes a total of 2.2 million premises. Optus regards 1.4 million of these premises as serviceable and 0.8 million as unserviceable due to reasons including 0.5 million premises being MDUs, heritage overlays and distance.[12]

Optus argues that it is neither economically viable nor practical to connect these currently unserviceable premises, while Telstra disputes Optus' claims.[13] The difficulty and cost of performing the in-fill investment to service these homes may constitute a barrier to expansion that affects Optus' ability to compete using HFC.

Telstra submits in its exemption application that, by encouraging Optus to invest more in its HFC network, there would be an increase in competition, particularly over time as Telstra, Optus and other competitors move to upgrade their competing networks to

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[11] Telstra, *Response to draft decision regarding Telstra's exemption application in respect of the SingTel Optus HFC network*, 15 October 2008, p. 51.

[12] Optus, Response to ACCC Discussion Paper, March 2008, p. 14.

[13] Optus, Response to ACCC Discussion Paper, March 2008, p. 16; Telstra, Response to ACCC Discussion Paper, March 2008, p. 34, 84.

compete with each other. There would arguably be some potential for improved dynamic competition if the exemption was granted and Optus made infill investment and upgraded the capabilities of its network. However, this is just one possible outcome that could stem from granting the exemption, and the ACCC considers that competing firms already have substantial incentives to invest in differentiating their services. The ACCC considers it unusual that Telstra has effectively submitted that it needs Optus to upgrade its network first before it would consider equivalent investments.

Telstra remains the dominant provider of retail fixed voice services and broadband services at a national level. It retains an ability to utilise its copper customer access network (CAN) to maintain a strong position in this market given the structural characteristics of telecommunications markets. Given that Optus is the second largest telecommunications carrier, removing its access to the ULLS may result in worse price and non-price retail outcomes for consumers in areas where Optus no longer has ULLS access, unless consumers can easily switch to supply by Optus HFC services. In this regard, the Optus HFC network does appear to be able to provide broadly substitutable retail services for the homes Optus currently regards as serviceable. However it is important to note that the switching costs associated with moving between copper and HFC can be significant, which may impede the process of competition.

Optus states that, out of its 2.2 million premises passed, it does not use ULLS for the 1.4 million premises that it regards as serviceable via its HFC network.[14] Accordingly, a significant investment that could result from granting the exemption would be connecting those 0.8 million premises that Optus currently regards as unserviceable. If those premises were not connected to the HFC network and the exemption was granted, customers would lose the option of acquiring a ULLS-supplied service from Optus without necessarily gaining the option of an HFC service. The ACCC considers that this would result in damage to the level of competition in retail fixed voice and broadband markets, and tend to lead to higher prices to end-users.

Alternatively, Optus may still choose to acquire the declared services, but at prices above those available were the services still regulated. In this scenario, the most likely consequence of granting the exemption application would be higher prices for end-users.

The modelling of the cost of connecting the homes that Optus currently regards as unserviceable is complex. The ACCC does not consider that it is in a position to make a definitive conclusion on the investment case for Optus of connecting homes that Optus currently regards as unserviceable to its HFC network. However, the ACCC notes that the payback period for such investments would appear to be significant.

The ACCC considers that Telstra's ownership of its 50 per cent interest in Foxtel is a crucial consideration affecting this investment case. In particular, the high content costs faced by Optus are a significant barrier to expansion that limits Optus' ability to achieve potential economies of scope on its HFC network and to recover the costs of expanding or infilling the network by, for example, connecting up MDUs. This in turn affects the competitiveness of the Optus HFC network and makes the economic viability of such investments in Optus' HFC network clearly questionable. While

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[14] Optus, Response to ACCC Discussion Paper, March 2008, p. 9.

Telstra has argued that Optus has the ability to access certain volume discounts in content, the ACCC is not satisfied that the discounts contained in the content supply agreement would make a significant difference to the investment case.

The ACCC therefore considers that removing Optus' ability to access the regulated ULLS within the HFC footprint could reduce the level of competition and potential for competition in retail fixed voice and broadband markets, and could damage the competitive process. As other competing carriers would be able to compete through regulated access to Telstra's services, this competitive detriment may be somewhat limited but, overall, the ACCC is not satisfied that the promotion of competition envisaged by Telstra as a result of granting this exemption would, in fact, occur. The ACCC is also not satisfied that it would be an efficient outcome for Optus to infill its HFC network.

***Other issues raised by the exemption application***

In addition to the two major issues identified above, the ACCC also has other concerns about the effects on competition and on efficient use of and investment in infrastructure if the exemption were granted:

*Wholesale services*

Telstra notes that the granting of the exemption may have some impact on the operation of wholesale markets but submits that this is not relevant as it considers that there will not be any impact at the retail level. Further, it submits that, to the extent that competition may be harmed in the wholesale markets due to removing Optus' supply of wholesale services using DSLAMs, Optus may continue to compete in the wholesale market using HFC, may reach agreement with Telstra for purchasing the ULLS and can continue to use ULLS outside the HFC footprint. It also submits that other parties may continue to act in the wholesale market using DSLAMs.

The ACCC considers that Telstra is the dominant operator in the upstream markets for the wholesale supply of broadband and fixed voice services. The ACCC is of the view that these wholesale markets do not display the characteristics of effectively competitive markets. As Optus is Telstra's largest competitor in both of these wholesale markets, removing Optus' ability to access regulated services could remove wholesale supply options for third parties who rely on Optus to provide them with a commercially negotiated wholesale fixed voice or broadband product. The ACCC notes the possibility of supply by Optus of wholesale services over its HFC network, but observes that neither Telstra nor Optus currently supply wholesale services over their HFC networks, nor have they during the life of their HFC networks. The ACCC considers that switching to wholesale provisioning by HFC could have significant implications for both a wholesaler and its wholesale customers and impede the process of competition. The ACCC considers that granting the HFC exemption application could therefore lead to a reduction in competition in the relevant wholesale markets by removing a significant source of competition. Other firms may not have the same ability to provide wholesale services in at least the short to medium term.

The ACCC notes that Optus' ability to supply a wholesale fixed voice product over the ULLS was also an important rationale for the ACCC's recent decisions to grant

Telstra’s LCS, WLR and PSTN OA exemption applications and is a relevant consideration in respect of this application.

*National Broadband Network*

A separate consideration in relation to the efficient investment in infrastructure is that related to the proposed National Broadband Network (NBN). Several elements of the NBN rollout are currently unknown. This potential uncertainty affects the risks involved with, and hence the incentives for, investment in communications infrastructure. The ACCC also notes that uncertainty over the NBN may make it more difficult for the ACCC to be satisfied that granting this exemption will promote competition. However, the ACCC does not consider that concerns about the uncertainties about the NBN process are necessarily large ones.

*Speed race*

A Telstra argument that becomes more central to its later submissions is that granting the exemptions would lead to Optus improving the technology used in its network to increase the speed of broadband services and change its telephony technology, sparking a ‘speed race’ between Australian telecommunications providers.[15] The ACCC is not satisfied that such a scenario is more likely were the exemption granted than if it were not.

***Final decision***

The ACCC has weighed up the extent to which granting the exemption would promote any or all of the LTIE objectives in subsection 152AB(2). On balance its final decision is that it is not satisfied that granting the exemption application would be in the LTIE.

The ACCC in particular considers that the disincentive effect on efficient investment and subsequent effect on the promotion of competition that would be generated by the discriminatory access regime in the HFC exemption application is a concern. The ACCC also has significant concerns relating to Telstra’s 50 per cent interest in Foxtel, and the effect that this would have on the economies of scope of the Optus HFC network, were the exemption to be granted.

For these two key reasons, the ACCC’s final decision is that it is not satisfied that granting the HFC exemption application would either promote competition (in the manner set out in paragraph 152AB(2)(c)) or encourage the economically efficient use of and investment in infrastructure (in the manner set out in paragraph 152AB(2)(e)).

The ACCC also has concerns in relation to the related issues of:

- the effects on the wholesale markets for fixed voice and broadband services
- the implications of the NBN process.

[15] see, e.g. Telstra, Response to ACCC draft decision, October 2008, p. 1, 69.

The ACCC is of the view that granting the exemption would have little impact upon the objective of encouraging any-to-any connectivity (in the manner set out in paragraph 152AB(2)(d)).

**Structure of the final decision**

This report sets out the reasons for the ACCC's final decision. It is structured as follows:

**Section 1** provides background to the declared services in issue and summarises Telstra's HFC exemption application

**Sections 2, 3, 4 and 5** examine whether the proposed exemption should be granted with regard to the LTIE.

**Section 6** summarises the ACCC's conclusions in deciding not to grant the exemption.

**Appendix A** outlines the legislative provisions relevant to the ACCC's consideration of whether to grant the exemption.

**Appendix B** sets out a list of the submissions made by interested parties to the ACCC's decision process.

**Appendix C** sets out a list of the documents examined by the ACCC in the course of making the decision, and includes the lists of reference material that were provided by Telstra to the ACCC along with its submissions.

# 1. Background

## 1.1 What are the declared services at issue?

Telstra is seeking an exemption, pursuant to section 152AT of the *Trade Practices Act 1974* (Cth), from the standard access obligations (SAOs) relating to the supply to Optus of the following declared services:

- local carriage service (LCS) — a wholesale local call service, involving the carriage of a telephone call from one end user to another end user in the same standard zone.
- wholesale line rental (WLR) — the provision of a basic line rental service that allows the end user to connect to the access provider's public switched telephone network (PSTN). It provides the end user with the ability to make and receive standard PSTN voice calls; and a telephone number.
- public switched telephone network originating access (PSTN OA) — domestic PSTN originating access is the carriage of telephone calls from the calling party (the A-party) to a point of interconnection with an access-seeker's network.
- unconditioned local loop service (ULLS) — the unconditioned local loop service is the use of unconditioned communications wire between the end-user's premises and a point on the telecommunications network that is a point of interconnection located at the customer access module on the end-user side.
- line sharing service (LSS) — the line-sharing service allows similar functionality to a ULLS service to a competitor, but the voice service is provided by another party.

The ACCC declared the LCS and WLR in 2006 as part of its Local Services Review.[16] The LCS had previously been declared by the ACCC in July 1999.[17] The ACCC declared the ULLS and PSTN OA in 2006 as part of its Fixed Services Review.[18] The ULLS was first declared in 1999, while PSTN OA was originally deemed to be declared in 1997.[19] The LSS was most recently declared in October 2007, having originally been declared in August 2002.[20]

Detailed service descriptions of the declared services are contained in each of the ACCC's final decisions to declare the respective services.

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16 ACCC, *Local services review—final decision*, July 2006.

17 ACCC, *Declaration of local telecommunications services*, July 1999.

18 ACCC, *Declaration inquiry for the ULLS, PSTN OTA and CLLS—final determination*, July 2006.

19 ACCC, *Declaration of local telecommunications services*, July 1999; ACCC, *Deeming of telecommunications services*, 30 June 1997.

20 ACCC, *Review of the Line Sharing Service Declaration—final decision*, October 2007; ACCC, *Line sharing service—final decision*, August 2002.

The LCS and WLR are services that function at the resale level. There is no access seeker equipment required in the provision of these services (although access seekers may seek to provide other elements or services in conjunction with the service). While the provision of the PSTN OA itself does not require access seeker equipment, the product does require interconnection with the access seeker network.

Comparatively, the ULLS and LSS are access-level services that are used in conjunction with access seeker equipment, such as DSLAMs or MSANs, in an exchange to provide voice and/or broadband services to end-users.

In this final decision, the ACCC has largely focused on the outcomes were an exemption for the ULLS to be granted. This approach reflects the emphasis placed on the ULLS in Telstra's submissions, the exemptions already granted by the ACCC in relation to LCS, WLR and PSTN OA and the fact that Optus has announced it is moving from supply via resale products (i.e. WLR, LCS and PSTN OA) in favour of supply by ULLS.[21]. Except where otherwise stated, the ACCC considers that, in deciding whether to grant the exemption, the same analysis applies to the consideration of the exemption application in relation to all five declared services.

## 1.2 Developments relating to the exemption application

Since the ACCC's decision in 2006 to declare the ULLS, PSTN OA, LCS and WLR services, there have been two significant ACCC reports which are relevant to the assessment of this exemption application. The ACCC has also been conducting arbitrations in relation to all five services for which Telstra seeks an exemption.

### Fixed Services Review second position paper

In April 2007, the ACCC released a second position paper in its ongoing *Fixed Services Review* (the FSR2).[22] The primary purpose of the position paper was to outline a framework for the review of existing service declarations.

In the FSR2, the ACCC considered that *ex ante* access regulation under Part XIC should focus on those elements of the fixed-line network that continue to represent 'enduring bottlenecks'. The ACCC considered that an enduring bottleneck would generally refer to a network element or facility that exhibits natural monopoly characteristics and is 'essential' to providing services to end-users in downstream markets in a way that promotes the LTIE.[23]

Where an enduring bottleneck does not persist, the ACCC stated that it will be inclined to progressively withdraw *ex ante* access regulation where it is confident that declaration is not required to promote the LTIE. The ACCC noted that its proposed approach was:

> … also based on the principle that, for services or network elements which are not enduring bottlenecks, competitors that do not wish to invest in their own infrastructure will, more than likely,

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21 Optus, Response to ACCC Discussion Paper, March 2008,p. 6.
22 ACCC, *Fixed Services Review—a second position paper*, April 2007.
23 ibid, pp. 16–17.

> have the opportunity to enter into commercially negotiated arrangements for access with third parties (or the incumbent) without the need for *ex ante* regulatory intervention. In this regard, the withdrawal of access regulation at certain network layers does not necessarily suggest that these forms of competition will cease, or that their price will necessarily be raised excessively by the access provider. Rather, it is recognition that *ex ante* regulation is no longer required to ensure that these services are competitively priced at or near their underlying costs.[24]

However, the ACCC did note regarding the promotion of full-facilities based competition that:

> The Commission's position has consistently been that it will only seek to promote facilities based (full or quasi) competition where it is likely to be economically efficient, and therefore in the LTIE.[25]

The FSR2 also considered the geographic dimension to market definition employed by the ACCC in the past and its future application. The ACCC noted it may be more meaningful to begin its analysis by considering geographic units at the exchange level (given this would be the field for demand-side substitutability).[26] Exchange level geographic units could then be aggregated together in the same 'class' of market if they exhibit 'similar' competitive characteristics.

In addition to this particular aspect of market definition, the ACCC considered more generally the approach to be taken to the assessment of competition.[27] The ACCC identified the following structural and behavioural characteristics that it would examine in making a competition assessment:

- structural factors, including market concentration, the nature of competition and the underlying costs of service provision
- the potential for competition, including planned entry, the size of the addressable market and the existence and height of barriers to entry, expansion and exit in the relevant markets
- the dynamic characteristics of markets, including growth, innovation and product differentiation, as well as changes in costs and prices over time
- the nature and extent of vertical integration in the market.

The FSR2 also proposed to conduct a comprehensive review of fixed service declarations commencing in mid 2008.[28] In effect, the timing of Telstra's numerous fixed line service exemption applications brings forward the ACCC's consideration of various issues relevant to the Fixed Services Review, in particular the extent of *ex ante* regulation across geographic areas of Australia. Accordingly, any decision made by the ACCC in relation to the various exemption applications may involve consideration of the most substantive issues that would normally arise in the course of reviews of specific declarations as part of the Fixed Services Review.

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24 ibid, p. iii.
25 ibid, p 42.
26 ibid, p. 40.
27 ibid, pp. 40–49.
28 ibid, pp. v, 30.

### Audit of competitive infrastructure

In March 2007, the ACCC issued a discussion paper outlining the proposed approach to its audit of competitive infrastructure (the Communications Infrastructure Audit). The ACCC indicated that this audit would inform its analysis of the state of competition in relevant telecommunications markets in future processes including decisions regarding the removal of regulation where it is no longer needed to promote the LTIE.

*Phase 1: Telstra Customer Access Network (CAN) Record Keeping Rule (RKR)*

In September 2007, the ACCC released its Telstra CAN RKR. This requires Telstra to report quarterly on ULLS and LSS take-up – broken down by individual competitors using these services and ESAs. The ACCC has received four rounds of Telstra CAN RKR data (September 2007, December 2007, March 2008 and June 2008).

*Phase 2: Infrastructure Audit RKR*

In December 2007, the ACCC released an RKR requiring 22 specified carriers to report annually on the locations of their core network (fibre, microwave) and CAN infrastructure (copper, fibre, HFC, radio). Carriers were required to report on the geographic extent of each of the sub-groups of infrastructure. The first round of reporting, for the period to January 2008, has now been received.

### Arbitrations

The ACCC is currently arbitrating two access disputes between Telstra and Optus relating to ULLS, and two relating to PSTN OA.

The ACCC is also conducting a number of access disputes relating to other parties' use of the declared services at issue in this exemption application. In total, there are currently 13 access disputes underway relating to ULLS, 10 relating to LSS, 2 relating to LCS, 2 relating to WLR, and 2 relating to PSTN OA.

## 1.3 Summary of Telstra's HFC exemption application

On 18 December 2007 Telstra lodged an application (the HFC exemption application) with the ACCC under section 152AT of the TPA seeking an individual exemption from its SAOs in respect of supply to Optus of the ULLS, LSS, LCS, WLR and PSTN OA within a defined geographic area.

The application seeks exemption from supply of the services to Optus only (or any carrier who acquires a service and then re-supplies it to Optus). Existing access rights of other carriers would not be affected by this exemption application (to the extent they are not already affected by ACCC decisions on other Telstra exemption applications or to the extent to which they do not resupply to Optus).

The geographic area proposed by Telstra in its HFC exemption application is the area Telstra defines as within the 'commercial reach' of the Optus HFC network. Telstra defines the area of 'commercial reach' as including customer premises that lie wholly or partly within 75 metres, measured on a straight line basis, of the nearest point on a network distribution line of Optus' HFC network in the Sydney, Melbourne and Brisbane metropolitan areas, as existing at the date that the exemption is granted.[29]

Telstra states that it is not seeking that Optus expand its HFC network footprint.[30] Rather it submits that the exemption would encourage Optus to make two types of investments within its existing footprint of 2.2 million homes (1.4m of which Optus currently regards as 'serviceable'):[31]

- upgrade the capability of the HFC network (for example, deploying a faster cable technology such as DOCSIS 2.0 or 3.0,[32] or providing business or wholesale services)

- serve a larger number of customers in the footprint, mostly by connecting up multiple dwelling units (MDUs) and other dwellings currently regarded by Optus as unserviceable.

The premise of Telstra's application is that full infrastructure competition is the first-best competition, as it encourages competition across a greater range of service and product attributes.[33] It states that the 'ladder of investment' needs to be managed to encourage moving up the ladder towards full facilities-based competition.

Telstra notes that Optus' HFC network provides infrastructure-based competition to Telstra's fixed line copper network, but argues that Optus is not using its HFC network in a way that promotes competition and the LTIE, instead favouring supply via the use of the ULLS.

Telstra's application further argues that there are no technical or commercial reasons why Optus cannot use HFC more widely, and that reasons put up by Optus for not using its HFC network to date do not stand up to scrutiny.[34] In particular, Telstra submits that the 1.4 million out of 2.2 million premises currently considered by Optus as serviceable is very low. Telstra states that it and comparable overseas companies consider only around 7% of premises passed to be unserviceable. In particular, it submits that MDUs (which make up 0.5m of the 0.8m homes Optus considers unserviceable) are serviceable, contrary to Optus' submissions.[35]

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29 Telstra, Initial submission in support of exemption application, December 2007,, p. 62.

30 ibid, p. 64.

31 ibid, p. 3.

32 Data Over Cable Service Interface Specifications (DOCSIS) is an international cable modem standard developed by CableLabs. Version 1.1 supports broadband internet, tiered services and VoB. Versions 2.0 supports additional services such as video conferencing, T1/E1 voice and data services, Layer 2 VPN, and other business services. DOCSIS 2.0 also permits higher upstream bitrates than version 1.1. DOCSIS version 3.0 is the latest version and supports additional services such as a switched digital video and IPTV, as well as increasing the allowable upstream and downstream bitrates. Both Telstra and Optus currently use DOCSIS version 1.1. See also Harris, *Use of HFC to deliver broadband services*, December 2007, p. 11.

33 Telstra, Initial submission in support of exemption application, December 2007, p. 8.

34 ibid, p. 29.

35 ibid, p. 34.

Telstra submits that Optus is not using HFC because of the regulated price of ULLS and other services, together with the fact that the declared services are available at all.[36] Telstra submits that removing the availability of the declared services for Optus, which is already at the 'top of the ladder of investment', would lead to Optus investing in its HFC network, in turn leading to dynamic efficiency and competition gains from competition with services provided over Telstra's copper customer access network (CAN).[37]

Telstra provided a submission with two annexures in support of its HFC exemption application.[38] Public versions of these documents are available on the ACCC's website. The submission sets out Telstra's views on the effect that the granting of the exemption application would have on the LTIE. Telstra submits that granting the exemption will promote competition and the efficient use of, and investment in, infrastructure in the proposed exemption area. As a result, Telstra contends that granting the exemption will promote the LTIE.[39]

### Promotion of competition

Telstra argues that, in response to the exemption, Optus will compete more vigorously via its own HFC and mobile networks as a result of the loss of access to regulated services. Telstra submits that Optus will invest in its own infrastructure by expanding upon the existing customer reach within its network footprint as well as making improvements to the existing technical capabilities of the network.[40] Telstra argues that such investment is demonstrably likely and that as a result of these investments, 'powerful market forces will be unleashed' that will lead to a 'dynamic, intensifying process of competition'.[41]

Telstra refers to the arguments of Professor Martin Cave who states that the continuation of Optus' 'dual sourcing policy' — that is, allowing Optus to choose between the use of the ULLS and the other declared fixed line services on one hand and its HFC network within the HFC network footprint on the other — will lead to 'very limited incentive to invest' in Optus' own networks. Cave contends that the dual sourcing policy 'has led and will lead to a diminution of the arena of competition and hence to a loss of dynamic efficiency.'[42]

Telstra submits that the benefits of infrastructure-based competition accrue on a large scale, while any costs arising from the granting of the proposed exemption order are limited.[43] Telstra argues that the increased costs faced by Optus are relatively small because:

1. Optus will have an incentive to reduce its connection costs per user by making additional modest investments in its HFC network — for example, upgrading its

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36 ibid, p. 47.
37 ibid, p. 75.
38 Telstra, Initial submission in support of exemption application, December 2007.
39 ibid, p. 69.
40 ibid, p. 75.
41 ibid, pp. 75-6.
42 Martin Cave, *Applying the ladder of investment in Australia*, 2007, Annex 1, p. 12.
43 Telstra, Initial submission in support of exemption application, December 2007, p. 77.

telephony service to an IP-based service would eliminate the need for the installation of remote units in single dwelling units and multi dwelling units;

2. Optus will have the incentive to add more customers to increase its economies of scale; and

3. Optus has other options, such as its 3G network, if particular customers cannot be connected via HFC.[44]

Telstra notes that the granting of the exemption may have some impact on the operation of wholesale markets.[45] However it submits that this is not relevant as it considers that there will not be any impact at the retail level. Further, it submits that, to the extent that competition may be harmed in the wholesale markets due to removing Optus' supply of wholesale services using DSLAMs, Optus may continue to compete in the wholesale market using HFC, may reach agreement with Telstra for purchasing the ULLS and can continue to use ULLS outside the HFC footprint. It also submits that other parties may continue to act in the wholesale market using DSLAMs.[46]

### Economically efficient use of, and investment in, infrastructure

Telstra submits that granting the exemption will encourage the efficient investment in and use of infrastructure. Telstra argues that granting the exemption will bring the competitive landscape 'closer to the point of efficient duplication'.[47] Telstra relies on overseas evidence to support its argument that more investment in Optus' HFC would be efficient, and that the withdrawal of regulated access can stimulate investment.[48] Telstra states that Optus is currently short of the efficient level of investment in connecting homes. It also submits that granting the exemption would be in Telstra's legitimate interests.[49]

Telstra further submits that currently the Optus network is underutilised and granting the exemption will give Optus the incentive to use its HFC network for homes that are currently treated as unserviceable.[50] Telstra submits that granting the exemption will lead to the emergence of infrastructure-based competition and, as a result, both Optus and Telstra will use their networks more efficiently.[51]

## 1.4 Telstra's other exemption applications

The HFC exemption application follows Telstra's exemption applications relating to several other declared services:

- the WLR service and LCS in a total of 387 exchange service areas (ESAs)

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44 ibid, p. 77.
45 ibid, p. 78.
46 Ibid, p. 79.
47 ibid.
48 Ibid, p. 80.
49 Ibid, p. 83.
50 Ibid.
51 Ibid.

- the PSTN OA service in a total of 404 ESAs
- the domestic transmission capacity service (DTCS) on 20 capital-regional routes; inter-exchange DTCS in CBD areas of each capital city; tail-end transmission in CBD areas of each capital city; inter-exchange transmission in metropolitan areas and certain regional centres for DTCS; and tail-end transmission in metropolitan areas and certain regional centres for DTCS up to 2 Mbps only.

Accordingly, Telstra proposes that the HFC exemption application relates to the WLR, LCS and PSTN OA services insofar as they are not already covered by another exemption under section 152AT of the TPA.[52]

Optus objected to the HFC exemption application on the basis that it was not possible for the ACCC to either consult properly or to apply the correct legal test to the HFC exemption application.[53] This was because it argued that the uncertain status of the LCS, WLR and PSTN OA exemption applications meant that the scope of the services proposed to be exempted under the HFC exemption application was not fixed or knowable. Optus submitted that the ACCC should at the least defer consideration of the HFC exemption application until the other exemption applications had been decided.

Telstra refuted Optus' submissions and submitted that the same outcome was sought whether or not the other exemption applications were granted.[54] It submitted that there was no uncertainty about the legal test, and that Optus was not impaired in the consultation process. Optus also provided a further response to Telstra's letter that reiterated Optus' concerns and stated that the ACCC should seek confirmation from Telstra that Telstra will not challenge any decisions made by the ACCC in other exemption applications.[55]

On 22 August 2008, the ACCC made a final decision to grant Telstra's LCS/WLR exemption applications in 248 ESAs out of 387 ESAs for which an exemption was sought. On 29 October 2008, the ACCC also made a final decision to grant Telstra's PSTN OA exemption application in 265 ESAs out of 404 ESAs for which an exemption was sought.

Accordingly, in regard to both the LCS/WLR and PSTN OA exemptions sought by Telstra as part of the HFC exemption application, there is no uncertainty (barring any implications of appeals against or review of the ACCC's decision).

At the time of the draft decision on the HFC exemption application, some uncertainty potentially remained for the PSTN OA exemption sought by Telstra as part of the HFC exemption application. This was because the ACCC's decision on the PSTN OA exemption application had not yet been finalised. However, the ACCC was satisfied that the scope of Telstra's HFC exemption application was clear and that the ACCC's

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52 Refer to the ACCC website for further details on Telstra's other exemption applications.

53 Optus, *Telstra's HFC exemption application*, letter from Optus to ACCC, 21 February 2008, p. 1.

54 Telstra, *Telstra's exemption application with respect to Optus' HFC network*, letter from Telstra to ACCC, 28 March 2008, p. 1.

55 Optus, *Telstra's HFC exemption application*, letter from Optus to ACCC, 3 April 2008, p. 3.

analysis had not been impeded by any potential uncertainty regarding other exemption applications. The ACCC noted that it was under a statutory timeframe to make a decision in respect of this exemption application.[56] The ACCC does not consider that any of the submissions on the draft decision were impeded by the fact that the PSTN OA exemption application final decision had not yet been made at the time of making those submissions.

The ACCC notes that there is significant overlap between the proposed exemption area in this application (i.e. the Optus HFC footprint) and the areas where exemptions have either recently been granted (LCS, WLR, and PSTN OA). Analysing the proposed exemption area at an ESA level, 57% of the ESAs in the Optus HFC footprint have had exemptions granted for the LCS/WLR and PSTN OA.[57]

Of the ESAs in the HFC footprint where Optus has taken ULLS services, 80% of these ESAs have had exemptions granted for LCS/WLR and PSTN OA. This suggests that in much of the areas where Optus utilises ULLS services, Telstra will already be exempt from supplying either the declared LCS/WLR or PSTN OA services. The ACCC considers that this supports the appropriateness of its decision to focus its analysis on the effect of granting an exemption on access to the ULLS.

Of the ESAs in the HFC footprint where Optus is not utilising the ULLS, 11% of these ESAs have had exemptions granted for the LCS/WLR and PSTN OA.[58]

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[56] Subsections 152AT(10), (11) and (12)

[57] Based on Telstra CAN RKR data. Note: there are minor discrepancies in the number of ESAs where Optus report to have DSLAMs deployed in its submissions to this assessment process and where the Telstra CAN RKR reports Optus having taken up ULLS.

[58] Based on Telstra CAN RKR data.

# 2. Long Term Interests of End-users (LTIE) test

The ACCC must not make an individual exemption order under section152AT or a class exemption determination under section 152AS of the TPA unless it is satisfied that the making of the order or determination will promote the LTIE of carriage services or of services provided by means of carriage services.

In determining whether granting the HFC exemption application will promote the LTIE, regard must be had to the extent to which granting the exemption would be likely to result in the achievement of the following objectives:

- promoting competition in markets for listed services;
- achieving any-to-any connectivity in relation to carriage services that involve communication between end-users; and
- encouraging the economically efficient use of, and the economically efficient investment in, the infrastructure by which telecommunications services are supplied and any other infrastructure by which telecommunications services are, or are likely to become, capable of being supplied.[59]

In relation to these objectives, the Australian Competition Tribunal has previously noted that:

> It was put to us that the earlier decision in *Re Sydney Airports Corporation Ltd* (2000) 156 FLR 10 ("*Sydney Airports*") provided assistance in interpreting the "promotion of competition" criterion. In *Sydney Airports*, a review of a decision to declare a facility pursuant to Pt IIIA of the Act, it was stated (at para [106]):
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>> "The Tribunal does not consider the notion of 'promoting' competition in s 44H(4)(a) requires it to be satisfied that there would be an advance in competition in the sense that competition would be increased. Rather, the Tribunal considers that the notion of 'promoting' competition in s 44H(4)(a) involves the idea of creating the conditions or environment for improving competition from what it would be otherwise. That is to say the opportunities and environment for competition given declaration, will be better than they would be without declaration.
>
> In our view, this description is apt for the criterion established under s 152ATA(6) and s 152AB(2)(c). In addition, we consider that this description is equally applicable to assessing whether the "particular thing" encourages economically efficient use of, and investment in, infrastructure pursuant to s 152AB(2)(e).[60]

Accordingly, the ACCC considers that it should assess whether (and the extent to which) granting the exemption will create the conditions or environment for improving competition or the economically efficient use of and investment in infrastructure from what it would otherwise be.

The ACCC notes that there is a strong relationship between considerations relating to the promotion of competition and the economically efficient use of and investment in

[59] see section 152AB of the TPA.
[60] Seven Network Limited (No 4) [2004] ACompT 11, para [123] to [124].

infrastructure. Common issues arise when assessing these two objectives. Accordingly, submissions and analysis relating to the objective of encouraging the efficient use of and investment in infrastructure have also been addressed in the ACCC’s assessment of the objective of the promotion of competition.

The legislative background to the LTIE test is set out in Appendix A of this decision.

# 3. Promotion of competition

### The ACCC's approach to determining whether granting the exemption would promote competition in telecommunications markets

In assessing whether granting an exemption would promote competition it is useful to undertake the following three-stage analysis:

1. identify those markets that would be affected by granting the exemption
2. assess the state of competition within those markets
3. assess whether price and service offerings to consumers in those markets are likely to be better with the granting of the exemption.

In most cases the markets most likely to be affected by granting an exemption are the market(s) for downstream services rather than the market in which the regulated service is supplied. This reflects the key rationale for access to essential infrastructure - that of promoting more competitive downstream markets by enabling the supply of upstream inputs on terms and conditions more reflective of competitive outcomes. Further, the overarching aim of promoting the LTIE of telecommunications services guides the ACCC to be particularly mindful of the impact of granting an exemption on the supply of services at the retail level.

That said, it is necessary to assess the boundaries and state of competition of the market in which the eligible service is supplied. This is because of the close interrelationship between upstream and downstream markets. The level of competition in the supply of the eligible service may be one determinant of the level of competition in downstream markets.

A useful tool for the ACCC to use when assessing whether granting an exemption will promote the LTIE objectives is the 'future with or without' test. Under this approach the current state of competition in the markets for both the regulated and downstream services is first assessed. Only by understanding the current state of competition in these markets can a meaningful interpretation of the likely future state of competition be understood.

The ACCC stated in its August 2008 final decision on Telstra's exemption applications for the LCS/WLR (LCS/WLR exemption final decision) that ULLS-based competition, where efficient, is a preferable form of competition to re-sale competition for the provision of voice services because it has longer-term benefits.[61] The ACCC considered that ULLS-based competition encourages competitors to compete on greater dimensions of supply, such as price and quality, which allows them to dynamically innovate their services. Also, by reducing reliance on competitors' network assets and related services it can lead to more sustainable competition. The ACCC reached similar

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[61] ACCC, *Telstra's local carriage service and wholesale line rental exemption applications—final decision and class exemption*, August 2008, p. 28.

conclusions in its October 2008 final decision on Telstra's exemption applications for the PSTN OA service.[62]

Telstra's application starts from the premise that 'infrastructure competition is the first-best competition'.[63] However it considers that ULLS or LSS-based competition does not lead to the same benefits as end-to-end facilities-based infrastructure competition.

The ACCC agrees with certain arguments made by Telstra in support of the benefits of infrastructure competition, where efficient, as compared to resale competition, but does not necessarily share the same view of ULLS-based competition. However, the ACCC agrees that facilities-based competition (including ULLS-based competition) can firstly lead to greater price competition as entrants have more control over costs and have incentives to develop and deploy more efficient technologies in order to compete with the incumbent operators. Secondly, it enables greater service innovation since the entrants are no longer tied to the functionality of the incumbent's network.

The ACCC notes that Telstra, in its response to the ACCC's draft decision, submits that the ACCC's view that end-to-end facilities-based competition and ULLS-based competition can deliver similar benefits is at odds with widely-held views.[64] Telstra submits that full-facilities-based competition will deliver wider benefits to the community that ULLS-based competition, the benefits of which it submits largely accrue to access seekers.[65] Telstra cites a number of papers in support of its position.[66]

The ACCC notes Telstra's comments but considers that its above position remains appropriate. Both full-facilities-based and ULLS-based competition can deliver important benefits. The more significant benefits of competition derive from the ability of access seekers to control their costs, deploy more efficient technologies and innovate in service delivery. Access seekers derive a significant ability to achieve these through the use of the ULLS as well as through full facilities-based competition. In some cases, ULLS-based access seekers may not have a significantly greater amount of differentiation than if they had full facilities infrastructure. In others, there may be greater differences, as argued by Telstra. However, it seems clear that the additional benefits of full-facilities-based competition also come at considerably greater cost, because potential competitors must invest in last-mile access technologies that have very high fixed costs. Furthermore, any competitor who makes such investment will of necessity compete against Telstra, which has already 'sunk' its investment. Accordingly the question for the ACCC in assessing this exemption application is whether the full-facilities-based competition that Telstra envisages in its submissions will better create the opportunities and environment for competition compared to the environment which currently exists.

The ACCC considers it is important that full-facilities-based investment be efficient, rather than considered an end-goal of itself in all circumstances. This view is reflected

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62 ACCC, *Telstra's PSTN Originating Access exemption applications – CBD and Metropolitan areas—Final Decision and Class Exemption*, October 2008.

63 Telstra, Initial submission in support of exemption application, December 2007, p. 7.

64 Telstra, Response to ACCC draft decision, October 2008, p. 12.

65 ibid.

66 ibid, p. 12-14.

in the ACCC's price-setting approach to declared services, where it aims to set efficient-cost based prices that allow efficient investment decisions to be made.

Consistent with its position, the ACCC has previously noted in the FSR2 that:

> Efficient, facilities based competition is more likely to be 'effective competition' (and therefore promote the LTIE) because rivals are able to differentiate their services and compete more vigorously across greater elements of the network (and supply) chain. It is also more likely to produce enduring benefits because competitors that have invested in their own infrastructure are more likely to remain in the market (because of high sunk costs).[67]

However, the ACCC has also noted the very important caveat that:

> Despite advocating a stepping stone approach to competition, the Commission does not consider that full facilities-based competition is the end goal in all circumstances. Rather, the Commission only seeks to promote facilities-based and quasi facilities-based competition where it is economically efficient.[68]

and further reiterated in the FSR2:

> The Commission's position has consistently been that it will only seek to promote facilities based (full or quasi) competition where it is likely to be economically efficient, and therefore in the LTIE.[69]

Consistent with these comments, while the ACCC considers that the 'ladder of investment' concept may be a useful analogy for the process by which competition emerges, the ACCC does not consider that the idea of the 'ladder of investment' is a vital or integral concept within its approach to regulating declared services. The ACCC notes Cave's own comments on the 'ladder of investment' theory:

> This paper is concerned with one particular manifestation of this - the application to Australia of an influential approach to the encouragement of infrastructure competition known as the 'stepping stones' or 'ladder of investment' hypothesis.
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> ...
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> The normative component of the 'ladder of investment' has been adopted by a number of regulators and governments: by the European Regulators Group (ERG) and by many national regulators in Europe, and by the New Zealand Government in its 2006 stocktake of telecommunications regulation and subsequent legislation. The ACCC also has written of the benefits of maximising economically efficient infrastructure competition and of the role of the ladder of investment in achieving that outcome. This is despite the fact that the ladder of investment theory remains no more than a hypothesis, as scientific testing of an imprecise proposition of this kind remains problematic.[70]

The ACCC agrees with Cave's view that the 'ladder of investment' is simply a hypothesis. The ACCC has had regard to the approach but does not consider that it forms a major part of the ACCC's approach to regulation. Indeed, an alternative way of conceptualising the 'ladder of investment' is that a regulator should make all or several

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67 ACCC, *Fixed services review – second position paper*, April 2007, p. 41.

68 ACCC, *A strategic review of the regulation of fixed network services—ACCC position paper*, June 2006, p. 13.

69 ACCC, *Fixed services review – second position paper*, April 2007, p. 42.

70 Cave, *Applying the ladder of investment in Australia*, p. 1.

rungs available such that access seekers are able to make efficient investment decisions by choosing between them.

## 3.1 Market definition

### *The ACCC's general approach to market definition*

To assist in determining the impact of potential exemption, the ACCC will first need to identify the relevant market(s) and assess the likely effect of exemption on the promotion of competition in each market.

Section 4E of the TPA provides that a market includes any goods or services that are substitutable for, or otherwise competitive with, the goods or services under analysis. Accordingly, substitution is key to market definition.

The ACCC's approach to market definition is discussed in its *Merger Guidelines*, June 1999, and is also canvassed in its second position paper, *Strategic Review of Fixed Services*, April 2007. The ACCC is currently undertaking public consultation on a revision of its *Merger Guidelines*. The *Draft Merger Guidelines*, February 2008, outlines the ACCC's current approach to market definition, which is described below. Once finalised following public consultation, the *Draft Merger Guidelines*, February 2008, will replace the *Merger Guidelines*, June 1999.

The approach to market definition set out in the ACCC's *Draft Merger Guidelines*, February 2008, focuses on two key dimensions of substitution: the product dimension and the geographic dimension.

In some cases, market definition requires close attention to the functional levels of the supply chain that are relevant to the matter under consideration or the particular timeframe over which substitution possibilities should be assessed. Generally, however, these functional and temporal considerations form part of the product and geographic dimension analysis. The ACCC focuses on the foreseeable future when considering the likely product and geographic dimensions of a market.

The ACCC takes a purposive approach to market definition, which means that the definition of a relevant market cannot be separated from the particular issue under consideration. Market definition always depends upon the specific facts and circumstances of the relevant issue, and current evidence from market participants will often be critical. Decisions relating to market definition in previous, albeit similar, inquiries will provide only limited guidance.

Identifying relevant substitutes to the service in question is key to defining a market.

Substitution involves switching from one product to another in response to a change in the relative price, service or quality of the product the subject of the inquiry. There are two types of substitution: demand-side substitution, which involves customer-switching; and supply-side substitution, which involves supplier-switching. These switching costs, if significant, can significantly impede the substitutability of products.

A method to determine if a product or service is a close substitute is to use the hypothetical monopolist or 'SSNIP' test. This test establishes the smallest 'product' or 'geographic' space over which a hypothetical monopolist could impose a 'small but significant non-transitory increase in price' (SSNIP) without reducing its profits. A SSNIP in the context of the hypothetical monopolist usually consists of a price rise for the foreseeable future of 5 to 10 per cent above the price level that would prevail with competition.

A product in a particular geographic region (or a group of products or regions) is a close substitute if a significant proportion of sales or supply capacity would be likely to switch in response to a small but significant non-transitory increase in the price of the product in question, quickly and without significant investment or switching costs.

The ACCC seeks to identify close substitutes of the relevant product by considering the following types of information:

- the function or end use of the product;
- physical and technical characteristics of the product;
- costs of switching purchases between the product and potential substitutes;
- views and past behaviour of buyers regarding the likelihood of substitution between products;
- evidence of buyers switching to other products in response to price increases in the recent past;
- evidence of producers redeploying their production capacity in response to price increases in the recent past;
- costs of switching production and distribution systems from another product line to a product that is closely substitutable with the relevant product;
- views, business records and past behaviour of suppliers of the relevant products regarding the impact of price and marketing decisions by suppliers of potential substitute products on their own pricing and marketing decisions; and
- relative price levels and price movements of the product compared to potential substitutes.

The ACCC also seeks to identify close substitutes of the relevant geographic region by considering the following types of information:

- the costs to customers of obtaining supply from alternative regions;
- any limitations on the ability of customers to access alternative sources of supply in alternative regions;
- the costs of extending or switching production and distribution systems to supply the customers in alternative regions;

- any regulatory or other practical constraints on suppliers selling to alternative regions
- records relating to trade flows and the actual movement of customers and/or suppliers between geographic regions, especially related to changes in relative prices across regions in the recent past;
- views and business records of buyers and suppliers regarding the likelihood of switching between geographic sources of supply; and
- the relative price levels and price movements of different geographic sources of supply.

The ACCC is guided by the commercial realties test to ensure that market(s) which it identifies accurately reflect the arena of competition. In this regard, in the Australia Meat Holdings Case[71] it was found that "any geographic market …must be one that corresponds to the commercial realities of the industry and represents an economically significant trade area. Because a geographic market determination looks to actual trade patterns, it is not required that geographical boundaries be drawn with exactitude…"[72]

There are difficulties with applying traditional geographic demand and supply-side substitutability analysis to fixed-line telecommunications services. For example, the opportunity for demand-side substitution is limited by the fact that the fixed-line infrastructure is physically connected to a household. A consumer is unlikely to move to another geographic area simply due to a price increase (or degradation of quality), particularly because (among other things) the cost of re-location will probably far outweigh any saving made on fixed-line services.

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

It is important to note that Part XIC of the TPA does not require the ACCC to precisely define the scope of relevant markets for the purpose of assessing an exemption application. In exemption inquiries, it may be sufficient to broadly identify the scope of the relevant markets likely to be affected by the making of the exemption order. Accordingly, a market definition analysis under Part XIC of the Act should be seen in

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71 *Australia Meat Holdings v Trade Practices Commission* (1989) ATPR 40-932 at 50111, the Federal Court quoted with approval from Von Kalowski, *Antitrust laws and trade regulation* (Matthew Bender, New York, 1981), Vol 3 at pp. 18-96 that "Any geographic market… must be one that corresponds to the commercial realities of the industry and represents an economically significant trade area. Because a geographic market determination looks to actual trade patterns, it is not required that geographical boundaries be drawn with exactitude…"

72 ibid, at 40-932 and 50,091-50,092.

the context of shedding light on how exemption would or would not promote competition rather than in the context of developing "all purpose" market definitions.[73]

### *ACCC's previous views on downstream telecommunications markets*

The ACCC has previously considered downstream markets relevant to the LCS, WLR, PSTN OA, LSS and ULLS, in the context of previous declarations and exemption decisions.

The ACCC's recent view on the retail market for fixed voice services, in its LCS/WLR exemption final decision, was that:

> Consumers are increasingly acquiring a bundle of fixed voice services from the one provider. This may be due to customer preferences of receiving a single bill for all the services and the cost savings of acquiring a bundle from the same service provider – the price of the package is usually at a discount to that of acquiring given amounts of a product separately. For the same reasons, the ACCC is of the view that it is appropriate to include basic access, local calls, national and international long distance calls and fixed to mobile calls within the bundle (together, "Fixed Voice Services").[74]

In the 2006 *Local Services Review,* the ACCC stated that the relevant downstream markets for the LCS and WLR:

> …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 call services. The ACCC did not consider that it was necessary to form a precise view as to the boundaries of the downstream retail voice market.[75]

In its November 2006 assessment of Telstra's PSTN and LCS undertaking, the ACCC considered that:

> PSTN OTA is a key input into a number of retail services in the telecommunication market including domestic long distance, international and fixed to mobile services.[76]

In the September 2008 final decision on Telstra's PSTN OA exemption applications, the ACCC's view was that:

> the vast majority of acquirers of PSTN OA from Telstra are offering the full bundle of voice services which suggests that long distance services do not represent a separate market but merely make up a segment of the bundle of Fixed Voice Services.[77]

In terms of the ULLS and relevant voice and broadband markets, in the July 2006 *Declaration inquiry for the ULLS, PSTN OTA and CLLS – Final Determination* the ACCC considered that:

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

74 ACCC, *Telstra's local carriage service and wholesale line rental exemption applications – Final Decision*, August 2008, p. 42.

75 ACCC, *Local Services Review – Final Decision*, July 2006, p. 31.

76 ACCC, *Assessment of Telstra's PSTN and LCS Undertaking – Final Decision*, 26 November 2006, p. 115.

77 ACCC, *Telstra's PSTN Originating Access exemption applications – CBD and Metro areas – Final Decision and Class Exemption,* October 2008, p. 56.

> …the ULLS is an input, which when combined with xDSL technology and a competitor's own customer access network infrastructure, facilitates the supply of a high bandwidth and voice carriage services, as well as upstream and downstream carriage services provided by means of the carriage service.
>
> Therefore, for the purpose of this declaration inquiry, the Commission considers that the relevant markets in which the ULLS and the PSTN OTA may promote competition are:
>
> - wholesale and retail supply of fixed voice services;
> - retail supply of mobile telephony services;
> - wholesale and retail supply of customer access services;
> - wholesale and retail supply of broadband services, including BDSL and other high bandwidth, business grade data services; and
> - wholesale and retail supply of broadband services to residential and small business users. [78]

Regarding the relevant downstream markets for LSS, the ACCC stated in the October 2007 *Review of the Line Sharing Service Declaration* (LSS Declaration review) that:

> The ACCC believes that the key downstream market [for LSS] is the market for the supply of high bandwidth carriage services to end-users … [and] downstream markets for fixed voice services are also relevant to this declaration inquiry.[79]

In its discussion of HFC in the LCS/WLR exemption final decision, the ACCC stated that:

> …the ACCC is of the view that broadband services with similar pricing, quality and functionality delivered via HFC (as well as other types of infrastructure) will be substitutable from the perspective of most consumers. However, as noted in that review, the demand characteristics in the market for broadband services are still emerging. It is also relevant to note that there may be switching costs incurred by consumers in switching between an xDSL broadband product and a HFC broadband product.[80]

### *ACCC's previous views on upstream telecommunications markets*

The ACCC has previously considered upstream markets relevant to the LCS, WLR, PSTN OA, LSS and ULLS, in the context of previous declarations and exemption decisions.

The ACCC found in the WLR and LCS Exemption Final Decision that:

> The LCS and WLR can be used separately to provide basic access and local calls as part of a fixed voice cluster or as part of broader bundle of fixed voice and/or broadband, mobile or pay TV services. However, the ACCC understands that it would be highly unusual for LCS and WLR to be acquired separately.

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78 ACCC, *Declaration inquiry for the ULLS, PSTN OTA and CLLS – Final Determination*, July 2006, p. 13.

79 ACCC, *Review of the Line Sharing Service Declaration – Final Decision*, October 2007, p. 32.

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

> Accordingly, the ACCC considers that it is appropriate to consider LCS and WLR in terms of a bundled product together with PSTN OA (Fixed Voice Bundle) at the wholesale level. Also relevant is that the potential substitutable products at both the upstream and downstream levels tend to replicate the bundle of LCS/WLR products.[81]

As noted above, in the July 2006 *Declaration inquiry for the ULLS, PSTN OTA and CLLS – Final Determination*, the ACCC considered in relation to the ULLS and PSTN OA that:

> the relevant markets in which the ULLS and the PSTN OTA may promote competition are:
>
> - wholesale and retail supply of fixed voice services;
> - retail supply of mobile telephony services;
> - wholesale and retail supply of customer access services;
> - wholesale and retail supply of broadband services, including BDSL and other high bandwidth, business grade data services; and
> - wholesale and retail supply of broadband services to residential and small business users.[82]

The role of the LSS in the wholesale market was considered in the LSS Declaration review. The ACCC found that 'Telstra remains the only supplier of the declared LSS service' and that the substitutability of the LSS with other products, such as Upper Spectrum Sharing[83] or wholesale xDSL, was limited.[84]

In its LCS/WLR exemption final decision, the ACCC noted that the ULLS could serve as a substitute to both the LCS/WLR resale services and the LSS:

> the ACCC notes that ULLS can serve the functional needs of access seekers that seek access to the LCS and WLR because the ULLS can be used for the provision of voice services in the downstream markets.[85]
>
> …
>
> The ULLS, however, appears to clearly service the functional needs of access seekers that seek access to the LSS, as both the ULLS and the LSS can be used for the provision of xDSL services in downstream markets.[86]

Regarding the competitive constraint of HFC on the wholesale market, the ACCC found in its LCS/WLR exemption final decision that:

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81 ACCC, *Telstra's local carriage service and wholesale line rental exemption applications – Final Decision*, August 2008, p. 50.

82 ACCC, *Declaration inquiry for the ULLS, PSTN OTA and CLLS – Final Determination*, July 2006, p. 13.

83 Upper spectrum sharing (USS) uses a similar jumpering arrangement to the LSS except that the last jumper connects to a ULLS access seeker's equipment rather than Telstra's. See also ACCC, *Telstra's local carriage service and wholesale line rental exemption applications – Final Decision*, August 2008, p. 40.

84 ACCC, *Review of the Line Sharing Service Declaration – Final Decision*, October 2007, pp. 25-7.

85 ACCC, *Telstra's local carriage service and wholesale line rental exemption applications – Final Decision*, August 2008, p 52.

86 ibid, p. 54..

> HFC networks may be a competitive alternative for the owners of these [HFC] networks, however, they are confined to the extent to which they provide a competitive alternative for other access seekers.[87]

***Parties' submissions on relevant markets***

*Retail fixed voice*

In its supporting submission to its exemption application, Telstra contends that the current Optus cable telephony service and any voice over broadband (VoB) service it may provide should be treated as close substitutes for Telstra's PSTN voice services in areas where the HFC network is present.[88] Telstra submits that this approach to market definition would be consistent with the position adopted by regulators in the United States, France, Germany and Canada.[89]

In its submission in response to the ACCC's discussion paper for the HFC exemption application (the discussion paper), Telstra reiterates its position and submits that the following products should be treated as being in the same retail market for fixed voice services:

- switched telephony offered on Telstra's PSTN network;
- telephony offered over Optus' HFC network;
- VoIP services; and
- mobile services.[90]

Telstra submits, as set out in its submission in support of its WLR and LCS exemption applications, that:

> …the commercial reality is that VoIP is increasingly seen by customers and service providers as a substitute to traditional, PSTN-based voice services'.[91]

In response to the ACCC's Discussion Paper, Optus submits that the HFC network does not provide suitable services for business customers.[92] Optus contends that this is because the HFC network cannot meet business customers' quality of service requirements because the Optus HFC network:

- is only able to provide a **[c-i-c starts] [c-i-c ends]** when business customers typically require 'business grade' availability of 99.95%.
- cannot provide symmetric 'business grade' upload/download capacity.

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87 ibid, p. 51.
88 Telstra, Initial submission in support of exemption application, December 2007, p. 72.
89 ibid, pp 70-72.
90 Telstra, Response to ACCC Discussion Paper, March 2008, pp. 15-16.
91 ibid, p. 16.
92 Optus, Response to ACCC Discussion Paper, March 2008, p. 7.

- cannot provide consistency of service because it is a shared network; therefore its capacity is affected by congestion levels meaning particular speeds cannot be guaranteed.

- is not a diverse network and therefore cannot provide the secure continuous operation that business customers often require.[93]

Telstra submits that relevant markets should not be segmented by customer type.[94] In its supporting submission to its exemption application, Telstra contends that corporate customers could be served by the HFC network either by a network upgrade or the use of a 'fibre shot' (a piece of fibre leading directly from Optus' urban fibre network).[95] Telstra provides a report from Michael G. Harris (the Harris report) in support of its submission to demonstrate that Optus' HFC network can be used as a substitute to the ULLS to provide business services.[96]

In its response to the ACCC's discussion paper, Optus identifies 'issues and omissions in the Harris Report' and further contends that 'it is inadequate from an economic point of view to discuss only the engineering feasibility of adding to the capacity of the network.'[97]

*Retail broadband*

In response to the ACCC's discussion paper, Telstra submits that ULLS-based broadband and cable services should be considered as being in the same retail product market.[98] Telstra contends that it appears Optus' offerings of these products to end-users are 'substantially equivalent' in that most of the price and non-price features are exactly the same.[99] Telstra further submits that it is not clear from Optus' marketing as to whether Optus offers end-users a choice between the two.[100] Telstra goes on to submit:

> …as a supplier, SingTel Optus treats them as close substitutes; and clearly expects its customers to treat them as substitutes.[101]

Telstra relies on the conduct of overseas regulators in the United Kingdom, Ireland and the Netherlands to demonstrate that its approach is the correct market definition for the ACCC to adopt.[102]

Telstra also considers that wireless broadband should be treated as being in the same market as DSL and cable broadband. Telstra states wireless broadband:

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93 ibid, p. 7.
94 Telstra, Response to ACCC Discussion Paper, March 2008, p. 17.
95 Telstra, Initial submission in support of exemption application, December 2007, p. 65.
96 Harris, *Use of HFC to deliver broadband services*, December 2007.
97 Optus, Response to ACCC Discussion Paper, March 2008, pp. 8-9.
98 Telstra, Response to ACCC Discussion Paper, March 2008, p. 14.
99 ibid, pp. 14, 17.
100 ibid, p. 14.
101 ibid, p. 14.
102 ibid, pp. 14-15.

> …is capable of delivering high speed internet and voice services which directly compete with fixed broadband services.[103]

Therefore, Telstra submits:

> …taking a forward-looking approach, there seems no reason for excluding these options from the relevant market.[104]

As stated above, Optus submits in response to the ACCC's Discussion Paper that the HFC network is unsuitable for supplying business services.[105] In particular the second and third points identified above more directly impact on broadband services.

*Retail pay TV market*

Telstra identifies pay TV products as a relevant market in its supporting submission to its HFC exemption application. Telstra suggests that the pay TV products offered by Optus over its HFC network should be considered substitutes to those offered by Foxtel over Telstra's HFC network, given that the 2002 content sharing deal enables Optus to offer the 'best available' content for its pay TV service.[106]

In its response to the ACCC's Discussion Paper, Optus also identifies pay TV as a service which is offered over its HFC network.[107] Optus notes, however, the differences in the Australian pay TV market, compared to other jurisdictions, including market structure and penetration.[108]

In response to the ACCC's draft decision, Foxtel submitted that:

> FOXTEL disagrees that there is a retail pay television market. FOXTEL considers that it competes with and is constrained by free to air such that retail pay television services cannot be separated from television services provided over free to air networks. Further, with increasing advances in technology, including TIVO, multichanneling and the increased content available through the Internet, FOXTEL considers that defining the market as the retail pay TV market is too narrow and ignores the more appropriate market definition which, at the least includes television services provided by free to air networks.[109]

*Wholesale markets*

In its supporting submission to its exemption application, Telstra submits that:

> Optus currently supplies wholesale services within its HFC network only using DSLAMs and not using its HFC network.[110]

Telstra contends that while granting this exemption would render Optus unable to offer these wholesale services using its DSLAMs, Optus could offer wholesale access to its own HFC network.[111] Alternatively, Telstra argues that:

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[103] ibid, p. 15.
[104] ibid, p. 15.
[105] Optus, Response to ACCC Discussion Paper, March 2008, pp. 7-9.
[106] Telstra, Initial submission in support of exemption application, December 2007, p. 42.
[107] Optus, Response to ACCC Discussion Paper, March 2008, p. 6.
[108] ibid, pp. 23-24.
[109] Foxtel, Response to ACCC Draft Decision, October 2008, p. 3.
[110] Telstra, Initial submission in support of exemption application, December 2007, p. 74.

> self supply by SingTel Optus to its own downstream retail arm still acts to discipline Telstra in the downstream market[112]

In response to the Discussion Paper, Telstra submits that ULLS and HFC are upstream inputs into a similar range of retail services as both can support voice telephony and broadband services.[113] Telstra further submits that overseas regulators in Ireland and the Netherlands have treated DSL and cable broadband as being in the same wholesale markets.[114]

Optus submits that the HFC network cannot provide a consistency of service and that it is therefore not suitable for the provision of wholesale services.[115] Optus contends that as HFC is a shared network, capacity is affected and speeds cannot be guaranteed.[116] This in turn, according to Optus, limits the ability of wholesale customers to control the quality of service they provide to their customers.[117]

*Geographic market*

Telstra specifies the defined geographic area for the exemption application to be the area including customer premises that lie wholly or partly within 75 metres of the network distribution lines of Optus' HFC network in Sydney, Melbourne and Brisbane.

In identifying potential exemption areas relevant to the HFC exemption application, Telstra submits that a definition that 'maps' the Optus HFC network footprint would be more appropriate than an ESA-based definition.[118] However, Telstra suggests that there would be little practical difference if either approach was adopted.[119]

Telstra proposes to base the procedures for identifying exemption zones on those implemented in the New Zealand 'TelstraClear resale' decision, but argues that in this case they should be simpler to implement.[120] Telstra states that:

> As the network is "frozen" for the purposes of the exemption as at the order date, the 75 m exemption zone would be established upfront on a once and once only basis for the term of the exemption.
>
> …
>
> Telstra's proposed approach will actually be simpler to implement because the New Zealand exclusion zone has to take account of all alternative networks and the boundaries have to be adjusted whenever any competitor deploys additional network. [121]

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111 ibid.
112 ibid.
113 Telstra, Response to ACCC Discussion Paper, March 2008, p. 14
114 ibid, pp. 14-15.
115 Optus, Response to ACCC Discussion Paper, March 2008, p. 7.
116 ibid, p. 8.
117 ibid, p. 8.
118 Telstra, Initial submission in support of exemption application, December 2007, p. 69.
119 ibid, p. 70.
120 ibid, pp. 60-1.
121 ibid, p. 60.

In response to the ACCC's Discussion Paper, Telstra submits that the ACCC does not need to determine precisely how geographic retail and wholesale market boundaries align with the proposed exemption area.[122] Telstra contends that if, after granting the exemption, it became apparent that geographic retail and wholesale market boundaries differed to the exemption zone boundaries, competition would still be promoted.[123]

Optus submits, in response to the ACCC Discussion Paper, that:

> There are a total of 262 Telstra Exchange Service Areas (TESA) which overlap with Optus HFC footprint. Optus has installed 179 DSLAMs in these TESA.[124]

### *ACCC's market definition*

***Downstream markets***

The declared services that are the subject of this exemption application are upstream inputs to a range of internet and telephony retail products:

- ULLS and LSS when combined with DSLAM/MSAN deployment are upstream inputs into the ADSL broadband product
- ULLS when combined with soft switching and MSAN deployment can be used to supply a fixed voice service
- LCS, WLR and PSTN OA are upstream inputs into a fixed-line voice service.

In addition, Optus' HFC network provides cable-based voice and broadband products.

The relevant downstream product markets can thus be broadly defined as the retail broadband market and the retail fixed voice market.

Another relevant product market is the retail market for pay TV services. Both Optus and Telstra use their HFC networks to provide pay TV services.

*ACCC's view - Retail fixed voice market*

The ACCC considers that, in addition to the voice service provided over Telstra's PSTN network, the following services could potentially form part of the retail fixed voice service product market:

- VoIP services. There are three main types of VoIP services available to end users:

    1. soft switching and the ULLS (POTS emulation);
    2. internet access device (IAD) and the ULLS/LSS (carrier-grade VoIP); and
    3. VoIP and the ULLS/LSS (application layer VoIP);

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122 Telstra, Response to ACCC Discussion Paper, March 2008, p. 12.
123 ibid.
124 Optus, Response to ACCC Discussion Paper, March 2008, p. 11.

- cable-based voice services such as telephony provided over Optus' HFC network; and

- mobile.

As stated in its LCS/WLR exemption final decision, the ACCC is of the view that POTS emulation is likely to be substitutable for a PSTN voice service.[125] However, at the present time, the ACCC considers that carrier-grade and application layer VoIP services are unlikely to be an effective substitute for PSTN voice. This is because, in terms of demand-side substitutability, there are limitations concerning quality and security. Further, in terms of supply-side substitutability, it would be unlikely that a VoIP provider would switch to providing a fixed-line voice service in the event of a SSNIP in fixed voice services.[126]

Due to comparable standards in quality and price, the ACCC is of the view that cable-based voice services and voice services provided over Telstra's PSTN network are likely to be substitutes from a demand-side perspective. The availability of a cable-based voice service would likely be sufficient to prevent a SSNIP in fixed voice services provided over Telstra's PSTN, as in the event of a SSNIP a significant proportion of end-users would be likely to switch to a cable-based voice service (provided their premises are serviceable by cable). However the ACCC notes the quality issues relating to business customers' use of services over HFC.

Consistent with its LCS/WLR exemption final decision, the ACCC also considers that mobile services are only an effective substitute for fixed line voice services in a small percentage of cases.[127] The reasons for this include costs associated with mobile services, the inconsistency of call quality and consumer practice. The ACCC notes that developments in the market may contribute to the future substitution of these products and the ACCC is monitoring consumer behaviour in this regard.[128]

On the supply-side, the ACCC maintains the view that a provider of mobile voice services would be highly unlikely to switch to the provision of fixed voice services in the event of a SSNIP in the price of fixed voice services. This is because of the large and lumpy sunk costs and long lead times involved in switching.[129]

The ACCC considered in its LCS/WLR exemption final decision that that there is not a separate voice market segment for business customers. In that decision, the ACCC acknowledged that on the demand-side, business consumers may seek particular service requirements distinct from other consumers. However, the ACCC considered that there is likely to be a sufficiently large degree of supply-side substitution such that supply to residential customers is likely to be a substitutable service for supply to business customers.[130]

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[125] ACCC, *Telstra's local carriage service and wholesale line rental exemption applications – Final Decision*, August 2008, p. 42.
[126] ibid, pp. 42-4.
[127] ibid, p. 46.
[128] ibid, pp. 44-6.
[129] ibid, p. 46.
[130] ibid.

In regard to HFC, the ACCC notes the issues raised by Optus regarding the supply of ‘business grade’ services on its current HFC network, such as reliability and ‘upload/download’ capacity. The ACCC also notes Telstra’s submission that upgrades to the network may allay some of these concerns. While some of these issues appear to be more pertinent in relation to broadband services, the ACCC considers that these issues may have some effect on demand-side and supply-side substitution in the retail voice market. The ACCC considers whether there are barriers to provision of services to business customers over HFC below. However, the ACCC remains of the view that there is likely to be sufficient supply-side substitutability between residential and business customers such that supply to each can be considered as part of the same market. Accordingly the ACCC does not propose to consider business customers as a distinct market. The ACCC notes that there are a relatively small number of businesses that would be operating in the proposed exemption area.

*ACCC’s view - Retail broadband market*

The ACCC is of the view that the following services may form part of the retail market for broadband products:

- DSL broadband provided by:
  - Telstra;
  - access seekers acquiring ULLS and LSS in conjunction with DSLAMs; or
  - resellers purchasing wholesale broadband from Telstra or other ULLS-based access seekers;
- broadband provided over a cable network such as Optus’ HFC network (cable broadband); and
- broadband provided over a fixed wireless network (wireless broadband).

The ACCC is of the view that DSL broadband and cable broadband products are likely to be broadly substitutable from a demand perspective. This is because, in the event of a SSNIP in DSL broadband, an end-user may likely switch to cable broadband (provided their premises are serviced by a cable network). It is relevant to note, however, that there may be costs incurred by a consumer in switching between an xDSL broadband product and a HFC broadband product, which may impede their ability or tendency to switch between the services. Such switching costs, including the costs of CPE and the time costs of waiting for connections, could cause disruption to the competitive process. Relevantly, the ACCC notes that, under the terms of the proposed exemption, Telstra proposes a staggered implementation timeline. This would allow time to manage these switching costs but the ACCC considers that there would still be significant disruption to each end-user customer.

In terms of DSL broadband to wireless broadband substitution, as the ACCC has previously expressed, it appears that ‘wireless/mobile networks are increasingly capable of providing competitive voice and lower bandwidth data services, with expectations that shared cell bandwidth capacities will continue to increase over time'.[131] However, there are continuing concerns that wireless networks may not be close substitutes given the coverage and functionality which can be provided over higher bandwidth fixed networks.[132] As the ACCC has previously concluded, despite signs that wireless offerings are becoming increasingly competitive, the extent to which consumers consider wireless/ mobile broadband internet technologies as substitutes for fixed technologies is currently unclear. The ACCC therefore considers it prudent to adopt a conservative approach, and consider that any constraint upon fixed broadband and voice markets is likely to be only at the margins.[133]

As discussed above, the ACCC also considers that there may be business-specific broadband service requirements that are not currently available over Optus' HFC network. In this regard, the ACCC has noted the issues raised by Optus regarding the supply of 'business grade' services on the current network, such as reliability and 'upload/download' capacity. The ACCC also notes Telstra's submission that upgrades to the network may allay some of these issues. The ACCC does not consider it is necessary to identify business broadband services as a separate market in this analysis but is mindful of the issues and arguments regarding the provision of such services.

The ACCC has previously acknowledged that it may be appropriate to identify a retail market for bundled voice and broadband services.[134] For the purposes of this decision, however, the ACCC is of the view that such a market would be implicitly included in the analysis of the retail market for fixed voice services and the retail market for broadband.

*ACCC's view – Retail pay TV market*

The ACCC is of the view that the following services could form part of the retail market for pay TV products within the proposed exemption area:

- pay TV products provided by Optus over its HFC network
- pay TV products provided by Foxtel over Telstra's HFC network

The existence of a retail pay TV market was previously considered by Justice Sackville in the *Seven Network Limited* case, where the court recognised that a relevant market was:

> …the retail pay television market (being a market for the supply of pay television services to retail subscribers).[135]

Foxtel has submitted that it disagrees with the court about the presence of a retail pay TV market.[136] This is on the basis that pay TV competes with free to air TV services. At this stage, it is the ACCC's view for the purposes of this exemption application that

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131 ACCC, *Telecommunications competitive safeguards for 2006*-2007, May 2008, p. 5.
132 ibid, p. 6.
133 ACCC, *Telstra's local carriage service and wholesale line rental exemption applications—final decision and class exemption*, August 2008, p. 50.
134 ibid, pp. 47-8.
135 *Seven Network Limited v News Limited* [2007] FCA 1062 at [18]
136 Foxtel, Response to ACCC Draft Decision, October 2008, p. 3.

there is likely to be insufficient demand or supply-side substitution to warrant a finding that pay and free-to-air television are in the same market.

The ACCC considers that the retail market for pay TV may be a relevant market for consideration in assessing whether to grant this exemption. The ACCC notes that the effects on this market will depend on the associated incentives for making additional connections within the footprint that granting the exemption would deliver to Optus and Telstra. However, the ACCC notes also that conditions in the pay TV market may have implications for the effect of granting the exemption on other relevant markets.

The ACCC has also considered whether IPTV that can be provided via broadband connections could be part of the same market as pay TV. IPTV is packet-based TV content that is transmitted over an Internet Protocol-based digital network. IPTV can provide both live TV as well as Video On Demand. However, the ACCC considers that IPTV is something more than simply the ability to access video clips on the internet. The ACCC considers that the type of IPTV that would be relevant to its pay TV market definition would be quality-assured and secure services, typically run as a commercial venture.

In terms of whether IPTV products could be substitutable for pay TV, the ACCC considers that while there are an increasing number of TV-like services available via broadband connections, there are substantial limitations on the technical quality (i.e. required connection speed) and breadth of content currently available in Australia. At this stage the ACCC does not consider these products as close substitutes to the traditional pay TV products available via HFC cable.

The ACCC notes that the second largest Australian pay TV provider, Austar, primarily services rural areas. Apart from a small area of overlap, it does not compete where Foxtel operates. The ACCC also notes the presence of other smaller participants in the retail pay TV market, such as SelecTV, but considers that currently these participants only present limited competition to Foxtel and Optus in the pay TV market.

*Conclusion on retail markets*

In consideration of the above, the ACCC is of the view that the relevant product markets at the retail level are for:

1. supply of fixed voice products provided over Telstra's PSTN network, cable-based voice services and POTS emulation

2. supply of cable and DSL broadband products, and possibly, as a weaker substitute, wireless broadband technologies

3. supply of pay TV products provided over Optus' and Telstra's HFC networks

### *Upstream markets*

Where competition is likely to be affected considerably at the wholesale level, this may have flow-on effects at the retail level. Accordingly, it is appropriate to consider any effects at the wholesale level. The ACCC also notes that, where there are barriers to entry in a downstream market, this may have implications for the promotion of competition in upstream markets.

*ACCC's view - Wholesale voice market*

As stated in the ACCC's LCS/WLR exemption final decision, it is appropriate to consider WLR and LCS as a bundled product together with PSTN OA (Fixed Voice Bundle) at the wholesale level.[137] It is also relevant to consider potential substitutable products for the Fixed Voice Bundle.[138]

In terms of demand-side substitution the first relevant question for the ACCC is whether a firm that wishes to supply fixed voice services to end-users has any alternative options at the wholesale level in order to provide services at the downstream level.

Broadly, the following services (in addition to Telstra's provision of the Fixed Voice Bundle) may be part of the wholesale fixed voice market:

- at a wholesale level — resale of a ULLS-based Fixed Voice Bundle by other service providers;
- at an access level — self-supply through DSLAM/MSAN based provision via the use of the ULLS; and
- at a network level — end-to-end networks such as HFC or fibre optic.

At the wholesale level, as previously noted in the ACCC's LCS/WLR exemption final decision, the ACCC understands that various other telecommunications providers supply a wholesale fixed voice service to access seekers. The ACCC understands that Optus is one such provider that offers a wholesale product by using soft switching and ULLS combined with DSLAM/MSAN deployment to supply a wholesale fixed voice service. To the extent that these wholesale services are available, the ACCC considers that these can be an effective substitute to wholesale fixed voice services acquired from Telstra.[139]

With regard to the provision of a wholesale product over Optus' HFC network, Optus does not currently offer an HFC wholesale voice product. The ACCC notes that:

- owners of alternative infrastructure to Telstra's PSTN, such as Optus, are not required to provide access to their networks. Therefore, alternative networks such as HFC will not necessarily provide a competitive constraint if there were a SSNIP in Telstra's fixed voice bundle.
- in terms of demand-side substitutability, a telecommunications reseller may not readily substitute a HFC-based wholesale voice service from Optus in place of the Fixed Voice Bundle. Such a service is likely to be unattractive to wholesale

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137 ACCC, *Telstra's local carriage service and wholesale line rental exemption applications – Final Decision*, August 2008, p. 51.
138 ibid.
139 ibid, pp. 51-52.

customers as it would require time-consuming and expensive work at customer premises, and reduced scale and coverage. There would also be potential work for access seekers in upgrading their own facilities, such as network interfaces. Furthermore, wholesale customers could be restricted to on-selling these services within the Optus HFC footprint, and may face difficulties in connecting certain premises such as MDUs.

- in terms of supply-side substitutability, in the past when there has been a SSNIP in the Fixed Voice Bundle, Optus has not entered the wholesale market to provide wholesale voice over its HFC network.

- Telstra also does not provide significant wholesale services via its own HFC network.

In consideration of the above, the ACCC is of the view that provision of a wholesale voice service over Optus' HFC network is not presently a close substitute for Telstra's wholesale Fixed Voice Bundle.

At the access level, the ACCC considers that ULLS can be used by access seekers as a substitute for WLR and LCS. Although a fixed voice bundle, provided via the LCS, WLR and PSTN OA, can be substituted by ULLS, the ULLS is also subject to this exemption application. Accordingly, this option for substitution would not be available to Optus if the exemption was granted.

The ACCC does not consider that LSS is, from the demand or supply side, a substitute for WLR/LCS. LSS allows an access seeker to provide data services to an end-user while generally another provider supplies a fixed voice service to that consumer. While a VoIP service may be offered by LSS-based broadband providers, the ACCC does not consider VoIP to be a substitute for WLR/LCS at the retail level.[140] Further, by definition, if a service provider is using LSS, the end customer must already have a PSTN based voice service. Therefore, any VoIP offering is likely to be an additional voice service rather than an alternative. In addition, as the LSS is also subject to this exemption, Optus would not have the LSS available to it.

At the network level, in the event of a SSNIP in the fixed voice bundle, an option for access-seekers could be to invest in their own end-to-end network. However, as noted in the ACCC's LCS/WLR Exemption Final Decision, because of the ongoing presence of natural monopoly characteristics across particular elements of the fixed networks,, full-facilities based competition is unlikely to be efficient or commercially feasible in most scenarios. Further, the large and lumpy sunk costs combined with the considerable lead times involved by an access seeker switching to the provision of voice services via their own infrastructure are likely to be too large to prevent a SSNIP.[141]

Accordingly, the product market is likely to be for the supply of upstream inputs used for the provision of traditional fixed voices services.  These inputs are likely to include

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[140] ibid, pp.43-45.
[141] ibid, p. 53.

LCS/WLR and ULLS, but not LSS or alternative infrastructure such as wireless or HFC.

*ACCC's view - Wholesale broadband market*

Wholesale DSL broadband is commercially provided by Telstra to resellers over its CAN. Similarly, other telecommunication providers including Optus provide wholesale DSL broadband through ULLS or LSS used in conjunction with DSLAM/MSAN deployment.

However, the existence of alternative networks such as HFC does not necessarily provide access seekers using the CAN with the ability to use these alternatives as a supply substitute. Notwithstanding the demand for wholesale DSL broadband, the ACCC notes that neither Optus nor Telstra currently offer a wholesale broadband service over their HFC networks.

Furthermore, an HFC-based wholesale broadband product is unlikely to be an effective demand-side substitute for wholesale DSL broadband for the following reasons:

- as the HFC network is a shared network, capacity may be affected by congestion levels, meaning that certain speeds could not be guaranteed. A reseller therefore may not be able to guarantee the quality of broadband resold to end-users.

- a reseller of HFC broadband products would have to undertake time-consuming and expensive work at customer premises.

- HFC networks have smaller scale and coverage.

Consequently, the ACCC is of the view that an HFC-based wholesale broadband product would not be a close substitute for wholesale DSL broadband at this time.

The ACCC considers that its observations above about the role of HFC in the wholesale voice market relating to Optus not entering the wholesale market for wholesale broadband over its HFC network in response to a SSNIP, and Telstra not providing significant wholesale services via its own HFC network, are also relevant in a consideration of wholesale markets for broadband. These considerations further support the view that an HFC-based wholesale broadband product would not be a close substitute for wholesale DSL broadband at this time.

*Conclusion on wholesale markets*

In light of the above arguments, the ACCC is of the view that the relevant product markets at the wholesale level are for:

1. supply of wholesale fixed voice services provided by:

    a. WLR/LCS and PSTN OA;

    b. operators using ULLS combined with DSLAM/MSAN deployment; and

c. self-supply using the ULLS combined with DSLAM/MSAN deployment; and

2. supply of wholesale broadband products provided by:

   a. operators using ULLS combined with DSLAM/MSAN deployment; and

   b. self-supply using the ULLS combined with DSLAM/MSAN deployment.

***Geographic market***

Telstra's HFC exemption application specifies the defined geographic area for the exemption application to be the area including customer premises that lie wholly or partly within 75 metres of the network distribution lines of Optus' HFC network. The Optus HFC network is present in areas of Sydney, Melbourne and Brisbane.

*ACCC's views – Geographic dimension*

As noted above, Part XIC of the TPA does not require the ACCC to precisely define the scope of relevant markets for the purpose of assessing an exemption application. In certain exemption inquiries, it may be sufficient to broadly identify the scope of the relevant markets likely to be affected by the making of the exemption order. Accordingly, a market definition analysis under Part XIC of the Act should be seen in the context of shedding light on how granting an exemption would promote competition rather than in the context of developing 'all purpose' market definitions.[142]

Also as noted above, there are difficulties with applying traditional geographic demand and supply-side substitutability analysis to fixed-line telecommunications services. For example, the opportunity for demand-side substitution is limited by the fact that the fixed-line infrastructure is physically connected to a household. There are also difficulties in applying supply-side substitutability analysis. For example, the nature of fixed-line networks, including the sunk and lumpy characteristics of investment and the long lead times often involved in deployment, raises the possibility that rivals will often have limited scope to quickly re-deploy supply to geographic areas in response to a non-transitory price increase, or degradation of quality.

In the past, the ACCC has generally adopted a "national" geographic dimension when framing the geographic scope of the relevant market(s) in telecommunications markets. However, declaration of the ULLS and LSS has allowed competitors to install their own DSLAMs in Telstra exchanges in order to provide retail broadband and voice services to end-users. This type of competition has developed unevenly across different geographic areas of Australia. As foreshadowed in the FSR2, the ACCC has examined competitive dynamics at a more geographically disaggregated level with the aid of empirical data.[143] Notably, the ACCC has examined the LCS and WLR in its

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142 see ACCC, Telecommunications services- Declaration provisions – a guide to the declaration provisions of Part XIC of the TPA, 1999.

143 ACCC, *Fixed Services Review – A second position paper*, April 2007, p. 36.

assessment of Telstra's LCS/WLR exemption application and the PSTN OA in its assessment of Telstra's PSTN OA exemption application.[144]

The ACCC recognises that the dispersion of the population in Australia has led to competition developing unevenly across different geographic areas of Australia. However, in those areas of Sydney, Melbourne and Brisbane that are subject to Telstra's exemption application, it is likely that competition has developed relatively consistently. These proposed areas have similar characteristics in that they are all metropolitan regions of major capital cities and the customers in these areas are likely to be mainly residential in nature. This reflects the fact that a primary driver for HFC deployment was the provision of pay TV, a consumer service. These metropolitan areas also have more significant ULLS take-up and better coverage from wireless and mobile alternatives than do regional and rural areas.

Therefore, the ACCC considers it appropriate to use Optus' HFC network footprint (howsoever defined) as the basic geographic unit for its competition analysis at both the wholesale and retail levels. The ACCC is of the view that this will reflect, as accurately as possible, the actual level of competition in the provision of services in those areas subject to Telstra's exemption application.

The ACCC is aware, however, that there may be some practical difficulties with determining the operation of the 75m rule proposed by Telstra in its exemption application. As a consequence, there might be some challenges in administering the exemption were it to be granted. The ACCC notes that Telstra has proposed a significant exchange of network information between Optus and Telstra, which could lead to significant procedural and confidentiality issues.[145] The ACCC notes however Telstra's submission that a similar scheme has been enacted in New Zealand, which could potentially provide some guidance on the practical method for enforcing such a scheme.[146]

Ultimately, the competition question before the ACCC is whether the granting of the exemption in the proposed geographic area will promote the LTIE. In this context, the ACCC considers that the differing competitive dynamics across geographic areas is an issue that is best addressed in the consideration of any regulatory remedy (i.e. the decision whether the granting of the exemption orders would promote the LTIE) rather than the process of market definition.

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[144] ACCC, *Telstra's local carriage service and wholesale line rental exemption applications—final decision and class exemption*, August 2008; ACCC, *Telstra's PSTN originating access exemption applications—CBD and metropolitan areas—final decision and class exemption*, October 2008.

[145] Telstra, Initial submission in support of exemption application, December 2007, p. 61.

[146] ibid, p. 60.

## 3.2 Assessing the state of competition

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

Once the relevant markets have been defined,[147] the next step in the analysis is to assess the state of competition in the relevant markets. Importantly, assessing the state of competition is not a static analysis limited to a description of current conditions and behaviour. Rather, it should also take into account dynamic factors such as the potential for sustainable competition to emerge and the extent to which the threat of entry (or expansion by existing suppliers) constrains pricing and output decisions.

***The concept of 'effective competition'***

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

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

- many services are provided by a small number of providers, in a situation where the incumbent as owner of the only ubiquitous local loop remains the predominant provider of most (if not all) essential inputs
- the industry is characterised by economies of scale, scope and density over large ranges of output
- services are often differentiated from each other
- there are constantly evolving service types and network technologies.

The concept of 'effective competition' recognises the practical limitations of the theory of perfect competition. Definitions of such a standard are always difficult, but some characteristics can be highlighted.[148] Effective competition:

- is more than the mere threat of competition—it requires that competitors be active in the market, holding a reasonably sustainable market position[149]

[147] To the extent possible, taking into account the uncertainty surrounding the geographic dimensions of the relevant markets

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

[149] Olivier Boylaud and Giuseppe Nicoletti, 'Regulation, market structure and performance in telecommunications', *OECD Economics Studies*, no. 32, 2001/1.

- requires that, over the long run, prices are determined by underlying costs rather than the existence of market power (a party may hold a degree of market power from time to time)

- requires that barriers to entry are sufficiently low and that the use of market power will be competed away in the long run, so that any degree of market power is only transitory

- requires that there be 'independent rivalry in all dimensions of the price/product/service [package]'[150]

- does not preclude one party holding a degree of market power from time to time, but that power should 'pose no significant risk to present and future competition'.[151]

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

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

> Effective competition is concerned not only with the ability to control prices and costs for products and/or services, but also with consumer benefits such as quality of service, a range of services available to consumers, efficient operation of firms in a market and innovative service provisions as well.[152]

***Factors which are relevant to a competition assessment***

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

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

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

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

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

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[150] *Re Queensland Co-operative Milling Association Ltd and Defiance Holding Ltd* (1976) 25 FLR 169.

[151] In general, however, market power must not be used in a way that would constitute a 'misuse of market power'.

[152] OECD, *Indicators for the Assessment of Telecommunications Competition* DSTI/ICCP/TISP,2001, p. 6.

### 3.2.2 The level of competition in the relevant markets

This section provides an analysis of the state of competition in the relevant markets. While the ACCC draws conclusions about the level of competition generally, the following submissions and analysis deal most closely with the state of competition relevant to the Optus HFC network. An issue raised by both Optus and Telstra was Optus' relative usage of ULLS and HFC both within and outside the Optus HFC footprint. Parties also made submissions on the issue of serviceable and unserviceable premises.

In its response to the ACCC's draft decision, Telstra submits that the ACCC has used a flawed approach in its assessment of the state of competition in markets.[153] In particular, it submits that the starting point is not whether any markets for listed services are or are not effectively competitive, but whether the objective in the TPA of the promotion of competition is likely to be achieved. The ACCC considers that Telstra has misunderstood the ACCC's draft decision. The promotion of competition objective in the LTIE does not require the result of an exemption to be a particular state of competition, but instead measures the extent to which the conditions for competition may be improved. This is consistent with the ACCC's approach in both this and other regulatory processes under Part XIC. However the question of whether there is effective competition in relevant markets will inform this analysis.

#### *3.2.2.1 Retail fixed voice markets*

***Parties' submissions***

Telstra submits that the benefits of infrastructure-based competition are not being realised.[154] Telstra further submits that, compared to overseas cable companies, Optus is unique in that it has a low level of serviceable homes and a high level of usage of regulated access in its cabled areas.[155] However, Telstra considers that Optus' 32 per cent telephony penetration rate in the homes it treats as serviceable is strong, and comparable to overseas cable companies such as Virgin Media.[156] Telstra contends that the Optus HFC network's overall performance is 'substantially diluted' when the 36 per cent of the passed premises regarded as unserviceable by Optus are added back in, making telephony penetration 21 per cent.[157] Telstra submits that the comparatively good take up of HFC services within the network's pool of serviceable homes demonstrates that the HFC network is fit for purpose as an effective competitor.[158] In its response to the ACCC's discussion paper, Telstra submits that more recent data indicates that Optus has a HFC telephony penetration rate of 38 per cent.[159] Telstra further submits that Optus' share of PSTN lines by HFC as a proportion of all PSTN lines is about 5.2 per cent.[160]

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153 Telstra, Response to ACCC Draft decision, October 2008, p. 52.
154 Telstra, Initial submission in support of exemption application, December 2007, p. 17.
155 ibid, p. 45.
156 ibid.
157 ibid.
158 ibid, p. 46.
159 Telstra, Response to ACCC Discussion Paper, March 2008, p. 27.
160 ibid, p. 28.

In its supporting submission to the exemption application, Telstra argues that regulated access impacts on the state of competition on not just the 36 per cent of unserviceable homes, but all homes within the HFC footprint as it deprives customers of the dynamic benefits of infrastructure-based competition.[161] In its response to the ACCC's January 2008 Discussion Paper, Telstra submits that Optus' penetration rates for HFC telephony services demonstrates that when 'Optus chooses to compete via cable, it can do so effectively.'[162]

In its response to the discussion paper, Optus submits that it supplies residential customers via its HFC network, rather than Telstra's CAN, where the premises are serviceable by HFC.[163] Optus submits that it uses an internal Business Rule which specifies that where HFC is available for supply to a customer, that customer will be supplied with HFC and not with ULLS or resale products.[164] Optus states that if a customer's premises are not serviceable by the HFC network, then it will use Telstra's fixed line network.[165] Optus submits that of the 2.2 million premises passed by the HFC network, around 800,000 are unserviceable.[166] Optus states that it does not supply business or wholesale customers with fixed voice services via the HFC network.[167]

Optus submits that its cable telephony subscriber numbers have decreased since the 2003/04 financial year.[168] However, Optus contends that this decrease should be considered in the context of the downward trend in the number of fixed telephony lines generally.[169] Optus submits that its ULLS voice customer numbers have significantly increased since the 2005/06 financial year but this figure is still significantly lower than the total number of voice customers on its HFC network.[170] Optus further submits that the growth in ULLS customers is matched by a decline in resale base customers, reflecting a specific decision by Optus to migrate existing resale customers to ULLS.[171] Optus also submits that Telstra does not provide telephony services via its HFC network.[172]

Telstra's June 2008 submission reiterates its views on the state of competition in the relevant markets.[173] Telstra contends that Optus' March 2008 submission reveals that there have been strong levels of growth in the number of customers connected to its HFC network.[174] Telstra submits that based on Table 1.1 of Optus' March submission **[c-i-c starts] [c-i-c ends].**[175]

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161 Telstra, Initial submission in support of exemption application, December 2007, p. 46.
162 Telstra, Response to ACCC Discussion Paper, March 2008, p. 27.
163 Optus, Response to ACCC Discussion Paper, March 2008, p. 6.
164 ibid, p. 9.
165 ibid, p. 11.
166 ibid.
167 ibid, p. 7.
168 ibid, p. 6.
169 ibid.
170 ibid.
171 ibid.
172 ibid, p. 16.
173 Telstra, Supplementary submission, June 2008.
174 Telstra, Supplementary submission, June 2008, Attachment 1, p. 1.
175 ibid, p. 1.

Following the ACCC's draft decision, Telstra submitted that the ACCC had made flaws in its approach to and conclusions on the level of competition.[176] This was because the ACCC had considered barriers to entry and expansion that related to the Optus HFC network, in addition to barriers to entry and expansion to other competitors in the market. Telstra submitted that barriers relating to the Optus HFC network only related to Optus' commercial interests:

> The considerations listed in (a) to (c) above are all directed to the promotion, or protection, of SingTel Optus' commercial interests. They are not considerations relevant to whether the granting of the exemption sought by Telstra would be likely to result in the achievement of the objective of promoting competition in the market in which retail fixed voice services are provided. The exemption sought by Telstra does not impact on the barriers to entry that SingTel Optus faces in the provision of retail fixed voice services.[177]

Telstra further submitted that there was significant competition in the area covered by the Optus HFC footprint, demonstrated by the number of DSLAM operators.[178] It submitted that many of these operators had an equivalent or larger number of DSLAMs than Optus in the HFC area, and that many of the affected ESAs have significant numbers of facilities-based competitors. It also submitted that the number of non-Optus DSLAM operators in exchanges in DSLAMs had grown quickly over the period since December 2005.[179] Eisenach also provides analysis showing that there are a number of non-Optus DSLAMs in many of the ESAs covered by the Optus HFC network.[180]

***ACCC's views***

*State of competition*

A relevant consideration when considering the state of competition in a market is the competitor shares within that market.

The ACCC considers that Telstra remains the dominant provider of retail fixed voice services nationally.[181] In the ACCC's 2005-06 *Market Indicators Report*, Telstra retained large revenue market shares of local telephony (72 per cent), domestic long-distance (69.7 per cent), international calls (63.2 per cent) and fixed-to-mobile (75.5 per cent) services.[182] The ACCC noted in its most recent *Competitive Safeguards Report* that Telstra increased its retail market share for basic access/local call provision in 2006-07, following a steady decline since 2001-02.[183]

The ACCC's assessment of the state of competition in local telephony as part of its *Telecommunications Competitive Safeguards Report, 2005-06* found that:

> While resellers have made some inroads to Telstra's retail market share in the provision of basic access and local calls, this has been minimal, and there are significant barriers to new entrants

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176 Telstra, Response to ACCC Draft decision, October 2008, p. 53.
177 ibid, p. 53.
178 ibid, p. 54-5.
179 ibid, p. 56.
180 Eisenach, *Evidence relating to the ACCC's draft decision denying Telstra's exemption application for the Optus HFC footprint*, 13 October 2008, p. 12.
181 ACCC, *Telecommunications competitive safeguards for 2006*-2007, 12 May 2008, p. 19.
182 ACCC, *Telecommunications market indicator report 2005-06*, August 2007, p. 5.
183 ACCC, *Telecommunications competitive safeguards for 2006*-2007, 12 May 2008, p. 18.

> obtaining sufficient scale to compete sustainably. Further, the overriding characteristic of the market is that there is still a large degree of reliance on Telstra's network for the provision of local telecommunications services; hence there is very little infrastructure-based competition. These factors combine to provide the major source of Telstra's profitability and market power.[184]

The ACCC also noted in its 2006-07 *Competitive Safeguards Report* that:

> Carriers entering the fixed voice market generally do so by reselling regulated wholesale services of the incumbent. The presence of a dominant incumbent and long-entrenched second entrant increases the likelihood of an aggressive competitive response to a new entrant investing in its own network or entering by way of investment in ULLS compatible technology. Given telecommunications investment costs are generally sunk, and therefore not readily recoverable, the resale of regulated wholesale services allows carriers to achieve minimum efficient scale before committing to more significant investment.[185]

However the ACCC noted that "[t]he increasing take-up of ULLS by carriers suggests that voice service provision over this medium is increasingly considered an economically feasible method for carriers."[186] The ACCC notes that, nationally:

- At June 2008, ULLS access seekers' share of total SIOs on a national level was 5 per cent; and
- From 30 September 2007 to 30 June 2008, ULLS take-up nationally increased at an annual rate of 93 per cent from 306,000 to 521,000.[187]

Accordingly, while take-up of ULLS is still low compared to the total number of lines in the network, it is clear that take-up of ULLS is growing strongly and may significantly increase in the foreseeable future.

Although Telstra is the dominant supplier of fixed voice services, the level of competition in the proposed HFC exemption area may be different to that experienced on a national basis. This is because of the use of ULLS by various access seekers and the presence of the Optus HFC network. The ACCC noted in its 2006-07 competitive safeguards report that Optus' and Telstra's positions as the largest two providers in providing retail basic access and local calls have been relatively stable over the past six years, and that this was consistent with their positions as infrastructure owners.[188]

Optus submitted that it had **[c-i-c starts] [c-i-c ends]** voice customers on its HFC network at February 2008, out of 2.2 million premises passed and 1.4 million premises currently regarded by Optus as serviceable.[189] This is a higher percentage of customers than the 10% of customers that Optus has nationally.[190] Accordingly, the ACCC

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184 ACCC, *Telecommunications competitive safeguards report 2005-06*, p. 20.
185 ACCC, *Telecommunications competitive safeguards for 2006*-2007, 12 May 2008, p. 18.
186 ibid, p. 19.
187 ACCC, Telstra's local carriage service and wholesale line rental exemption applications—final decision and class exemptions, August 2008, p. 70.
188 ACCC, *Telecommunications competitive safeguards for 2006*-2007, 12 May 2008, p. 18.
189 Optus, Response to ACCC Discussion Paper, March 2008, p. 7. Optus publicly reported a slightly higher number of 534,000 customers in its management reporting for 31 March 2008: Singtel, M*anagement discussion and analysis of financial condition, results of operations and cash flows for the first quarter ended 30 June 2008*, p. 44.
190 ACCC, *Telecommunications competitive safeguards for 2006*-2007, 12 May 2008, p. 18.

considers that the presence of the Optus HFC network, along with other infrastructure discussed further below, would appear to result in a greater level of competition within these areas than outside.

Optus also has the largest number of ULLS among access seekers, and its ULLS and DSLAM-based supply serves customers within the HFC footprint. Optus states that its HFC network overlaps (to some degree) with 262 Telstra ESAs, and that of these exchanges Optus has installed DSLAMs in 179 of them.[191] However it submits that it only uses these DSLAMs to provide services to homes that it considers are not serviceable by HFC.[192] Optus has reported that it has 317,000 ULLS telephony customers at 31 March 2008, and 368,000 customers at 30 June 2008.[193]

In addition to Optus having customers on ULLS-based services among houses it considers to be unserviceable, other providers use ULLS in those areas as well. As noted by Telstra, there has been growth in the number of DSLAM operators other than Telstra and Optus in metropolitan ESAs over the last three years. The ACCC considers that these ULLS alternatives would also be a factor in the greater level of competition within the region covered by Optus' HFC network. It is relevant to note Optus' submission that its business rules specify that the ULLS only be used as a substitute to the Optus HFC network where a premise is not 'serviceable' by the HFC.[194] To the extent these houses are not serviceable, Optus' access to the ULLS would provide competition in the provision of fixed voice services that would not otherwise exist. However the opportunity for other suppliers to provide voice using the ULLS is also relevant, given the presence of other DSLAM operators in the same geographic regions as Optus' HFC network.

Optus' HFC network would only be likely to provide a competitive constraint within its geographic footprint. It would not be an alternative for premises in areas outside the footprint. Accordingly, the ACCC considers that the competitive constraint exerted by the HFC network would be limited in those areas. The ACCC also notes the differing technology of the HFC network compared to the CAN may mean that there will be switching costs for consumers in changing their customer premises equipment from ULLS-based provision to HFC-based provision or vice versa, even if the premises is serviceable by HFC.

The ACCC notes finally that Telstra does not provide voice services over its HFC network, essentially dual sourcing those customers that obtain voice with cable broadband or pay TV services. In its response to the draft decision, Telstra considered that its use of dual sourcing is very different to that of Optus.[195] It stated that, unlike Optus, it faces the full economic cost of two networks, whereas Optus has a regulated price for access to Telstra's infrastructure. It states that Telstra's use of two networks does not harm the LTIE in the same way that Telstra submits Optus' use does.[196] The

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191 Optus, Response to ACCC Discussion Paper, March 2008, p. 10, para [2.27]
192 ibid, p. 9, para [2.21].
193 Singtel, M*anagement discussion and analysis of financial condition, results of operations and cash flows for the first quarter ended 30 June 2008,* p. 44.
194 Optus, Response to ACCC Discussion Paper, March 2008, p. 9.
195 Telstra, Response to ACCC Draft Decision, October 2008, p. 50.
196 ibid, p. 51.

ACCC considers the implications of Telstra's ownership of an HFC network further below, but notes that Telstra receives a cost-reflective price for declared services acquired over its network.

The ACCC considers that pricing responses and outcomes for consumers of fixed voice services can provide information on the level of actual competition in a market. Evidence of price and non-price competition in particular geographic areas would tend to provide support for the emergence of effective competition within those areas.

Telstra argues that the geographic area where the HFC is deployed should be considered a lucrative geographic area and that there is evidence of competition in the retail market for voice services in **[c-i-c starts] [c-i-c ends]**.[197] However the ACCC notes that such a response is not necessarily in response to HFC in particular but rather general competitive conditions, including ULLS-based provision.

*Potential for development of competition in the market*

Evidence of the potential for the development of competition in a market will be relevant to the state of competition in that market. If there are insurmountable barriers to entry in the market, then competition may be unlikely to be promoted by the granting of an exemption. As such, the ACCC has considered the relevant barriers and impediments to entry and expansion in relation to the supply of retail fixed voice services.

Given the nature of Telstra's HFC exemption application, the ACCC has focused in the following section on issues relating to the potential for development of competition through the Optus HFC network, but has also where relevant considered the effect of actual or potential entry by other parties. Where appropriate, the ACCC has had regard to its recent conclusions about the potential for ULLS-based competition to develop in its recent decisions on Telstra's LCS/WLR and PSTN OA exemption applications.

The ACCC notes Telstra's submission that it is not appropriate to consider barriers to entry and expansion relating to the Optus HFC network in the consideration of whether granting the HFC exemption application would promote competition. Telstra also submits that the exemption does not impact on the barriers to entry that Optus faces in the provision of retail fixed voice services.

The ACCC is not satisfied that either of these arguments are valid. Given the targeted nature of the HFC exemption application, and that Telstra's submissions focus on the potential impact of the exemption on the Optus HFC infrastructure, it is appropriate for the ACCC to consider the possible effects on the use of that infrastructure. The ACCC considers that, were it not to consider the barriers to entry and expansion for the Optus HFC network in its making of this decision, it would be failing to consider relevant matters. The ACCC notes that it has also considered barriers to entry and expansion for other methods of providing telecommunications services, including DSLAM-based provision.

[197] Telstra, Response to ACCC Discussion Paper, March 2008, p. 27.

In reference to Telstra's second argument, the ACCC considers that assessing the effect of the exemption on Optus' provision of voice services and the resulting effect of the exemption on the LTIE is in fact relevant to the ACCC's assessment. Effects on Optus' provision of voice services will affect the competition generally in voice provision. This affects the ACCC's consideration of the promotion of competition criteria and hence the consideration of the LTIE.

Size of addressable market

The ACCC has previously noted that it is relevant to consider the number of SIOs in an ESA when considering the potential for facilities-based entry into particular exchanges.[198] The number of SIOs will be a key factor in guiding entry decisions of access seekers into exchanges, as it will affect the economies of scale that could (at least potentially) be realised by a competitor. Equally, in considering the potential for competition in reference to the Optus HFC network, it is relevant to consider the number of homes that can be serviced using that network.

The ACCC considers generally that Optus' HFC network would appear to have sufficient overall size and geographic reach to provide competition for provision of services within its footprint. While the Optus HFC network is smaller than Telstra's copper CAN and HFC networks and has limited geographic scope, this has not prevented Optus using its HFC network to provide voice and broadband services. The ACCC notes the Optus HFC penetration among serviceable homes in that regard.[199] The ACCC similarly notes Telstra's submission that many HFC networks overseas also have limited geographic scope.[200]

- *Serviceability of premises*

However, a key point of debate between Optus and Telstra regarding the addressable HFC market relates to the number of homes treated as unserviceable by Optus within its HFC network footprint, and particularly the cost of connecting MDUs. The Optus network passes at least 2.2 million premises.[201] The ACCC notes Telstra's submissions that the number of premises passed by the Optus HFC network would be likely to have grown as more MDUs were built.[202] However the ACCC does not consider that this point is significant to its assessment. Of the 0.8 million premises treated by Optus as unserviceable, 0.5 million are considered unserviceable by virtue of being MDUs.

Telstra submits that more premises should be serviceable by Optus' HFC network.[203] It states that in using its own HFC network, it treats only 6.5% of premises as unserviceable. It also points to Virgin Media in the UK as having only 6% of premises regarded as unserviceable. In particular, Telstra argues that it is not reasonable for Optus to regard MDUs as unserviceable. Telstra argues that MDUs should in fact be

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198 ACCC, *Telstra's local carriage service and wholesale line rental exemption applications—final decision and class exemptions*, August 2008, p. 71.
199 Telstra, Initial submission in support of exemption application, December 2007, p. 31.
200 ibid, p. 31.
201 Optus, Response to ACCC Discussion Paper, March 2008, p. 11.
202 Telstra, Initial submission in support of exemption application, December 2007, p. 33.
203 ibid, p. 33.

considered as ‘attractive, concentrated clusters of customers and potential customers who can be serviced with limited network extension requirements’.[204]

Optus and Telstra disagree about the costs of connecting MDUs. Harris, in his report for Telstra, estimates that the cost in Southern California of installing cable in MDUs and building lateral cables to each of the units are as follows:[205]

| **Units per MDU** | **US$** |
|---|---|
| 4 | $835 |
| 8 | $1,335 |
| 16 | $2,335 |

Telstra also provides its own estimate of the costs of making connections to both SDUs and MDUs:[206]

| **Activity** | **Cost** |
|---|---|
| Aerial cable drop to SDU | $250 |
| Internal wiring in SDU from drop | $90 |
| Aerial cable drop to MDU | $250 |
| Fit amplifier and splitter in MDU MDF cupboard | $400 |
| Lateral from MDF cupboard to unit (no backbone) | $350 |
| Customer premises equipment (CPE) – cable model | $110 |

Using these cost estimates, Telstra argues that the cost of installation to the first unit in an MDU, plus the CPE, is $1110 ($250+$400+$350+$110), while the cost of installation plus CPE for each subsequent unit is $460. Telstra considers that, based on an estimated return derived from the revenues of the Optus Fusion product, the payback period for the cost of connections is no more than 19 months where 2 units in an MDU sign up, or 12 months for 16 units in an MDU.[207]

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204 ibid, p. 34.
205 Harris, *Use of HFC to deliver broadband services*, December 2007, p. 20.
206 Telstra, Initial submission in support of exemption application, December 2007, p. 83.
207 Telstra, Initial submission in support of exemption application, December 2007, p. 84.

Conversely, Optus contends that the ACCC cannot be satisfied that it would be economically feasible for Optus to connect up MDUs.[208] It argues that this is true irrespective of whether ULLS access is available. Optus contends that there are high network access costs and low penetration, and that connecting MDUs has low NPV and long payback period. Optus states that there are three major cost categories for connecting MDUs to the HFC network:

- network enhancement or upgrading costs
- lead-in cable costs for wire from the street to the MDU communications room
- lateral cable costs from the communications room to each unit.

Optus contends that the fixed costs of an MDU build must be incurred before any sales can be made and irrespective of the number of customers in the building. It states that the low penetration achievable for telephony and data through HFC limits the returns that can be made in MDUs. Optus presents its most recent commercial analysis of connecting MDUs that was conducted in 2003.[209] Optus states that this largely commercial-in-confidence document demonstrates low NPV and long payback period for such connections. The analysis concludes that deployment would not lead to positive cash flow until **[c-i-c starts] [c-i-c ends]**. Optus contends that the fact that the analysis was carried out in 2003 is good evidence that MDUs are not commercially viable as the analysis was conducted before the ULLS was ‘commercially available’.[210] It submits that Harris and Telstra’s cost estimates should not be considered comparable to those that Optus would incur.

In response to the commercial analysis presented by Optus, Harris considers that certain of the costs may be overstated due to the age of Optus’ calculations.[211] Harris also considers that it would be possible to treat MDUs in the same way as SDUs when connecting, assuming that more updated technology was used. Harris also questions certain of the inputs used by Optus in its calculations.[212]

In the ACCC’s draft decision, the ACCC conducted an analysis of the costs of connecting MDUs that was presented by Telstra and Optus.[213] The ACCC considered that there would appear to be issues with the cost estimates presented by both Telstra and Optus. The ACCC’s analysis indicated that the payback period for connecting MDUs would appear to be between the 12 to 19 months put forward by Telstra and the **[c-i-c starts] [c-i-c ends]** put forward by Optus. The ACCC noted that there were potential issues with both analyses, although the differences between the parties largely related to the incremental variable costs of MDU connections rather than the fixed costs. In particular, the ACCC noted that Optus included additional costs compared to Telstra for a customer access unit; incremental transmission, CMTS expansion and

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208 Optus, response to ACCC Discussion Paper, March 2008, p. 16.
209 ibid, p. 39.
210 ibid, p. 20.
211 Harris, *Issues arising from Optus’ submissions*, June 2008, p. 9.
212 Harris, *Issues arising from Optus’ submissions*, June 2008, Attachment C.
213 ACCC, *Telstra’s exemption application in respect of the Optus HFC network—draft decision*, September 2008, p. 57-59.

DMS ports; and incremental telephony equipment. The ACCC examined possible payback periods based on an adjusted form of Telstra's analysis. The analysis included some CAU costs and incremental transmission, CMTS expansion and DSM port costs, but did not allow incremental telephony costs based on views in Harris' report. The ACCC also examined adjusting the EBITDA margin used in the analysis. Making both these adjustments lead to payback periods for connection costs in the order of 3 to 4 years.

Both Optus and Telstra provided submissions in response to the above ACCC analysis in the draft decision on the costs of connecting MDUs. Telstra submitted that the MDU costs in the ACCC's analysis were overstated.[214] It submitted that the incremental transmission, DMS ports and CMTS costs in Optus' analysis should not be included. This was because Telstra submitted that these network-type costs would not be incremental to existing service provision using ULLS.[215] It submitted that these core network elements would be utilised under either ULLS or HFC provisioning.

Telstra also reiterated submissions that Optus should be required to use best-in-use technology.[216] In particular it reiterated its submission that CAU technology should not be used by Optus and that any costs calculations should be based on a voice over broadband (VoB) solution. It submitted that CAU technology in any form is outdated and that no cost for such connections should be included.[217]

Telstra also submitted that in any case the payback periods of up to 4 years modelled by the ACCC in its draft decision are not unreasonably lengthy. It bases this argument on the length of the asset life for lead-ins, the fact that lead-ins support multiple customer premises, the fact that MDUs represent a number of potential customers and the fact that Optus already has customers in some MDUs.[218]

Optus submits, in relation to Telstra's and Harris' submissions that costs in its analysis could be overstated due to the age of its calculations, that the most substantial part of the costs of cable installation are labour costs which have actually increased since its last MDU analysis was done.[219] It points to network enhancement costs, lead-in cable costs and lateral cable installation costs as all involving substantial labour costs.[220] In relation to Harris' comments on the costs in Optus' cost analysis, Optus submits that Harris has misunderstood the nature of incremental telephony equipment. It submits that this relates to head-end equipment rather than CPE, and is properly incurred.[221]

Optus also submits that treating MDU connections in the same way as SDUs, as proposed by Harris, would not be a workable scenario in Australia due to the fact that multiple aerial drop cables would not be acceptable to body corporates and that local authority approval may also be needed.[222] It submits that, for a variety of reasons, it

214 Telstra, Response to ACCC draft decision, October 2008, p. 34.
215 ibid, p. 34-5.
216 ibid, p. 36.
217 ibid, p. 37.
218 ibid, p. 37.
219 Optus, Response to ACCC draft decision, October 2008, p. 14.
220 ibid, p. 15.
221 ibid, p. 16.
222 ibid, p. 15.

would be unable to reach a high penetration in MDUs, which would further reduce its available subscribers. It points to evidence from its consultants CEG that over-builders are typically marginal overseas.[223] Finally, Optus also submits that the EBITDA of 40 per cent used in the ACCC's analysis would be too high, given the EBITDA for all of Optus. In the June quarter 2008, Optus' EBITDA was reported as 25.3 per cent, with the Consumer and SMB fixed line division obtaining an EBITDA of 17 per cent.[224]

In light of these submissions from interested parties, the ACCC considers that some adjustments to its analysis may be appropriate.

The ACCC retains concerns that neither Optus' nor Telstra's analysis is necessarily complete or uses the most appropriate assumptions. Firstly, there may have been changes to revenues and costs identified in Optus' calculations. Over the five years since Optus' analysis was performed in 2003, certain costs, such as technology equipment prices, may have decreased, as argued by Telstra, while others, such as labour costs, may have increased, as argued by Optus. The ACCC also notes that a position needs to be taken on the additional costs that Optus' analysis includes that are not in Telstra's analysis. In relation to penetration rates, the ACCC noted in its draft decision that assumptions in relation to penetration rates will have an effect on the payback period. In light of the approach taken of adjusting Telstra's analysis, rather than basing calculations on Optus' calculations, it is not necessary to determine the exact penetration that Optus may be able to achieve. This is because Telstra's approach determines a range of payback periods for different numbers of connected MDU premises. However, Telstra's approach to fixed costs inherently assumes that costs are only incurred when a subscriber signs up, which seems to contradict Optus' submissions about certain fixed costs being incurred before any sales can be made.

The two parties do not reach substantially different views on the fixed costs of connecting a MDU, albeit the calculations are by different methods. Optus estimates a total cost based on a study of 161,000 MDUs, and then distributes this total cost over subscriber numbers based on a **[c-i-c starts] [c-i-c ends]** penetration rate, to reach a fixed cost per subscriber of **[c-i-c starts] [c-i-c ends]**. However, without the IT costs category this reduces to around **[c-i-c starts] [c-i-c ends]** of fixed costs per subscriber, although as noted by Optus the increases in labour cost prices over time may have increased this amount.[225] The ACCC considers that it is not obvious why certain IT costs, such as customer interface systems, marketing systems or billing systems, would need to be incurred simply because MDUs are being connected, as they would seem to be generic costs already incurred by Optus to supply over HFC. Telstra separately estimates the cost of connecting an MDU from the common area to the external HFC network plant at $650 per building.

The major difference between the Optus and Telstra cost estimates relates to the incremental costs of connecting additional subscribers once a customer seeks to take Optus' HFC. Telstra estimates the additional costs as being $350 for running lateral wiring from the MDU common area to the unit and $110 for a cable modem, leading to

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[223] ibid, p. 17.

[224] Singtel, *Management discussion and analysis of financial condition, results of operations and cash flows for the first quarter ended 30 June 2008*, p. 38.

[225] Australian Bureau of Statistics, *Labour Price Index, June 2008,* 6345.0,13 August 2008.

total variable costs per subscriber of $460. Optus estimates similar amounts for these two costs but also estimates that there are additional customer costs relating to its use of a customer access unit of **[c-i-c starts] [c-i-c ends]**; incremental transmission, CMTS expansion and DMS port costs of **[c-i-c starts] [c-i-c ends]**, and incremental customer telephony equipment of **[c-i-c starts] [c-i-c ends]**, leading to total costs per subscriber of **[c-i-c starts] [c-i-c ends]**.

The major part of the difference between the positions of Optus and Telstra relates to the inclusion of the customer access unit and incremental telephony equipment. Telstra submits that the customer access unit (CAU) modelled by Optus is an outdated and inefficient piece of equipment.[226] It also submits, citing Harris, that this piece of equipment would already be in an Optus warehouse and so would already be incurred. Telstra cites Eisenach's conclusions that this high cost would affect the business case for Optus connecting MDUs.[227] Harris also states that it would be unnecessary to incur incremental telephony equipment costs as standard telephony equipment could instead be used.[228] Telstra repeats such submissions in its response to the draft decision.[229]

In the ACCC's view, these additional costs may be overstated by Optus. In relation to the incremental transmission, telephony equipment, CMTS expansion and DMS ports, the ACCC considers that, as submitted by Telstra, these network-related costs may not be additional costs for customers being switched from provision by Optus DSLAM infrastructure to Optus HFC infrastructure. Accordingly, the ACCC does not propose to include these costs in its analysis (although they would be incurred for new customers and the ACCC's calculations could accordingly be considered a low case for an estimate of connection costs).

The more disputed cost is that related to the CAU used by Optus. The ACCC notes that both parties agree that the CAU used historically by Optus is relatively bulky and an older piece of technology. Accordingly the ACCC considers that Optus, were it to deploy to MDUs, may utilise a cheaper CAU. However, the ACCC considers that the CAU would appear to be a real cost, and it is unclear that the ACCC should disregard that cost simply because the CAUs may have been purchased previously. Further the ACCC is not able to assess the number of CAUs that Optus may have on hand at present. Alternatively, as suggested by Telstra, Optus may switch to provision of a voice over broadband product using an analogue telephony adapter.[230] This may be a cheaper solution that would provide a broadly comparable service. The ACCC however notes its previously stated concerns about the ability of VoIP solutions to at this stage provide a fully effective substitute to PSTN voice in all circumstances.[231]

In its draft decision, the ACCC considered that an adjusted view of the costs of connecting MDUs might be obtained by disregarding or reducing certain of the costs

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226 Telstra, Supplementary submission, June 2008, p. 12.

227 Telstra, Supplementary submission, June 2008. Attachment 1, p. 6; Eisenach, *Comparative Analysis of Communications Markets*, June 2008, p. 25.

228 Harris, *Issues arising from Optus' submissions*, June 2008. Attachment C.

229 Telstra, Response to the ACCC draft decision, October 2008, p. 36.

230 ibid, p. 35.

231 ACCC, *Telstra's local carriage service and wholesale line rental exemption applications—final decision and class exemption*, August 2008, p. 43.

claimed by Optus.[232] For customers that are switching from ULLS-based provision to HFC-based provision, it would not seem necessary to include an allocation for incremental transmission, telephony equipment, DMS ports and CMTS expansion, although such costs (totalling **[c-i-c starts] [c-i-c ends]**) would be incurred if a new customer was added.[233] This is because, as argued by Telstra, these costs relate to the core network rather than the incremental customer access network.

In relation to the treatment of CAUs, the ACCC considered in its draft decision that halving the cost of the CAU, reflecting comments of Eisenach about trends in technology costs might better approximate costs that would be incurred today, and adding such a cost into Telstra's analysis, might give an idea of the payback periods that would be faced by Optus. Adjusting Telstra's analysis to include a **[c-i-c starts] [c-i-c ends]** cost for a CAU increases the payback period for 2 units to around 40 months, for 4 units to around 32 months and for 16 units to around 27 months. The ACCC notes that these values would only be relevant to the extent Optus continues to use the CAU technology it currently employs, and some evidence has been presented that this technology may no longer be a modern approach to voice over an HFC network. However, other additional costs may potentially be incurred were Optus to switch to the use of VoB solutions.

The other relevant adjustment might be to alter the amount of money that would be retained as profits out of the revenues in the Telstra cost model, noting Telstra's submission that 'clearly, SingTel Optus has other costs associated with supply of the service and Telstra would not suggest that the EBITDA margin would approach 50%'.[234] The ACCC noted in its draft decision that a reduced EBITDA margin of 40 per cent would be **[c-i-c starts] [c-i-c ends]**. This would result in the 2, 4 and 16 unit payback periods increasing to 37 months, 28 months and 22 months respectively. If the margin was instead 25.3 per cent, which is the EBITDA for Optus as a whole, the payback periods further increase to 68 months, 50 months and 38 months. It can be seen that assumptions about the EBITDA achieved on the provision of the HFC services can have a significant effect on the payback periods in the cost modelling.

Making the adjustment for the CAU costs as well as adjusting the EBITDA to 40 per cent would result in the payback periods noted above being 53 months, 42 months and 35 months respectively.

It is not the ACCC's role to reach investment decisions on behalf of companies, and it does not consider it necessary to precisely model the exact business case of connecting up MDUs to HFC. The ACCC notes that the cost of connecting up various different MDUs would be likely to vary. However, the ACCC considers that the likely payback period would appear to be significant and to lie somewhere between the positions put forward by Telstra and Optus, particularly when a more representative EBITDA is used in the analysis. The ACCC considers that a long payback period for the investment to connect MDUs may constitute a significant barrier to expansion for Optus to increase

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232 ACCC, *Telstra's exemption application in respect of the Optus HFC network—draft decision*, September 2008, p. 58.

233 Optus, Response to the ACCC's discussion paper, March 2008, p. 41.

234 Telstra, Initial submission in support of exemption application, December 2007, p. 85.

its addressable market. This would appear to be true whether or not the ULLS is a declared service.

The ACCC notes Telstra's submission that Optus has already installed cabling into 161,000 MDUs and that modelling should take this into account.[235] The ACCC's reading of Optus' submission is not that it has installed 161,000 MDUs with cabling into the common area. Rather, the ACCC's reading is that Optus' cost analysis was conducted on the basis of the expenditure that would be necessary to connect up 161,000 MDUs to its HFC network.[236] The ACCC notes that Telstra's analysis of this scenario assumes that lateral cable install is only $90,[237] which is significantly lower than the $350 used in its earlier analysis.[238]

The ACCC also notes Telstra's submissions that a three to four year payback period for HFC connections to MDUs is not unreasonable as a lead-in cable has a life of about 15 years.[239] However, the ACCC considers that the costs of making HFC MDU connections and the resulting payback periods calculated by the ACCC are significant. A relevant contrast may be the cost of making an incremental ULLS connection, which only requires technician work to be performed at the exchange. The ACCC has found an appropriate indicative price for such connection work in Band 2 to be $53.10 in 2008-09.[240] In regards to the ability of a lead-in to support multiple end-user customers, the ACCC notes that the calculations above account for different possible numbers of customers within the MDU to be connected.

Finally, the ACCC also considers Cave's arguments that the investment decisions for serviceable homes should be better considered as a marginal decision rather than an 'all or nothing' one.[241] That is, some currently unserviceable MDUs and SDUs would be easier to connect than others. The ACCC considers that this would be an accurate assumption, but considers that it is consistent with the above analysis. Clearly a typical SDU is more straightforward to connect than a typical MDU, which is reflected in the approach taken to Optus' current approach to serviceability. Also, both Optus and Telstra agree that some percentage of premises would not be economically serviceable under any circumstances. Significantly, there would still be significant payback periods, as calculated above, for the typical MDU whether or not the analysis is explicitly conducted on a marginal basis.

- *Body corporates*

The ACCC notes also that the addressable market for the Optus HFC network may also be limited by difficulties in obtaining access from body corporates in MDUs. Telstra argues that this issue is experienced by all operators and has been overcome by Telstra and overseas operators.[242] Conversely, Optus argues that it has experienced difficulties

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235 Telstra, Response to ACCC draft decision, October 2008, p. 37.
236 Optus, Response to ACCC Discussion Paper, March 2008, p. 40.
237 Telstra, Response to ACCC draft decision, October 2008, p. 37.
238 Telstra, Initial submission in support of exemption application, December 2007, p. 84.
239 Telstra, Response to ACCC draft decision, October 2008, p. 37.
240 ACCC, *Unconditioned local loop service—pricing principles and indicative prices*, June 2008, p. 31.
241 Cave, Letter to Peter Waters, 14 October 2008, p. 3.
242 ibid, p. 36

in obtaining agreement from body corporates and that this can be particularly difficult when Telstra HFC is already supplied to the building.[243] In its response to the ACCC's draft decision, Optus also submits that the need for negotiations would lead to significant additional costs to Optus for staff to conduct negotiations and that strata titles may lead to particular difficulties.[244]

The extent to which difficulties in obtaining agreement from body corporates would be a significant hurdle is unclear, given that Telstra appears to have made such installations. The ACCC would in general expect that body corporates would not seek to have MDU facilities disrupted and this may make it difficult or costly for Optus to arrange installation of HFC facilities. This would be particularly so where Telstra has already installed HFC backbone in an MDU and residents already have pay TV access. The ACCC notes that Telstra states that it has connected around two thirds of MDUs in the Telstra HFC footprint.[245] This in turn may make it difficult to obtain agreement for additional HFC to be installed from a number of body corporates in the Optus HFC footprint.

The ACCC notes that obtaining agreement for access to MDUs has been identified as an issue in various overseas jurisdictions. Optus cites a Canadian study that found that there were significant barriers to entry into MDUs for HFC operators.[246] Issues identified in that study included delays, difficulties in obtaining access where incumbents were already in place, high fees for using existing wire and a variety of fees for deploying new equipment. Telstra points to overseas regulators in the USA and Hong Kong who have taken action to prevent exclusive access arrangements, although it submits that it does not use such arrangements itself.[247] It also submits Eisenach's paper which indicates that access issues have been overcome by 'overbuilding' cable companies in the USA.[248] The ACCC also notes that access to in-building wiring is being considered by the French regulator ARCEP in the context of the deployment of FTTH networks.[249] ARCEP considered in regard to installing cable in MDUs that:

> The cost can be high, and the time needed to negotiate installations in common areas lengthy, particularly when deliberation by a board of coproperty owners is involved.
>
> It is unlikely that property-owners will allow several operators to install their equipment, which means that a local micro-monopoly structure could emerge (one operator per building), such as is already partially the case in Japan.[250]

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[243] Optus, Response to ACCC Discussion Paper, March 2008, p. 15.
[244] Optus, Response to ACCC draft decision, October 2008, p. 21.
[245] Telstra, Initial submission in support of exemption application, December 2007, p. 33.
[246] Optus, Response to ACCC Discussion Paper, March 2008, p. 16.
[247] Telstra, Initial submission in support of exemption application, December 2007, p. 36.
[248] Eisenach, *Comparative analysis of communications markets as it relates to the economic viability of Optus; HFC network and Telstra's proposed HFC exemption*, 23 June 2008, p. 26.
[249] see, e.g. ARCEP, *Very high speed Points of reference and outlook*, 10 November 2006, available at http://www.arcep.fr/fileadmin/reprise/dossiers/fibre/slides-fttx-prog-101106ang.pdf , accessed on 2 September 2008; Vandeputte, Bertrand, *FttH in France: orientation of regulation*, 11 April 2008, available at http://www.oecd.org/dataoecd/35/60/40460875.pdf, accessed on 2 September 2008.
[250] ARCEP, *Very high speed Points of reference and outlook*, 10 November 2006, available at http://www.arcep.fr/fileadmin/reprise/dossiers/fibre/slides-fttx-prog-101106ang.pdf , accessed on 2 September 2008, slide 13.

ARCEP is considering a regime for sharing in-building wiring to deal with some of these issues.

The ACCC considers that securing body corporate access could be an impediment to the provision of services to MDUs. Evidence demonstrates that this is an issue that has been of concern in a number of overseas jurisdictions. In the Australian context, Optus would have difficulties in obtaining agreement to install cabling where Telstra HFC has already been installed, and there accordingly may be significant ‘first mover’ advantage in providing cable services to such premises. This barrier to entry may not be insurmountable given sufficient time. The ACCC notes that Optus has not submitted that it would not be able to obtain agreement from body corporates at all. The ACCC considered in its draft decision that it was unclear whether negotiations with body corporates would lead to significant additional costs to Optus, but notes Optus’ subsequent submission that staff would be required to conduct such negotiations. Accordingly there may be costs incurred, although these have not been quantified by Optus.

- *Other premises*

Further to the issue of connecting MDUs is the issue of non-MDU houses that Optus currently treats as unserviceable, and whether these houses could be connected to the Optus HFC network. As noted above, Telstra agrees that certain homes would be unserviceable, and states that it regards 6.5 per cent of homes passed by its HFC as unserviceable.[251] However, Telstra submits that the number of SDUs which appear to be treated as unserviceable by Optus is unreasonably high.[252] Optus identifies reasons why a SDU might be considered unserviceable, including:[253]

- heritage areas that restrict overhead cabling
- distance of SDUs from the main HFC cable
- terrain
- previously non-residential land now re-zoned residential
- inactive areas where HFC was deployed but not completed for reasons such as low residential density or not being able to be reached by backhaul fibre.

The ACCC notes that the fourth of these points does not seem to be a reason why premises could not now be connected to the HFC network. The ACCC considers, however, that the other points would represent reasons why premises would be unserviceable. Accordingly, it is relevant that certain premises would be effectively unserviceable by HFC under any circumstances, which would constitute a barrier to entry to the use of HFC. However the ACCC notes that distance issues may be limited by Telstra’s adoption of a 75m rule for defining its proposed exemption area. In relation to the fifth point, the ACCC considers it surprising that the network would

251 Telstra, Initial submission in support of exemption application, December 2007, p. 34.
252 Telstra, Response to ACCC draft decision, October 2008, p. 38.
253 Optus, Response to ACCC Discussion Paper, March 2008, p. 15.

have been rolled out in such areas, but notes Optus' comments that it made some poor roll-out decisions due to time pressures.[254] In relation to Telstra's submissions about the amount of unserviceable SDUs, the ACCC notes that Optus does appear to have a higher level of unserviceable SDUs than Telstra. The reason for this is not obvious given that Telstra would face some of the same issues as Optus in its deployment of HFC.

Optus further submits in its response to the ACCC's draft decision that the determination of overhead cabling as 'non low-impact' can effectively prevent any further HFC build in some areas. This is because local planning authorities may exercise their power to stop overhead cabling.[255] The ACCC considers that this may be true, but that this perhaps would have been more of an effect on initial rollout of the complete network than on subsequent lead-in provisioning. While the ACCC has not been presented with evidence on this issue, it would seem natural to assume that fewer planning issues would prevent lead-in cabling from distribution cables that are already in place, than for original rollout of distribution cable.

<u>Telstra's ownership of a 50 per cent interest in Foxtel, ownership of an HFC network and the role of content</u>

Optus and Telstra make submissions about the related issues of Telstra's ownership of its own competing HFC network, the history of overbuild by Telstra of the Optus HFC network in the 1990s, and the issue of access to content. The ACCC considers that there are significant issues related to the history of pay TV and its effect on the economies of scope that can be accessed by Optus in its use of its HFC network.

Optus submits that Telstra's ownership of a HFC network, Telstra's overbuild of Optus' HFC network, Telstra's ownership of a 50 per cent interest in Foxtel and the content-sharing agreement between Foxtel and Optus are all significant factors that have limited the economies of scale available to Optus.[256] Optus argues that these factors undermine the economic feasibility of connecting MDUs to the HFC network and occur irrespective of the availability of declared services.

Optus also submits that the situation it face in pay TV is significantly different to that faced by overseas cable companies, which have internationally had highly profitable pay TV businesses.[257] It points to three reasons – the low pay TV penetration in Australia, the Telstra overbuild of the Optus HFC network and the cost of content. Optus submits that low pay TV penetration makes it difficult to achieve economies of scale needed to make pay TV profitable. It also submits that the Telstra overbuild had a significant effect on its pay TV business and that overseas operators had the advantage of some protection from overbuild from incumbent telecommunications companies. It submits that Telstra's overbuild investment could only be explained by the motive of elimination of a competitor in telephony services.[258] Finally, Optus submits that the cost of content is a significant cost to pay TV businesses. It submits that its content costs are

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[254] ibid, p. 12.
[255] Optus, Response to ACCC draft decision, October 2008, p. 19.
[256] Optus, Response to ACCC Discussion Paper, March 2008, p. 22-5.
[257] Optus, Supplementary submission, May 2008, p. 6.
[258] Optus, Supplementary submission, May 2008. Appendix I.

**[c-i-c starts] [c-i-c ends]**. It states that its content costs per subscriber are **[c-i-c starts] [c-i-c ends]** compared to **[c-i-c starts] [c-i-c ends]**. Optus submits that **[c-i-c starts] [c-i-c ends]**.

Comparatively Telstra argues that overbuild is not an issue.[259] It cites Cave, who considers that there is no link between Telstra's ownership of copper and HFC networks that justifies the refusal of the exemption application.[260] Cave considers that, while Optus may be better off with a monopoly cable infrastructure, this is not the same as meaning that such a situation would be in the LTIE. Cave also submits that, whatever view is taken of allegations about the possible anticompetitive effect of the Telstra overbuild in the mid 1990s, there have been fundamental changes in the market subsequently that mean ownership of two networks is not an issue.[261] Similarly, Eisenach considers that Optus' submissions concerning the significance of Telstra's HFC network are not consistent with the facts or economic theory.[262] He argues that there are no economies of scope or scale that Telstra is unable to exploit from owning two networks, and that it is only the presence of a competing HFC network, and not Telstra's ownership of it, that creates issues for Optus.[263] However he considers that consumers would not be better off if Telstra's HFC network did not exist. Telstra argues that broadband is a significant enough product that can replace the role of the pay TV business for Optus.[264]

In its Draft Decision, the ACCC considered that Telstra's 50 per cent interest in Foxtel and the resulting high costs of content to Optus constitute a significant barrier to expansion of the Optus HFC network. The ACCC considered that this situation had arisen from the unusual structural situation in the Australian pay TV market and Telstra's continuing ownership of its interest in Foxtel and in the HFC network.

In response to the ACCC's draft decision, both Telstra and Foxtel make a number of submissions regarding the ACCC's views.

Telstra submits that there is no nexus between Telstra's interest in Foxtel and Optus' content costs.[265] It submits that 'FOXTEL has an incentive to price at profit maximising levels', and asserts that the ACCC's draft decision implies that 'as a result of Telstra's 50% ownership, Foxtel is pricing at a level above that'.[266] Telstra states that there is no 'explanation of why the other Foxtel shareholders would sacrifice returns in order to anti-competitively subsidise Telstra in downstream retail businesses.'[267] Telstra also notes that Telstra does not have management control over Foxtel but has only a veto power.

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259 Telstra, Supplementary submission, June 2008, p. 16.
260 Telstra, Supplementary submission, June 2008, p. 17; Cave, *A note on Two Points in Optus' Submission*, June 2008, p. 4.
261 Cave, *A note on Two Points in Optus' Submission*, June 2008, p. 5-6.
262 Eisenach, *Comparative Analysis of Communications Markets*, June 2008, p. 19.
263 ibid, p. 22
264 Telstra, Supplementary submission, June 2008, p. 20.
265 Telstra, Response to ACCC Draft Decision, October 2008, p. 22.
266 Ibid.
267 Ibid.

Telstra states that high content costs are faced by the Australian industry as a whole, highlighting these costs as a major factor in the creation of the content supply agreement (CSA).[268] Telstra's submission also refers to Justice Sackville's findings in the C7 decision,[269] that:

- the CSA did not have the effect of substantially lessening competition in the retail pay TV market;[270] and
- none of Telstra's objectives constitute the purpose of substantially lessening competition in the retail pay TV market.[271]

Telstra asserts that the ACCC's considerations about Optus' content costs are contrary to the Court's findings.[272]

Telstra also submits that Optus 'has consistently supported the Foxtel content arrangements as being pro-competitive'. Telstra supports this submission with evidence from the C7 proceedings given by Optus executives discussing the benefits of the CSA to Optus, and with media releases.[273]

Telstra submits that Optus improved its content supply deal in 2005, including obtaining volume discounts 'built into the wholesale price that SingTel Optus pays to Foxtel for content.'[274] Telstra submits that this new agreement:

> …would provide SingTel Optus with incentives to grow its pay TV service, and Telstra believes that attractive discounts are achievable under this structure.[275]

Telstra argues that this 2005 deal demonstrates that:

- the current content supply arrangements are more favourable to Optus than the original CSA
- the fact that Optus was able to negotiate substantially improved content terms shows that Foxtel's directors act in Foxtel's best interests
- in 2005, Optus considered it worthwhile to remain in the pay TV business as part of an overall bundling strategy
- Optus' HFC investments are directed only at those services that cannot be served by ULLS, given that Optus spent over $100 million on digital conversion for pay TV[276]

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268 Ibid, pp. 23-24.
269 Ibid, p. 24.
270 Seven Network Limited v News Limited [2007] FCA 1062, [173].
271 Ibid, [170].
272 Telstra, Response to ACCC Draft Decision, October 2008, p. 24.
273 Ibid, pp. 25-6.
274 Ibid, p. 27.
275 Ibid.
276 Ibid, p. 28.

Foxtel has also made a submission referring to the 2005 content supply agreement. Foxtel has included detail about the volume discounts in the agreement, arguing suggesting that **[c-i-c starts] [c-i-c ends]**.[277]

Foxtel attached a 2005 letter to the ACCC which outlines some of the key features of the CSA, including the discount structure.[278] The letter includes the following table outlining the percentage discounts available to Optus for different bands of Optus pay TV subscribers connected:

**Table: Discounts on content costs available to Optus from Foxtel [c-i-c starts]**

| *Total number of Optus Subscribers (Optus Analogue Subscribers and Optus Digital Subscribers)* | [c-i-c] | [c-i-c] |
|---|---|---|
| [c-i-c] | [c-i-c] | [c-i-c] |
| [c-i-c] | [c-i-c] | [c-i-c] |
| [c-i-c] | [c-i-c] | [c-i-c] |
| [c-i-c] | [c-i-c] | [c-i-c] |
| [c-i-c] | [c-i-c] | [c-i-c] |

**Source: Foxtel Submission, October 2008, appendix.**

**[c-i-c ends]** Foxtel submits that this discount structure 'gives Optus the ability and incentive to grow its subscriber base'.[279]

In response to the draft decision, Telstra submits that under the CSA and Foxtel's 87B undertakings, Optus retains the option to make arrangements to secure content from sources other than Foxtel.[280] The 87B undertakings include obligations for Foxtel to acquire content on a non-exclusive basis. Telstra argues that this

> ...option to "buy around" FOXTEL should help provide a discipline on FOXTEL in negotiating with SingTel Optus.[281]

Foxtel submits that the ability of 'other subscription TV operators and channel providers such as SelecTV and Setanta [to] independently acquire content and compete with FOXTEL and others in the acquisition of that content and the provision of their services' is evidence that Optus can compete with Foxtel in the independent acquisition of content despite the CSA.[282]

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[277] Foxtel, Response to ACCC Draft Decision, October 2008, p. 3.
[278] ibid, appendix.
[279] ibid, p. 3.
[280] Telstra, Response to ACCC Draft Decision, October 2008, pp. 28-29.
[281] Ibid, p. 29.
[282] Foxtel, Response to ACCC Draft Decision, October 2008, p. 2.

Telstra also submits that Optus does not assess its pay TV business on a stand-alone basis, but rather:

> …as an HFC subscription driver of other bundled services (telephony and/or broadband).[283]

Telstra again refers to evidence from Optus to the C7 hearings about the benefits of bundling, and extracts media releases.

Telstra also argues that high content costs are faced by other telecommunications companies, like Virgin Media in the UK that 'acquires much of its value sports and movie content from BSkyB, which is a direct downstream competitor to VirginMedia (sic) in retail pay TV services and more recently in broadband (BSkyB uses BT's network.'[284] Telstra argues that Virgin Media shows that pay TV 'can still form part of the strategy of a facilities-based cable entrant'.[285] Cave also notes that content is an issue in the UK pay TV market.[286] Telstra also restates its argument that broadband is the more important service delivered via HFC, as opposed to pay TV.[287]

Optus has also made submissions relating to Telstra's ownership of an HFC network and the retail pay TV market in its response to the ACCC's draft decision.

Optus submits that the ACCC has:

> …correctly recognised that the high content costs face by Optus are a significant barrier to expansion that limits Optus' ability to achieve potential economies of scope on tis HFC network and recover the costs of expanding or infilling the network.[288]

Optus again submits that **[c-i-c starts] [c-i-c ends]**.[289]

Optus submits that its content costs are continuing to rise.[290] In its response to the draft decision, Optus submits an appendix regarding content costs[291] which **[c-i-c starts] [c-i-c ends]**

The ACCC has previously considered issues relating to the Australian pay TV market structure in 2003 in its *Emerging market structures* report.[292] A key recommendation of that report was that the government should require Telstra to divest its HFC network in full and divest its 50 per cent shareholding in Foxtel, unless it could be shown that the costs of such divestiture outweighed the benefits flowing from the increased competition that divestiture would promote.[293] The ACCC considered in that report that

283 Telstra, Response to ACCC Draft Decision, October 2008, p. 29.
284 Ibid, p. 31.
285 Ibid.
286 Cave, Letter to Peter Waters, 14 October 2008, p. 3.
287 Telstra, Response to ACCC Draft Decision, October 2008, pp. 31-33.
288 Optus, Response to ACCC Draft Decision, October 2008, p.13.
289 Ibid.
290 Ibid.
291 Optus, Response to ACCC Draft Decision, October 2008, Appendix E.
292 ACCC, *Emerging market structures in the communications sector*, June 2003.
293 ibid, p. xxi.

Telstra's investment in HFC was 'largely a defensive exercise to protect its copper network revenues'.[294] The ACCC also considered that:

> Telstra's actions in duplicating Optus' broadband network was intended to, and was successful in, reducing the competitive impact of Optus' cable network. Telstra's investment in the HFC network also decreased incentives for a new entrant to construct or develop alternative infrastructure, such as wireless-based technologies, at least in the areas already supplied by the HFC networks.[295]

This view is reinforced by documents and media reports from around the time of the rollout, which highlight the defensive nature of the rollout. Although, initially, Telstra stated to the media that it did not envisage significant overlap by its HFC network with Optus' network:

> Mr Blount also addressed the competitive cable rollout between Foxtel, owned by Telstra and News Ltd, and Optus Vision and allegations of overbuilding by the two in their attempts to secure key metropolitan market share in Melbourne and Sydney.
>
> "There has been zero overlap so far, to my knowledge," he said.
>
> However, he said there would be some overlapping in the first quarter of next year which would eventually settle at 10 to 15 per cent of the market in about 18 months time.[296]

it subsequently stated in annual reporting and to the media that it was using its HFC network as a defensive measure against Optus' HFC network and that network's potential to supply telephony:

> The first service on the network, the FOXTEL Cable TV joint venture, was launched, and by 30 June 1996 had 80,000 subscribers. This strategic investment in meeting its current targets, and over the longer term will protect existing telephony revenues, and enhance Telstra's revenue streams and profitability.[297]
>
> Mr Blount said the group's $4 billion pay-TV network – a joint venture with the News Corporation Limited – was being built mainly to defend the group's telephony revenue against incursions by Optus.[298]

Consistent with the ACCC's position in the *Emerging market structures* report, the ACCC's view is that Telstra's ownership of a competing HFC network and overbuild of Optus' network, in conjunction with its 50 per cent interest in Foxtel, did have a role in limiting the success of Optus' HFC network and pay TV business at the time it occurred. This will have had some ongoing effect on the profitability of the Optus HFC network.

The ACCC notes that that the Australian Competition Tribunal, in its 2004 decision on Seven Network's application for review of the ACCC's decision on the digital pay TV

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294 ibid, p. xxiii.
295 ibid, p. xxii.
296 David Shires, 'Privatisation threat to Telstra control: Blount' *Australian Financial Review*, 23 August 1995.
297 Telstra, *Investments and profit up, price down at Telstra*, (media release), 13 September 1996.
298 Brewster, Deborah 'Telstra to slash thousands of jobs' *The Australian*, 18 April 1996.

anticipatory individual exemption application lodged by Telstra, referred to the issue of Telstra's overbuild of Optus' HFC network.[299]

The Tribunal noted arguments from Seven Network that Telstra had overestimated the efficient costs of access to its HFC network because it had failed to fully take into account what is known as the "telephony defence". In this regard, Seven Network submitted that Telstra's HFC network was not built, and never would have been built, on the expectation of recovering the cost of investment (or even a substantial part of this cost) from pay television revenues or services that could be delivered over the network. Specifically, it was contended that Telstra built the network to defend the telephony revenues that it earned on its copper-wire network. [300]

Seven Network argued that, by building its own HFC network, Telstra was trying to ensure that fewer people connected to Optus' HFC network. The argument was that if people subscribed to Optus' subscription television services, they would also be able to receive telephony products over Optus' cable and bypass Telstra's network. Telstra, it submitted, stood to lose the local loop and long distance revenue from those telephony customers who churned to Optus.[301]

The Tribunal noted:

> That the telephony defence existed was not disputed by Telstra. For example, in its Statement of Facts, Issues and Contentions, Telstra "admits that one of the reasons why Telstra constructed a HFC Network included the perceived need to offer a full range of services (including subscription television) in order to prevent the loss of telephony revenues to competitors who did offer such a range".[302]

However, the ACCC considers that, while Telstra clearly obtains benefits from the integration of its ownership of the HFC network and its interest in Foxtel and the benefits of the telephony defence, Telstra's ownership of its HFC network at the present time is perhaps a less significant factor affecting the viability of Optus' business that its interest in Foxtel.

The ACCC considers that the more significant issue affecting the viability of Optus' HFC is Telstra's ownership of its 50 per cent share in Foxtel. In the *Emerging market structures* report, the ACCC found that Telstra's control over pay TV content was potentially a major barrier to the development of a viable infrastructure competitor to Telstra. More specifically, the ACCC considered that:

> If Telstra were divested of its Foxtel shareholding, both Telstra and Foxtel would have improved incentives to supply their services to competitors and Telstra would have diminished ability to use its market power to leverage into converged markets.
>
> …
>
> Only full divestiture is likely to produce fundamental changes in behaviour where there is presently joint ownership. This is based on the truism that integrated firms maximise joint profits whereas structurally separate firms maximise their own individual profits.

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299 Re Seven Network Limited (No 4) [2004] ACompT 11 (23 December 2004).
300 ibid, at paragraph 327.
301 ibid, at paragraph 327.
302 Ibid, at paragraph 330.

> Flowing from this, wherever there is ongoing integration, the incentive remains for the integrated entities to favour themselves through measures such as cross-subsidisation and discriminatory access, either explicitly or tacitly. All else being equal, such favouritism will be greater the higher the extent of integration or ownership.[303]

The ACCC considers that the implications of Telstra's ownership of an interest in Foxtel can be seen in the high content costs that are charged to Optus by Foxtel. While Optus has access to the same content as Foxtel, as noted above, Optus' content costs are **[c-i-c starts] [c-i-c ends]** and the ACCC considers that this would appear to limit the profitability of the service – in fact Optus argues that **[c-i-c starts] [c-i-c ends]**. Had a divestiture of Foxtel taken place, the ACCC considers that Foxtel's incentives to supply services would be fundamentally changed.[304] However, as Telstra has retained its interest in Foxtel, there would appear to still be significant competitive concerns stemming from the existing market structure. This situation would appear to be reflected in the declining number of pay TV subscribers on Optus' HFC network, as Optus would appear to have significantly reduced incentive to attract new pay TV customers under the current market structure.[305] Given the strength of Foxtel's subscriber numbers compared to Optus' and the consequent bargaining strength this could be expected to give Foxtel when acquiring content,[306] the ACCC would consider that there would be little prospect of Optus being able to obtain rights to significant content at Foxtel's expense.

The ACCC notes Telstra's submissions that Optus' broadband business should now be considered a more relevant service than pay TV. Relevantly, Telstra's submissions about connecting MDUs are not modelled using pay TV revenues but rather the revenues of Optus' Fusion product. Similarly, Telstra cites Eisenach's paper that concludes that Optus' aggregate revenues 'perform quite well' compared to US companies.[307] The ACCC considers that these arguments are to some extent misplaced. Firstly, the fact that other products are also available is a relevant consideration – however a significant limiting effect on Optus compared to the overseas cable company examples cited by Telstra would appear to be that Optus cannot access pay TV content at a price that would allow it to better defray the costs of connections such as MDUs. This limits the economies of scope that are available to Optus in its provision of services over its HFC. Secondly, an assessment of revenues only fails to account for the costs of providing services. Based on the submissions received, it is the relative cost of content that is the major issue faced by Optus. The ACCC also notes CEG's submissions that the overseas performance of cable businesses overseas may not be as successful as argued by Telstra and Eisenach.[308]

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[303] ACCC, *Emerging market structures in the communications sector*, June 2003, p. 57.

[304] The ACCC's full analysis of likely effects of divestiture was set out in ACCC, *Emerging market structures in the communications sector*, June 2003.

[305] The ACCC notes Telstra's submission that **[c-i-c starts] [c-i-c ends]** The ACCC considers the issue of possible volume-related content cost savings identified by Foxtel and Telstra separately in this decision.

[306] see, e.g., ACMA, *ACMA Communications report 2006-07*, February 2008, p. 195.

[307] Telstra, Supplementary submission, June 2008, p. 19; Eisenach, *Comparative Analysis of Communications Markets*, June 2008, p. 45.

[308] CEG, *Assessing the likely effects of asymmetric access regulation in Australia,* 14 October 2008, p. 16.

The ACCC notes that Telstra submits in response to the ACCC's draft decision that 'Foxtel has an incentive to price at profit maximising levels', and asserts that the ACCC's draft decision implies that 'as a result of Telstra's 50% ownership, Foxtel is pricing at a level above that'.[309] Telstra states that there is no 'explanation of why the other Foxtel shareholders would sacrifice returns in order to anti-competitively subsidise Telstra in downstream retail businesses.'[310]

The ACCC notes firstly that Telstra does have strategic influence over Foxtel, including the exercise of the veto power that was identified by Telstra.[311] The ACCC has previously noted this strategic influence in its *Emerging market structures* report.[312] The ACCC considers that this strategic influence is a significant one, even if Telstra does not have full control over Foxtel's operations. The ACCC has previously noted that Telstra has been able to exercise its veto power over Foxtel's decision-making.[313]

In this regard, the ACCC notes that Foxtel's shareholders – Telstra, News Corporation and Consolidated Media Holdings (CMH) – each have interests in the pay TV market, and wider media and telecommunications markets, that extend beyond their interests in Foxtel. As discussed elsewhere in this decision, Telstra has an array of interests in the telecommunications market as a vertically and horizontally integrated firm, which may extend to using its interests in Foxtel and its HFC network as a 'telephony defence'. CMH and News Corporation have a wide variety of interests in media, not least of which include being substantial suppliers of content to Foxtel.

The ACCC considers, therefore, that Foxtel's shareholders and management have incentives to price their products at levels that bring the greatest benefit to each of their businesses. The continued strength of Foxtel's position in the pay TV market, therefore, remains an interest to all of its shareholders for a variety of reasons, including the interests of Telstra. The ACCC notes that current arrangements, including the level of content costs being paid by Optus to Foxtel, will therefore not necessarily be against the interests of Foxtel's shareholders.

Telstra also raises issues about the content supply arrangements between Optus and Foxtel. Telstra has submitted that Optus 'has consistently supported the Foxtel content arrangements as being pro-competitive', and which it supports with evidence from the C7 proceeding, as given by Optus executives, and media releases.[314] The ACCC considers however, that this support for the CSA needs to be understood in the context in which the CSA was made. The assessment by Optus of its options in relation to the CSA in February 2002 is discussed the C7 case:

> 'The Board considered the four options available in relation to Optus' CMM business. It was noted that the Exit Now strategy was suboptimal in view of the significant exit costs of around A$1 billion, which would drop over time. Maintaining the status quo was not possible in the structurally flawed industry with CMM generating a negative cashflow of around A$300 million. The Manage for Cash plan would reduce the cash burn to around A$150 million.

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309 Telstra, Response to ACCC Draft Decision, October 2008, p. 22.
310 Ibid.
311 Ibid.
312 ACCC, *Emerging market structures in the communications sector*, June 2003, p. 51.
313 ACCC, *Emerging market structures in the communications sector*, June 2003, p. xviii.
314 Ibid, pp. 25-6.

> **However, there was no certainty that the industry would have rationalised at economically viable prices down the road**. Project Emu was a complex deal which was asymmetric to Optus, requiring Optus to bear too much of the risk and peak funding exposure with little upside. The Board noted Optus Management's recommendation that Project Alchemy was the most attractive option which would add some A$60 million to the bottomline [sic] going forward'. (Emphasis added.)[315]

Project Alchemy here refers to the:

> …streamlining Optus' pay television service by bundling Foxtel content with CMM pay television telephony products.[316]

Telstra's assertions about Optus' support for 'pro-competitive' benefits of the CSA to the retail pay TV market need to be seen in the context of the options facing Optus at the time the CSA was agreed upon.

Telstra also refers to Justice Sackville's findings in the C7 decision,[317] that:

- the CSA did not have the effect of substantially lessening competition in the retail pay TV market;[318] and
- none of Telstra's objectives constitute the purpose of substantially lessening competition in the retail pay TV market.[319]

Telstra asserts that the ACCC's considerations about Optus' content costs are contrary to the courts findings.[320] The ACCC disagrees that its views about the content costs faced by Optus, as a result of the CSA deals in 2002 and 2005, contradict the findings in the C7 case. Given the state of the pay TV market at the time the CSA was concluded, as highlighted in the extract above, the ACCC notes that it is not unreasonable to conclude that the CSA was a solution that did not substantially lessen competition, compared to other potential outcomes. In fact, Justice Sackville also noted this in his findings regarding the substantial lessening of competition, stating that:

> I reach this conclusion because, in the absence of the Foxtel-Optus CSA, Optus would have adopted the '*Manage for Cash*' strategy which would have led to the closure of Optus' pay television operations within three to four years. In the meantime, in the so-called '*counter-factual world*', Optus would not have been a significant competitive constraint on Foxtel.[321]

Overall, the ACCC considers that the more relevant question is whether the level of content costs flowing from the CSA may have the effect of significantly limiting the profitability of Optus' pay TV business in the current environment.

The ACCC does not consider that the ACCC's views oppose the conclusions of the court in the C7 case.

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315 Seven Network Limited v News Limited [2007] FCA 1062, [1719].
316 Ibid, [1717].
317 Telstra, Response to ACCC draft decision, p. 24.
318 Seven Network Limited v News Limited [2007] FCA 1062, [173].
319 Ibid, [170].
320 Telstra, Response to ACCC draft decision, p. 24.
321 Seven Network Limited v News Limited [2007] FCA 1062, [173].

A related point is Telstra and Foxtel's submission that Optus improved its content supply deal in 2005, particularly with the inclusion of volume discounts. The actual significance of these volume discounts, however, is uncertain. In the pay TV financials that Optus has supplied, Optus suggests that for **[c-i-c starts] [c-i-c ends]** the recurring monthly EBITDA per pay TV subscriber was **[c-i-c starts] [c-i-c ends]**.[322] Under the volume discounts submitted by Foxtel, **[c-i-c starts] [c-i-c ends]** Given the EBITDA data submitted by Optus **[c-i-c starts] [c-i-c ends]** or access the economies of scope that are currently unavailable to it.

The ACCC also considers that the effect and benefit of these discounts needs to be considered in the context of Optus' behaviour following the commencement of these volume discounts under the revised CSA. If, as suggested by Telstra and Foxtel, these volume discounts give Optus the ability and strong incentive to grow its pay TV business, the ACCC would expect to see Optus as a rational competitor attempting to increase its pay TV subscribers up to the levels where it would receive the most profitable volume discounts. Such an increase, however, did not materialise in the number of pay TV subscribers submitted by Optus. According to Optus' submission,[323] the number of Optus pay TV subscribers **[c-i-c starts] [c-i-c ends]** This does not appear to reflect the increase in pay TV subscribers that would be expected to occur if a rational firm was given strong incentives to grow its business and become more profitable. In contrast, Optus has stated that **[c-i-c starts] [c-i-c ends]**.[324]

The ACCC also notes the volume of subscribers required to achieve these discounts is **[c-i-c starts] [c-i-c ends]** Optus would also have to incur marketing and sales costs in order to achieve the required number of subscribers in which the discounts would start to apply. Even if it were to achieve these minimum subscriber levels, Optus would be **[c-i-c starts] [c-i-c ends]**

Furthermore, Optus submits that its content costs are continuing to rise.[325] In its response to the draft decision, Optus has submitted an appendix regarding content costs[326] which **[c-i-c starts] [c-i-c ends]**

As a consequence of these considerations, the ACCC is not satisfied that the current volume discount structure is likely to result in a reduction in the cost of content that is significant enough **[c-i-c starts] [c-i-c ends]** and to lower the barriers for Optus to infill its HFC network.

Finally, Telstra submits that Optus has the option to make arrangements to secure content from sources other than Foxtel.[327] Telstra argues that this 'should help provide a discipline on Foxtel in negotiating with SingTel Optus'.[328] Foxtel likewise submits that the ability of 'other subscription TV operators and channel providers such as SelecTV and Setanta [to] independently acquire content and compete with Foxtel and others in

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322 Optus, Response to ACCC draft decision, Appendix C.
323 Optus, Response to ACCC discussion paper, p. 7.
324 ibid, p. 6.
325 Optus, Response to ACCC Draft Decision, October 2008, p. 13.
326 ibid, Appendix E.
327 Telstra, Response to ACCC Draft Decision, October 2008, pp. 28-29.
328 ibid, p. 29.

the acquisition of that content and the provision of their services' is evidence that Optus can compete with Foxtel in the independent acquisition of content, despite the CSA.[329]

The ACCC does not find this argument persuasive. Firstly, the ACCC notes that Foxtel's relative size compared to Optus must give it a significant advantage in the acquisition of desirable content. The high content prices that resulted from Optus and Foxtel competing for content, particularly premium content, prior to the 2002 CSA seem strong evidence against Telstra's assertion that it is viable for Optus to bypass Foxtel and directly source content from upstream suppliers. Furthermore, as Telstra notes, there are conditions in the CSA that restrict Optus' independent acquisition of content, including the obligation to make any movie or sports rights acquired by Optus available to Foxtel.[330] This appears to limit the value to Optus of attempting to independently acquiring certain lucrative content.

In regard to SelecTV and Setanta, the ACCC considers that these companies do not provide strong evidence of Optus' ability to compete with Foxtel over content acquisition. According to their website, SelecTV currently offers a "Premium Package" and three foreign language packages; a "Greek Package", a "Spanish Package", and an "Italian Package".[331] The content of the "Premium Package" includes a selection of channels, all of which are also available to Foxtel subscribers, but does not appear to offer any channels owned by Foxtel, News Corporation or CMH. The ACCC is not satisfied that SelecTV's independent acquisition of foreign language content is strong evidence of competition in the market for pay TV content. Setanta, on the other hand, is a specialised international provider of sporting content and would likely have significantly greater economies of scale in the purchasing and on-selling of content compared to Optus. Setanta is also not bound by the obligations on Optus to on-supply to Foxtel.

Telstra submits that Optus does not assess its pay TV business on a standalone basis but rather as a driver of subscriptions to other products.[332] The ACCC similarly is not considering the Optus pay TV business in isolation, but rather assessing it as one service offering available over the Optus HFC network out of a bundle of services. This informs the business case and economies of scope available for expanding or infilling the HFC network. The profitability of the Optus pay TV business does not need to be assessed in isolation to be considered a barrier to expansion.

Telstra also argues that high content costs are faced by other telecommunications companies, like Virgin Media in the UK that 'acquires much of its value sports and movie content from BSkyB, which is a direct downstream competitor to VirginMedia (sic) in retail pay TV services and more recently in broadband (BSkyB uses BT's network).'[333] Telstra argues that Virgin Media shows that pay TV 'can still form part of the strategy of a facilities-based cable entrant'.[334] The ACCC notes that caution needs to be taken in comparing the UK and Australian markets, but does note Ofcom's recent

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329 Foxtel, Response to ACCC Draft Decision, October 2008, p. 2.
330 Telstra, Response to ACCC Draft Decision, October 2008, p. 29.
331 SelecTV's website: http://www.selectv.com/go/get-quote-/-sign-up. Accessed on 27 October 2008.
332 Telstra, Response to ACCC Draft Decision, October 2008, p. 29.
333 Ibid, p. 31.
334 Ibid, p. 31.

proposal to impose on BSkyB must-offer wholesale obligations with regulated terms in regard to premium content.[335] Whilst there are many issues addressed in Ofcom's paper, some of which are specific to a UK context and others that have more widespread application, a general conclusion that can be drawn from this paper is the on going importance of content and access to content in the pay TV sector.

Overall, the ACCC stands by its assessment that Telstra's 50 per cent interest in Foxtel and the resulting high costs of content to Optus constitute a significant barrier to expansion of the Optus HFC network. While overseas cable companies and Telstra (through its interest in Foxtel) have been able to access profits on the sale of pay TV services, in addition to supplying services such as voice and high speed broadband, Optus does not have the same economies of scope available to it. This limits Optus' ability to make investments such as those necessary to connect MDUs to its HFC network. This has arisen from the unusual structural situation in the Australian pay TV market and Telstra's continuing ownership of its interest in Foxtel and in the HFC network. While Optus has some ability to access volume-related discounts under its CSA with Foxtel, the CSA and the available discounts do not significantly alter the limited economies of scope available to Optus.

<u>Costs of network upgrades</u>

The ACCC considers that it is relevant, when considering the potential for competition to develop, to consider the extent to which network upgrades that would improve service quality of the HFC networks would be likely to occur. Both Optus and Telstra are utilising the relatively older DOCSIS 1.1 technology in their HFC networks.[336] The next iteration of the standard, DOCSIS 2.0, was deployed by some overseas cable companies in around 2004 or 2005. Telstra presents evidence that the newest iteration, DOCSIS 3.0, can be considered a 'relatively recent release' that has only been deployed by some overseas operators from 2007.[337]

The costs of upgrading to a higher DOCSIS technology do not appear to be insurmountable. Optus has been reported as evaluating a deployment of DOCSIS 3.0 technology, which suggests that the technology is at a cost and maturity that makes deployment feasible.[338] Telstra states that its technical expert has estimated the cost of a DOCSIS upgrade would be a few million dollars, although it does not give a citation for this.[339] Harris does estimate that the cost per head-end of upgrading to DOCSIS 2.0 would be $275,000, although it is unclear that this is the extent of the upgrades that would be needed.[340] In its response to the ACCC's draft decision, Optus provides more details on the upgrades that would be needed to support DOCSIS 3.0 on its network. Optus estimates that the cost of a DOCSIS 3.0 upgrade would be about **[c-i-c starts] [c-**

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335 Ofcom, *Pay TV second consultation: Access to premium content*, September 2008.

336 Harris, *Use of HFC to deliver broadband services*, December 2007, p. 13.

337 Telstra, Initial submission in support of exemption application, December 2007, p. 39; Harris, *Use of HFC to deliver broadband services*, December 2007, p. 12.

338 see, e.g., Warne, Dan, 'Optus/Telstra planning cable speed boost', *APC*, 17 July 2007, <http://apcmag.com/optustelstra_planning_cable_speed_boost.htm> accessed at 2 September 2008; Coleman, Luke, 'NBN: Should HFC competition be actively encouraged?' *Communications Day*, 12 August 2008, Issue 3338, p. 1.

339 Telstra, Initial submission in support of exemption application, December 2007, p. 39.

340 Harris, *Use of HFC to deliver broadband services*, December 2007, p. 24.

**i-c ends]**.[341] This is a more substantial investment than that which is suggested by Telstra. Having considered the above evidence, the ACCC is of the opinion that DOCSIS upgrades would not be an insignificant investment, although there does seem to be potential for Optus to make such an upgrade of the technology used in its network.

The ACCC also notes that Telstra has submitted generally that Optus will be able to make 'additional modest investments in its HFC network' to move to voice over broadband telephony.[342] However the ACCC notes that the cost of such network upgrades may be significant and that such upgrades could be subject to delay. For example, Telstra was recently reported to have experienced cost overruns and delays in its own network and information technology upgrades.[343] While the ACCC would not suggest that the same amount would necessarily be spent on upgrades to the HFC network, it does indicate that network cost upgrades can be significant.

National Broadband Network

It is relevant in the context of considering the costs of both network upgrades and infill investment to connect premises considered currently unserviceable to assess Optus' and Telstra's arguments relating to the effect of the government's proposed National Broadband Network (NBN). Optus argues that the planned roll out of the NBN would have a significant implication for investment in Australia.[344] Comparatively, Telstra argues that the NBN is a reason that the exemption should be granted, to encourage competition between the Optus HFC network and the eventual NBN.[345] In its submission in response to the draft decision, Telstra submits that the ACCC should not assume that the NBN will be a monopoly, and that overseas commentators and regulators see next generation networks as providing enhanced opportunities for end-to-end facilities-based competition.[346] In its response to the ACCC's draft decision, Optus argues that there are a number of possible outcomes from an NBN, including Optus losing its access rights were the exemption granted and a ban on other networks or overbuild of the NBN. Optus submits that the uncertainty about possible outcomes is exaggerated because there is no reasonable expectation of lengthy notice periods.[347]

Optus also submits that a NBN, once built, would further reduce Optus' business case for connecting premises to its HFC, as other competitors would be able to supply better or comparable services over the NBN. Optus submits that this would lead to reduced economies of scale for its network.[348]

341 Optus, Response to ACCC draft decision, October 2008, p. 18, Appendix F.
342 Telstra, Initial submission in support of exemption application, December 2007, p. 77.
343 Sainsbury, Michael 'Trujillo's 'transformation' reaches point of no return', *The Australian*, 16 Sep 2008, p. 33.
344 Optus, Response to ACCC Discussion Paper, March 2008, pp. 26, 30.
345 Telstra, Initial submission in support of exemption application, December 2007, p. 52 Cave, *Applying the ladder of investment in Australia*, p. 6.
346 Telstra, Response to ACCC Draft Decision, October 2008, p. 64-5.
347 Optus, Response to ACCC Draft Decision, October 2008, p. 22.
348 ibid, p. 22.

The Federal Government released a Request for Proposals (RFP) to roll out and operate a NBN for Australia on 11 April 2008.[349] However, several elements of the NBN rollout are currently unknown, including who the owner of the NBN will be, the regulation that will apply to it, and the extent to which the NBN will interconnect with or use existing infrastructure —including possibly Optus' or Telstra's HFC networks — or whether it will overbuild or replace existing infrastructure. While proposals are due by 26 November, and a decision on the tender planned for January 2009, the exact form of the NBN rollout and the surrounding regulation are not known at this time.

This uncertainty affects the potential outcome on competition if this exemption were granted, as potential outcomes may depend on the outcome for these issues. For example, were significant sections of the Optus fibre in the HFC network to be incorporated into the NBN, significant investment in the coaxial cables that connect premises to network distribution cables may be lost or stranded. This would mean that the potential increased competition that Telstra argues may occur, due to the greater number of premises connected to Optus' HFC, would not eventuate. Therefore, at this stage, the uncertainty about the NBN makes it more difficult for the ACCC to be satisfied that granting the exemption will promote competition in the relevant markets, and ultimately promote the LTIE.

The ACCC noted in its LCS/WLR exemption final decision that the NBN process may have an impact on access seekers' future investment decisions.[350] However, the ACCC considered in that decision that, while the NBN may create uncertainty, the uncertainty involved with the NBN process did not substantially affect the ACCC's assessment of whether granting the exemptions was in the LTIE.[351] In the current context, the ACCC notes that the overall scale of investment that could potentially flow from granting the exemption would appear to be larger than that considered in the LCS/WLR exemption decision. However it considers on the whole that in this current matter the NBN process is not of itself a reason not to grant the exemption, although it may increase the uncertainty associated with making investments.

In regard to Telstra's submissions about the need for the Optus HFC network to compete with the NBN, the ACCC considers that the considerations relating to competition between the NBN and HFC are generally the same as those relating to competition between the existing CAN and the HFC. The ACCC notes that both networks would continue to act as potential alternatives for provision of voice and broadband services and does not propose to examine this issue separately.

The ACCC considers the NBN is also relevant to its consideration of the efficient use of and investment in infrastructure criteria.

<u>Suitability of HFC for business customers</u>

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349 Department of Broadband, Communications and the Digital Economy, *Request for proposals to roll-out and operate a national broadband network for Australia*, DCON/08/18, 11 April 2008.

350 ACCC, *Telstra's local carriage service and wholesale line rental exemption applications—final decision and class exemption*, August 2008, p. 76.

351 ibid, p. 79.

Both parties make submissions concerning the provision of retail voice and data services to businesses over the HFC network. The ACCC firstly notes that the number of businesses within the HFC footprint is likely to be relatively small. Telstra submits that there are 100,000 business premises within the Optus footprint, and that these are likely to be SMEs.[352] Optus submits that the SME market is in fact smaller.[353] The ACCC considers, given that the Optus HFC network generally covers suburban geographic areas (as opposed to CBDs), that there will be relatively few large businesses.

Telstra submits that business voice and data services for SMEs should be able to be provided over HFC, and cites the views of overseas regulators that business customers could be supplied over HFC.[354] It submits that any large business could be supplied through use of fibre. Harris also submits that business services could be provided, although upgrades to the HFC network to allow E1 links to be provided or to install a spectrum shared DOCSIS 2.0 system to provide VPN services would be needed.[355]

Comparatively, Optus argues that the HFC is unable to meet the availability, consistency and diversity requirements necessary to supply business services.[356] It submits that the aerial nature of the network means that at best **[c-i-c starts] [c-i-c ends]** availability can be provided, that the shared nature of HFC means service quality cannot be assured and that a lack of diversity means secure continuous operation cannot be ensured. It also submits that Harris' comments about the costs of upgrading to allow provision of business services should not be considered reliable due to a number of omissions and issues with the analysis.[357] In particular it states that its nodes are saturated. Optus also submits that the cost of connecting business customers was very high and accordingly serving business customers was not feasible in 1999, long before ULLS was a viable option.[358]

Telstra, in response, submits that Optus' claimed availability is low and that overseas examples are evidence that aerial networks are not inherently less reliable than copper.[359] It also cites evidence from Eisenach that overseas cable companies are competing for SMEs.[360]

In the ACCC's view, Optus' claimed network availability seems low. While an aerial network is clearly more exposed than an underground one, it is unclear that the fact that a network is aerial would lead to this level of availability. As Harris points out, Optus' figures imply that the network would be unavailable for around **[c-i-c starts] [c-i-c ends]** a year. Accordingly, the ACCC does not consider that availability would be as big an issue as Optus claims. The ACCC notes that the additional costs to upgrade services identified by Harris and Optus differ significantly, although the ACCC

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352 Telstra, Initial submission in support of exemption application, December 2007, p. 65.
353 Optus, Supplementary submission, May 2008, p. 12.
354 Telstra, Initial submission in support of exemption application, December 2007, p. 65.
355 Harris, *Use of HFC to deliver broadband services*, December 2007, p. 24.
356 Optus, Response to ACCC Discussion Paper, March 2008, p. 8.
357 ibid, p. 8.
358 Optus, Supplementary submission, May 2008, p. 12.
359 Telstra, Supplementary submission, June 2008, p. 14.
360 Telstra, Supplementary submission, June 2008, p. 14; Eisenach, *Comparative Analysis of Communications Markets*, June 2008, p. 14.

considers that Optus' analysis may now be outdated given its age. The ACCC considers that the issues relating to consistency of service and diversity requirements may however be more significant barriers to convincing business users to obtain services over the HFC. It notes again that the amount of business customers at issue may be relatively small.

Customer information and inertia

Telstra's submission in response to the draft decision states that it considers switching costs are overstated.[361] It submits that switching costs between different network technologies are needed to achieve the benefits of end-to-end facilities-based competition, as 'it is highly unlikely that an entrant would completely replicate the incumbent's copper network'.[362] It submits that, where competing networks are actively differentiated from each other, switching will take place. Telstra submits that Optus has been able to make end-user customers move to the use of its HFC network.[363] In contrast, Optus argues in its submission in response to the draft decision that its DSLAM-based customers would incur switching costs if they stayed with Optus and switched to HFC provision. It identifies a $59 connection fee and $99 cable modem fee as being potential switching costs, as well as potentially higher costs for non-standard connections.[364]

The ACCC has noted in the past that customers may be unwilling to change telecommunications providers due to inertia arising from the lack of information on the range of competitors' services, the high costs of switching between retailers and time constraints in researching alternative provider's products.[365] For example, the ACCC noted in its 2005-06 *Competitive Safeguards* report that:

> Customer inertia, or status quo bias, also acts as a barrier to achieving sufficient scale to compete effectively. When combined with actual switching costs (such as contract lock-in) and information asymmetry about the range of available contracts, Telstra has considerable advantages as the incumbent default provider of local telecommunications [services].[366]

Relevantly, for the purposes of the present application, there is also potential customer inertia relating to the use of the HFC technology. The overall number of customers on either Telstra's or Optus' HFC networks is relatively low compared to the numbers connected to Telstra's CAN.[367] This may in part reflect a customer resistance to the use of HFC. Reasons for customers not switching to HFC might include the costs of obtaining replacement CPE such as a new cable modem, and the fact that switching suppliers is relatively easier and cheaper for CAN-based services. These factors could make it relatively more difficult to convince customers to purchase services supplied over HFC, even if a premises is serviceable by HFC. The ACCC notes that Telstra has proposed a staggered implementation timeline for the exemption to take place if

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361 Telstra, Response to ACCC draft decision, October 2008, p. 63.
362 ibid.
363 ibid.
364 Optus, Response to ACCC draft decision, October 2008, p. 26.
365 ACCC, *Telstra's local carriage service and wholesale line rental exemption applications—final decision and class exemption*, August 2008, p. 85.
366 ACCC, *ACCC telecommunications reports 2005-06*, 24 April 2007, p. 18.
367 ABS, *Internet Activity, Australia*, ABS 8153.0, December 07, released 24 April 2008.

granted. This would allow time to manage these switching costs but the ACCC considers that there would still be significant disruption to end-users.

The ACCC agrees with Telstra that there are generally some switching costs incurred wherever an end-user changes the technology over which services are supplied. However it disagrees that this means switching costs should not be taken into regard in considering the exemption. If the switching costs are substantial enough, then end-users may be more unlikely to switch providers. This would seem to be more of an issue where such customers have to switch technologies rather than just providers.

That said, while customer inertia clearly makes it more difficult for HFC competitors in the supply of fixed voice services to gain customers, the ACCC considers that customer inertia is not an insurmountable barrier to HFC-based entry. The ACCC notes that Optus uses HFC in preference to the ULLS for the 1.4 million homes it regards as serviceable, and that it does not appear to have been unduly restricted in acquiring customers due to reasons of inertia or reluctance to use HFC.[368] This is evidenced by the relatively large subscriber numbers for telephony on Optus' HFC and the growth in subscriber numbers for cable internet.[369] Optus is also able to charge customers for some of these costs, as stated in its submission.[370] However, the ACCC notes that customers who have already paid for separate connections and CPE for one technology may be reluctant to again incur those costs for a separate technology.

<u>Impediments faced by carriers generally</u>

Although, given the nature of the exemption application, the above discussion has focused on the barriers to entry particularly relevant to the Optus HFC network, it is also important that operators other than Telstra and Optus can service the 800,000 homes which are currently treated as unserviceable by Optus. Under the proposed exemption, these other operators would not lose any further rights to access declared services. Accordingly other operators could service end-users using either declared resale services or ULLS-based infrastructure. However, the ACCC has noted previously that these operators may also face barriers to entry to, in particular, making exchange-based investment such as DSLAMs. These barriers include the size of certain exchanges, deployment of pair-gain systems, exchange capping, delays and queuing in installing equipment and general customer inertia.[371] Such barriers may limit the ability of other competitors to make investments to provide ULLS-based services in certain cases.

*Conclusion- state of competition in retail fixed voice markets*

The ACCC does not have sufficient data to be definitive about the state of competition for fixed voice services within Telstra's proposed exemption area, but notes that the data available provides some indications.

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[368] Optus, Response to ACCC Discussion Paper, March 2008, p. 7.
[369] Singtel, *Management discussion and analysis of financial condition, results of operations and cash flows for the first quarter ended 30 June 2008*, p. 44.
[370] Optus, Response to ACCC draft decision, October 2008, p. 26.
[371] ACCC, *Telstra's local carriage service and wholesale line rental exemption applications—final decision and class exemption*, August 2008, pp. 72-86.

The ACCC considers that the retail market for the provision of fixed voice services nationally is less than effectively competitive, and that Telstra retains significant market power in that retail market. However, within the proposed exemption area, Optus' HFC network, with around **[c-i-c starts] [c-i-c ends]** subscribers, would appear to lead to a greater level of competitive tension than in the market generally. Given that Optus' HFC network largely falls in Band 2, where various parties are deploying DSLAMs and MSANs and utilising them in conjunction with the ULLS and LSS, there is also some competitive tension from these other operators. This evidence of differing market shares indicates some competitive constraint within the Optus HFC geographic footprint.

In considering the potential for competition to develop further through the use of the HFC network, the ACCC notes that there is evidence of barriers to entry and expansion in the provision of retail fixed voice services over the Optus HFC network. Currently, a competitive constraint is provided by the fact that 1.4 million premises within the Optus HFC footprint are able to obtain services over that network. However, the long payback period for making connections to MDUs, and other reasons for premises being unserviceable, would appear to limit the possibility of further competitive tension being created by more premises being treated as serviceable. This impediment is particularly exacerbated because of the issue of content costs faced by Optus, which has been created by Telstra's ownership of an HFC cable and particularly its 50 per cent interest in Foxtel.

The potential for competition is also affected by barriers to entry faced by carriers utilising DSLAM technology. As the ACCC has previously noted, exchange capping and queuing in particular are serious issues requiring further investigation.[372]

### 3.2.2.2 Retail broadband market

The ACCC notes that a number of issues and conclusions from the above discussion of the retail supply of fixed voice services will equally be relevant to a consideration of the retail supply of broadband. This reflects the nature of Telstra's HFC exemption application and the growing prevalence of fixed voice and broadband bundling.

However, the ACCC considers that in some respects there are different characteristics in the broadband market.

***Parties' Submissions***

In relation to the market for retail supply of broadband, Telstra makes similar submissions as above about the market for retail supply of fixed voice. Telstra submits that Optus offers retail broadband services over its HFC that are close substitutes for other retail broadband services.[373] It submits that the retail markets in which ULLS and cable-based services are offered are 'workably competitive'.[374]

Telstra's initial submission contends that Optus' 26 per cent broadband penetration rate in the homes it treats as serviceable is strong, and comparable to overseas cable

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372 ibid, pp. 82-3.
373 Telstra, Response to ACCC Discussion Paper, March 2008, p. 26.
374 ibid, p. 26.

companies such as Virgin Media.[375] However, Telstra contends that the Optus HFC network's overall performance is 'substantially diluted' when the 36 per cent of the passed premises regarded as unserviceable by Optus are added back in, making broadband penetration 16 per cent.[376] Telstra goes on to submit that, according to ABS figures, approximately 46 per cent of homes in metropolitan areas have broadband, making Optus' broadband penetration rate 28 per cent of 'serviceable' homes.[377] Telstra suggests that in its 'serviceable homes pool', Optus is capturing approximately 64 per cent of the total broadband lines provided by cable, DSL or wireless.[378]

In response to the ACCC's discussion paper, Telstra submits that more recent data indicates that Optus has a HFC broadband penetration rate of 29 per cent.[379] Telstra submits that, in comparison, its own HFC network passes 2.8 million homes and has a penetration rate of 12 per cent of homes passed.[380] Telstra also submits that Optus' cable modem subscriber base has grown rapidly from 96,000 in March 2003 to 412,000 in March 2008.[381] Telstra argues that, although Optus has approximately half the number of serviceable homes of Telstra, it has nearly a fifth more cable modem subscribers.[382] Telstra suggests that this shows:

> …the substantial overbuild between the two HFC networks is no barrier to success[383]

Telstra also submits that Optus' ability to choose between the use of regulated services and the use of its HFC network leads to less infrastructure-based competition than would otherwise occur. Telstra contends that this is because Optus will choose its cheapest option on a premises-by-premises basis regardless of which network is cheapest overall.[384] The marginal cost of supply over HFC will vary depending on customer–specific cost structures but the marginal cost of supply over ULLS will be relatively constant.[385] Therefore, it contends that, while infrastructure-based supply will occur to the extent that the costs of HFC supply are below the costs of supply of ULLS, it will not occur beyond that.[386] Hence, Telstra argues that there are negative competition outcomes. Telstra submits that the proposed exemption area falls within major cities, and:

375 Telstra, Initial submission in support of exemption application, December 2007, p. 45.
376 ibid.
377 ibid, p. 42.
378 ibid.
379 Telstra, Response to ACCC Discussion Paper, March 2008, p. 27.
380 Telstra, Initial submission in support of exemption application, December 2007, p. 41.
381 Telstra, Supplementary submission, June 2008, p. 5.
382 Telstra, Initial submission in support of exemption application, December 2007, p. 2.
383 ibid.
384 ibid, p. 50.
385 ibid.
386 ibid.

> ...is generally a more lucrative area in which to offer those services than the areas outside it.[387]

Telstra submits that the proposed exemption area has attracted more intense competition than other areas.[388] It submits that this intensity of competition is evidenced by its making of **[c-i-c starts] [c-i-c ends]**.[389]

Optus submits that it supplies residential customers via its HFC network, rather than Telstra's CAN, where the premises are serviceable by HFC.[390] Optus submits that there has been an increase in the number of cable internet customers on its HFC network from **[c-i-c starts] [c-i-c ends]** in the 2003/04 financial year to **[c-i-c starts] [c-i-c ends]** in February 2008.[391] Optus submits that there has also been a substantial increase in the number of data customers on the ULLS from **[c-i-c starts] [c-i-c ends]** in the 2005/06 financial year to **[c-i-c starts] [c-i-c ends]** in February 2008.[392] However, Optus submits that this number is still significantly lower than the total number of cable internet customers on its HFC network and should be seen in the context of its decision to reduce its resale-based customers.[393]

In relation to Telstra's contention that Optus is not serving customers via its HFC network because it can serve them more easily using the ULLS, Optus submits that if this were true, Optus would be serving customers via HFC to premises where ULLS is already unavailable (e.g. pair gain affected areas).[394] However, Optus submits that this is not the case and there are a number of premises adjacent to the HFC network where ULLS is unavailable and which are not served by the HFC network.[395]

In its May 2008 supplementary submission, Optus further contends that the rollout of its DSLAM network was designed to entirely avoid Optus' HFC customers, and that where it has installed DSLAMs in ESAs which overlap with the HFC footprint, those ESAs contained large numbers of premises unserviceable by HFC.[396] Optus submits that it has not installed DSLAMs in ESAs within the HFC footprint without large numbers of unserviceable premises.[397]

***ACCC's views***

*State of competition*

The ABS estimates that at the end of the December quarter 2007 there were 7.10 million active Internet subscribers in Australia, comprising 964,000 business and government subscribers and 6.14 million household subscribers. Terrestrial broadband subscribers (i.e. excluding satellite) represented 73 per cent of total Internet subscribers

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387 Telstra, Response to ACCC Discussion Paper, March 2008, p. 26.
388 ibid.
389 ibid, p. 27.
390 Optus, Response to ACCC Discussion Paper, March 2008, p. 6.
391 ibid.
392 ibid, pp. 6-7.
393 ibid, p. 6.
394 ibid, p. 21.
395 ibid.
396 Optus, Supplementary submission, May 2008, p. 10.
397 ibid.

in Australia at the end of December 2007.[398] According to the ABS, 54 per cent of internet subscribers are on DSL services, 7 per cent on wireless and 12 per cent on cable or other services. Connections with download speeds of 1.5Mbps or greater increased to 2.51 million or 35% of subscribers in December 2007, compared to 1.13 million or 17% of subscribers at the end of September 2006.

As the ACCC noted in its consideration of market definition, a characteristic of the market for broadband is that there is increasing evidence of a market for bundled voice and broadband services. There has been a trend in recent years towards a greater proportion of residential customers choosing to bundle additional services with a fixed voice service.[399] It appears that bundled offerings result in downward pressure on prices in retail markets.[400]

Amongst the most popular broadband technology, DSL, Telstra is the largest internet supplier, but other competitors have made some impact. The ACCC noted in its 2006-07 *Competitive safeguards* report that:

> DSL is the most common form of internet access in Australia with approximately 3.4 million households subscribing to the internet using this technology. ISPs have also increasingly taken advantage of the regulated access to unbundled services to provide DSL internet.
>
> …
>
> Telstra's DSL network is by far the most comprehensive in Australia, covering over 2400 exchanges. However, other ISPs have been industrious in expanding their DSLAM exchange footprints. The most expansive DSLAM rollouts have been by iiNet, Optus, PowerTel, Primus and TPG.[401]

Approximately 23 ISPs have invested in their own DSLAM/MSAN equipment to enable DSL service provision, with such ISPs generally investing in ADSL2+ equipment.[402] Telstra CAN RKR results for the March 2008 quarter shows that the ULLS and LSS unbundled services now represent:

- **[c-i-c starts] [c-i-c ends]** of all PSTN services;
- **[c-i-c starts] [c-i-c ends]** of all broadband services;
- **[c-i-c starts] [c-i-c ends]** of DSL lines; and
- **[c-i-c starts] [c-i-c ends]** lines.

The ACCC notes that there were 955,000 regulated unbundled services (LSS and ULLS) in operation by June 2008. There is also a significant amount of retail broadband competition that is driven by providers reselling Telstra's wholesale services. Since 2002, the market share of DSL resellers has been growing steadily,

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398 ABS, *8153.0 Internet Activity Survey*, December 2007.
399 ACCC, *Telecommunications competitive safeguards for 2006-2007*, 12 May 2008, pp. 43-44.
400 ACCC, *Telstra's local carriage service and wholesale line rental exemption applications—final decision and class exemption*, August 2008, p. 88.
401 ACCC, *Telecommunications competitive safeguards for 2006*-2007, 12 May 2008, pp. 30-31.
402 ACMA, *ACMA Communications report 2006-07*, p.25.

spurring the overall strong growth of broadband take-up. Overall, however, Telstra estimates that its retail market share at June 2008 is around 49 per cent of the retail broadband market, and that it is growing that market share over time.[403]

Relevant to the present application, Optus is the main part of the recent strong growth in the ULLS, and reported a 223% increase in its use of ULLS in the year to 30 June 2008 to 311,000 ULLS.[404] Optus increased its share of ULLS lines to **[c-i-c starts] [c-i-c ends]** in March 2008. Optus added **[c-i-c starts] [c-i-c ends]** DSLAM sites between 30 September 2007 and 31 March 2008. The composition of LSS services is more varied among carriers, with TPG and iiNet being the two more significant users. Optus utilises negligible LSS services.

The competitive effect of access seekers using ULLS and LSS is apparent in that Telstra's DSL line share is falling in ESAs where access seekers are present. From 30 September 2007 to 31 March 2008, Telstra's DSL line share in these ESAs fell from **[c-i-c starts] [c-i-c ends]** to **[c-i-c starts] [c-i-c ends]**.

The following table provides a summary of the number of exchanges that house DSLAM type technologies and the number of providers that installed equipment in particular exchanges.

**Table 1 – DSL infrastructure in exchange service areas [c-i-c]**

| **Number of infrastructure providers** | **No. of exchanges June 2006** | **No. of exchanges 31 January 2007** | **No. of exchanges 30 June 2008** |
|---|---|---|---|
| 1 infrastructure provider | 1 800 | 1 973 | [c-i-c] |
| 2 infrastructure providers | 115 | 163 | [c-i-c] |
| 3 infrastructure providers | 61 | 80 | [c-i-c] |
| 4 infrastructure providers | 67 | 62 | [c-i-c] |
| 5 or more infrastructure providers | 66 | 154 | [c-i-c] |

**Source: ACCC Telstra CAN RKR return for June 2008.**

The fact that Optus and Telstra both provide broadband services over HFC is also relevant to the present application. Optus offers a number of standalone and bundled broadband packages in the retail market over its HFC network, with some plans

403 Telstra, *Full year results and operations review - June 2008*, 13 August 2008, p. 24.

404 Singtel, *Management discussion and analysis of financial condition, results of operations and cash flows for the first quarter ended 30 June 2008*, p. 44.

offering speeds of up to 20 Mbp/s at prices comparable to xDSL products.[405] For example, Optus' 'Yes Fusion' plans starting from $79 per month bundle voice (unlimited local, STD, Optus mobile calls) and broadband in HFC and DSLAM areas.

Both Telstra and Optus increased the number of customers accessing the internet using their HFC networks in recent periods. Optus' HFC broadband customer base increased by 13.9 per cent to 415 000 customers in the year leading up to June 2008.[406] While Telstra has not publicly reported its cable internet subscribers in 2007-08,[407] the number during the year to 31 June 2007 increased by 18.6 per cent to 336 000.[408] The increased take-up of HFC broadband would appear to reflect increasing demand for higher bandwidth applications that are readily available in significant metropolitan regions across the HFC networks. However, although both Optus and Telstra reported significant increases in customers on their HFC networks, the limited deployment of these cable networks is a contributing factor to their inability to capture a larger share of broadband consumers nationally. Overall, as the ACCC considered above in relation to the supply of fixed voice services, the level of competition in the proposed HFC exemption area may be different to that experienced on a national basis. This is because of the use of the ULLS by various access seekers and the presence of the Optus HFC network.

Optus' 415,000 HFC broadband customers on its HFC network at June 2008, out of 2.2 million premises passed and 1.4 million premises currently regarded by Optus as serviceable, represents around a 19 per cent market share of premises passed or 29.6 per cent of homes treated by Optus as serviceable. Accordingly, the ACCC considers that the Optus HFC network would appear to provide a competitive alternative to the provision of broadband services over Telstra's CAN. As noted above, Optus also supplies broadband services over Telstra's CAN, and its HFC network overlaps with 179 exchanges in which DSLAMs are installed.[409] However Optus submits that it only uses these DSLAMs to provide services to homes that it considers are not serviceable by HFC.[410]

Other providers also use the ULLS and LSS in the proposed exemption area, which would tend to provide greater competition in the provision of broadband services than in areas without such a presence. The presence of some other operators may mean that Optus is not the only alternative provider to Telstra of broadband services.

The ACCC notes that the differing technology of the HFC network compared to the CAN may mean that there will be switching costs for consumers in changing their connection and customer premises equipment from ULLS-based provision to HFC-based provision or vice versa.

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405 Optus 'yes' fusion plans, available at http://personal.optus.com.au/web/ocaportal.portal?_nfpb=true&_pageLabel=Template_woRHS&FP=/personal/bundles/fusion&site=personal, accessed on 9 September 2008.

406 Singtel, *Management discussion and analysis of financial condition, results of operations and cash flows for the first quarter ended 30 June 2008*, p. 44.

407 Telstra, *Full year results and operations review - June 2008*, 13 August 2008, p. 15.

408 Telstra, *Annual report 2006–07*, 2007, p. 24.

409 Optus, Response to ACCC Discussion Paper, March 2008, p. 10, para [2.27]

410 ibid, p. 9, para [2.21].

As the ACCC noted in its consideration of the state of competition in voice services, there is evidence of Telstra having made targeted offers **[c-i-c starts] [c-i-c ends],** which indicates that competition in broadband was relevant to the making of these offers. This evidence of price and non-price competition in particular geographic areas would tend to provide support for the emergence of competition in that geographic area. The ACCC has also previously noted that there has been evidence of improved service offerings to consumers with little change in prices:

> According to the Internet Industry Association (IIA) broadband index, overall broadband service prices have not declined significantly. However, carrier investments in high-speed broadband are making faster service speeds available to consumers at no additional premium. Therefore, users of higher speed broadband connections are gaining additional value at little extra cost.
>
> The IIA also noted that bundled broadband packages appear to offer consumers more value for their internet service than stand-alone packages. This relationship appears to be consistent across the range of internet service bundles consumers choose. … Whether the total bundled package is more economical than the stand-alone package depends on the value and utility the additional services offer the end user.[411]

A more recent IIA report similarly considered that prices in broadband services had not changed significantly in recent times, and that competition tended to be focused on service packages rather than price.[412]

The ACCC considered above a number of barriers to entry and expansion in relation to the provision of retail voice services over the HFC. The ACCC considers that the same barriers are also relevant to the provision of retail broadband services over the HFC. Telstra would also appear to consider that similar considerations are relevant to provision of services in both the voice and broadband markets, stating that, as voice and broadband services can both be provided over cable or copper, it is not necessary to precisely define the separate product markets.[413] Similarly, the issues identified above in relation to barriers to competition and entry by DSLAM operators mentioned above will also apply in this case.

In its consideration of market definition above, the ACCC noted that there was some possibility that wireless broadband could, at the margins, provide some competitive constraint on fixed-line broadband markets. Over the last two years, Australia's four 3G mobile telephony operators have invested heavily in mobile broadband data technology. The ACCC has also observed that wireless and mobile network operators are increasingly providing competitive retail packages in the broadband market. For example, Vodafone is currently offering a stand-alone 5 gigabyte download capacity broadband plan for $49 a month over its 3G network.[414] Similarly, Optus is currently advertising 5 gigabyte mobile broadband plans for $49.99 per month, with customers receiving download speeds of between 512kbps and 1.5Mbps, while Primus advertises

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411 ACCC, *Telecommunications competitive safeguards for 2006*-2007, 12 May 2008, p. 32.
412 Internet Industry Association, *Spectrum/IIA Broadband Index, Sixth Edition (Q1 2008)*, 24 April 2008, p. 1.
413 Telstra, Response to ACCC Discussion Paper, March 2008, p. 14.
414 Vodafone, http://mobilebroadband.vodafone.com.au/mobile-broadband-standalone-plans.htm accessed on 9 September 2008.

a resold 6 gigabyte plan for $39.95 a month.[415] Both the Optus and Vodafone plans are offered in metropolitan areas of capital cities.

The ACCC understands that there is significant 3G infrastructure coverage across the majority of the suburban area covered by the Optus HFC footprint, over which wireless broadband plans in the retail market can potentially be offered. Telstra makes submissions that Optus could use its 3G network to serve some customers were the exemption granted.[416] Similarly, the ACCC has previously noted that fixed wireless technologies—such as PBA's iBurst network and Unwired's WiMax network—cover a significant part of metropolitan areas.[417] In terms of functionality however, the ACCC notes that these networks currently provide maximum through-put speeds of approximately 1 Mbps and are likely to provide only a limited substitute for DSL services.

*Conclusion- state of competition in retail broadband market*

Telstra is still in a strong position in the retail broadband market given the structural characteristics of telecommunications markets. Telstra's ownership of both the ubiquitous copper network and larger of the two HFC networks in Australia means that it is the main supplier of these fixed-line customer access services. Thus, Telstra is in a position where it controls access to the majority of inputs necessary for competition in downstream broadband markets. Accordingly the ACCC considers that the market for broadband remains less than effectively competitive.

Despite this, the retail broadband and voice-broadband bundle market is characterised by an increasing level of competition both from ULLS- and LSS-based services provided over Telstra's CAN, and services provided over Optus' HFC network. Both these delivery methods have experienced growth in broadband services over recent years, and provide comparable speeds to those provided by Telstra over its ADSL and HFC services. Optus' HFC broadband customer numbers suggest it is seen as a viable alternative in the areas it currently serves.

In considering the potential for competition to develop further through the use of the Optus HFC network, the ACCC notes again, as discussed above, that there is evidence of barriers to entry and expansion in the provision of broadband services, due to the effect of content cost issues on the business case for connecting up MDUs currently regarded as unserviceable. However there would be potential for the speeds provided over the HFC to improve were DOCSIS upgrades made. In addition to issues affecting the potential for competition stemming from HFC, the potential for competition is also affected by barriers to entry faced by carriers utilising DSLAM technology such as capping and queuing. There is some potential for wireless services to provide

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415 Optus, http://personal.optus.com.au/web/ocaportal.portal?_nfpb=true&_pageLabel=Template_wRHS&FP=/personal/internet/wirelessbroadband/plansandrates&site=personal, access on 9 September 2008; Primus, http://www.primus.com.au/PrimusWeb/HomeSolutions/Mobile+Broadband+%283G%29/, access on 9 September 2008.

416 Telstra, Initial submission in support of exemption application, December 2007, p. 56.

417 ACCC, *Telstra's local carriage service and wholesale line rental exemption applications—final decision and class exemption*, August 2008, p. 91.

competitive broadband services, although the ACCC considers that wireless services at this stage represent a weaker substitute that provides competition at the margins.

#### *3.2.2.3 Wholesale fixed voice and broadband markets*

The ACCC considers that upstream markets for fixed voice and broadband share significant characteristics and accordingly has considered them together.

***Parties' submissions***

Telstra submits that Optus appears to supply wholesale services by means of its ULLS and DSLAM network in areas where it has an HFC network.[418] Based on Optus' description of its rollout program, the ACCC considers that Telstra's submission would appear to be correct.[419]

Telstra submits that the issue regarding the level of competition in the wholesale market is not about:

> …Optus' current wholesale products but its capability and incentives to offer future cable-based wholesale products.[420]

Telstra submits that the purpose of access regulation is to promote competition in the downstream retail market.[421] Telstra submits that although Optus does not currently supply wholesale services over its HFC network, it self-supplies to its own downstream retail arm and this acts to discipline Telstra in the downstream retail market.[422]

Telstra further submits that even if Optus chose not to supply wholesale services in the future, the Optus HFC network still provides an indirect competitive constraint on wholesale pricing conduct.[423] Telstra as argues that:

> If upstream service providers raise their prices too high, downstream providers will not be able to compete against a vertically integrated cable operator.[424]

Therefore, Telstra submits that it would still be appropriate to include the HFC network in the analysis of the competitiveness of the wholesale market.[425] Telstra submits that, even if Optus offers no wholesale service on its HFC network, Optus' HFC network should not be excluded from the market because to do so would underestimate the level of competition in the market and therefore overstate the incumbent's market power.[426]

Telstra also states that, were Optus no longer able to provide wholesale services as a result of granting the exemption, other parties would be able to enter into ESAs through the use of DSLAM services and provide wholesale services.[427] It submits that the

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418 Telstra, Initial submission in support of exemption application, December 2007, p. 78.
419 Optus, Supplementary submission, May 2008, p. 10.
420 Telstra, Response to ACCC Discussion Paper, March 2008, p. 24.
421 Telstra, Initial submission in support of exemption application, December 2007, p. 74.
422 ibid.
423 Telstra, Response to ACCC Discussion Paper, March 2008, p. 24.
424 ibid.
425 Telstra, Initial submission in support of exemption application, December 2007, p. 74.
426 Telstra, Response to ACCC Discussion Paper, March 2008, p. 25.
427 Telstra, Initial submission in support of exemption application, December 2007, p. 79.

ACCC's regulation of access to other companies' access to declared services will itself restrain Telstra's behaviour.[428]

In contrast, Optus submits that it does not provide fixed voice wholesale services over its HFC network, and that it is misleading to think of the HFC network as a complete substitute for the CAN.[429] Optus submits that the network is not suitable for business or wholesale services, and cites the fact that Telstra does not wholesale over its own HFC.[430]

Optus cites similar arguments in relation to wholesale customers as it does for business customers, such as the absence of consistency of service and the absence of the ability for wholesale customers to control quality of service.[431] It also submits that there are significant obstacles to providing back-of-house IT systems for wholesale over HFC.[432] Optus also submits that HFC would not be an attractive technology for wholesale customers due to the costly and time-consuming connection process. It submits that no party would use HFC in preference to copper, which has a relatively simple connection process.[433]

Finally, Optus submits that the current levels of broadband penetration in Australia have come about as a result of the current access-based competition regime and particularly Optus' access to services provided by Telstra as required by the unbundling of the local loop.[434]

In its response to the ACCC's draft decision, Telstra submits that the ACCC's draft decision overstates the importance of Optus as a wholesaler.[435] It submits that most significant broadband competitors self-supply using their own DSLAMs and ULLS, and that wholesale services are accordingly unlikely to play a significant role in downstream markets. It states that, if Optus is a significant wholesaler, then it will have a strong incentive to offer an HFC-based wholesale product were it to no longer have ULLS access.[436] Telstra also submits that other ULLS-based competitors already have substantial spare capacity on their equipment and that they would be likely to find wholesale provision attractive. It submits that these operators would have the incentives and means to provide wholesale services.[437]

### *ACCC's conclusion*

The ACCC considers that the analysis concerning the wholesale market generally is relevant to the consideration of the wholesale market in the area covered by the Optus HFC network. However, the ACCC notes that, given the evidence discussed above that

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428 Telstra, Response to ACCC Discussion Paper, March 2008, p. 23.
429 Optus, Response to ACCC Discussion Paper, March 2008, p. 8.
430 ibid, p. 7.
431 ibid, p. 8.
432 Optus, Response to ACCC Discussion Paper, March 2008, p. 8; Optus, Supplementary submission, May 2008, p. 19, Appendix B.
433 Optus, Supplementary submission, May 2008, p. 15.
434 Optus, Response to ACCC Discussion Paper, March 2008, p. 37.
435 Telstra, Response to ACCC Draft Decision, October 2008, p. 57.
436 ibid, p. 58.
437 ibid.

Optus has a higher than average retail market share within the Optus HFC footprint, Telstra's strength in the upstream market may be lower in that geographic region than outside it.

The ACCC considers that Telstra has significant market power in the upstream market for fixed voice services. This view is based on several factors.

Firstly, Telstra still controls the infrastructure by which the overwhelming majority of voice services are provided, with 89 per cent of all fixed voice lines supplied over its CAN.

Secondly, Telstra controls price and non-price access to LCS, WLR and ULLS (which the ACCC considers a substitute to the LCS and WLR at the wholesale level in some geographic regions). Other providers of wholesale voice services (which Telstra has elsewhere submitted to be AAPT-PowerTel and Nextep in addition to Optus)[438] currently depend on Telstra for access to ULLS. While regulated ULLS access is likely to act as a constraint upon LCS and WLR pricing, it is important to note that regulation creates the constraint. Without such regulation, Telstra's pricing of the LCS, WLR and ULLS would be relatively unconstrained.

Thirdly, Telstra is vertically integrated into downstream markets and enjoys a strong position in retail markets for fixed telephony services. Telstra's retail market share has increased from 69 per cent in 2005-06 to 71 per cent in 2006-07.[439] This may further affect the potential for competitive entry in the upstream market. A large retail customer base is typically necessary to justify investment in infrastructure before a new entrant can compete effectively with Telstra. In addition, telecommunications consumers face high costs of switching between retail suppliers. Supply contracts typically involve a fee for the costs of physically disconnecting and churning customers. These costs, in addition to general information asymmetries about the range of competitors' products, mean that consumers tend not to change their service provider unless there is a compelling reason to do so.

Accordingly, it is the ACCC's view that upstream markets for the provision of fixed voice and broadband do not display the characteristics of particularly competitive markets. That said, the scenario of alternative carriers supplying wholesale fixed voice and broadband services to access seekers is becoming more prevalent, and a number of carriers, including Optus, clearly do provide wholesale services to other companies using ULLS-based networks.[440]

A related point, and one particularly significant to the HFC exemption application, is the ability of Optus to provide wholesale services over its HFC network. Optus does not currently provide a wholesale fixed voice service over its HFC network, and Telstra likewise does not provide wholesale services over its HFC. The ACCC is not aware of widespread use of HFC for wholesaling in overseas jurisdictions, and it would appear

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438 ACCC, *Telstra's local carriage service and wholesale line rental exemption applications—final decision and class exemption*, August 2008, p. 96.

439 ACCC, *Telecommunications competitive safeguards for 2006*-2007, 12 May 2008, p. 18.

440 3rd Wave Communication Pty Ltd, *'Internode offers naked ADSL2+ via Optus resale'*, Exchange, Volume 20 Issue 9, 14 March 2008, p. 7.

to be unusual to supply wholesale services over this technology. The ACCC notes again that Optus is the largest user of the declared ULLS. Optus uses the ULLS to act as a wholesaler of voice and data services to provide services to other telecommunications companies.[441] Accordingly removing Optus' ability to wholesale over ULLS may have a significant effect on wholesale markets.

The ACCC notes Optus' arguments that it is not able to provide wholesale services over HFC. The ACCC considers that, in regard to Optus' submission that customers would need to build expensive wholesale interface systems, it is unclear why duplicate systems would be needed just because some services would be supplied over HFC. The ACCC would expect that, while some additional costs might be incurred, it would be unlikely that entire new systems would be built. Accordingly it is unclear that this is a significant barrier to the provision of wholesale over HFC. The ACCC also notes again that Optus' claimed network availability seems lower than would reasonably be expected.

The ACCC notes however that there would appear to be some significant switching costs for a wholesale customer acquiring wholesale copper-based services to acquiring wholesale HFC-based services. These would include having all end-users arranging a time for a truck roll to make new connections, which could constitute a significant disruption for many end-users, as well as paying Optus for such connections to occur, and arranging for new CPE. These switching costs between technologies could significantly disrupt the process of competition. Furthermore, there would appear to be other issues with wholesaling the HFC, including its lack of geographic reach and potential for quality of service to be uncertain, that would limit the attractiveness of HFC to wholesale customers. The ACCC considers that such factors would constitute barriers to entry for wholesaling the HFC. If Optus was using its HFC network rather than the ULLS, it may find it more difficult to obtain wholesale customers because of these barriers to entry.

However, it is also necessary to consider the extent to which other access seekers would be able to fill that wholesale role should Optus not be able to supply wholesale services. As the ACCC has noted in other processes, access seekers with unused capacity on their DSLAMs may seek to supply wholesale services.[442] While this is clearly true, the ACCC considers that removal of Optus from ULLS based-supply could have a significant effect given Optus' relative size in the market.

Finally, the ACCC notes that, in the past where there has been a small but significant increase in price of wholesale fixed voice or broadband services, Optus has not offered wholesale access on its HFC network.

#### *3.2.2.4 Retail pay TV*

The ACCC notes that limited submissions have been made regarding the effect on the retail pay TV market if the HFC exemption was granted.

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441 Singtel management discussion and analysis, June 08, p. 42.

442 See, e.g., ACCC, *Telstra's local carriage service and wholesale line rental exemption applications—final decision and class exemption*, August 2008, p. 112.

However, the ACCC considers that it is relevant to briefly consider the state of the market for retail pay TV and the potential for competition to develop.

As at the end of 2007, there were over 2.16 million pay TV subscribers in Australia.[443] Foxtel was the largest operator, with 1.335 million subscribers at the end of 2007, while Optus had 157,000 subscribers at the same time. Both of these companies operate in metropolitan markets only. It can be seen that Foxtel is the largest supplier to metropolitan consumers of pay TV, with close to 90% of subscribers. A third company, Austar, operates in regional areas and had 668,786 subscribers at the end of 2007. The Austar network largely does not overlap with the Foxtel network.

As noted above, the ACCC considered the pay TV market extensively in its *Emerging market structures* report in 2003.[444] The major conclusions from that report were that Telstra's 50 per cent interest in the largest pay TV operator, Foxtel, and ownership of the largest HFC network were significant competition concerns. The ACCC recommended that the government introduce legislation requiring Telstra to divest its interests in both the HFC and Foxtel, unless it can be shown that the costs of such divestiture outweigh the benefits flowing from the increased competition that divestiture would promote.[445]

Such divestiture has not occurred. As discussed earlier in this decision, the ACCC therefore considers that the same competition concerns remain. The ACCC considers that there is little prospect of effective competition in metropolitan pay TV markets while Telstra retains its interest in Foxtel and ownership of its HFC network

In particular, pay TV is relevant to the considerations in deciding whether to grant this exemption to the extent to which Telstra's ownership of Foxtel, and resulting pay TV content costs, as discussed above, may constitute a barrier to expansion for the Optus HFC network and affect the competition in other telecommunications markets. The ACCC notes that the issues discussed above concerning the economics of connecting MDUs are also a relevant barrier to an improvement in competition for pay TV.

## 3.3 Will granting the exemption promote competition?

A key question for the ACCC in addressing whether granting an exemption is likely to promote the LTIE is whether, and the extent to which, the granting of the exemption will promote competition in the relevant markets. As noted above, the ACCC considers that, in the context of assessing an exemption application, the concept of promoting competition refers to whether the opportunities and environment for competition with the exemption will be better than they would be absent the exemption, rather than to whether competition will in fact 'increase'.[446]

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443 Peters, Bob, *Subscription television in Australia*, Screen Australia, available at http://www.afc.gov.au/gtp/wptvanalysis.html, accessed on 9 September 2008.

444 ACCC, *Emerging market structures in the communications sector*, June 2003.

445 ibid, p. xxi.

446 see *Sydney International Airport* [2000] ACompT 1 at [106] and *Seven Networks limited (No 4)* [2004] ACompT 11 at [123] – [124].

In determining the extent to which granting an exemption is likely to promote competition, the ACCC must have regard to the extent to which it will remove obstacles to end-users gaining access to carriage services or to services provided by means of carriage services (subsection 152AB(4)).

***Parties' submissions***

Telstra submits that granting the exemption will promote competition in the relevant markets. Telstra contends that competition will be promoted as Optus will respond by competing more vigorously via its own HFC and mobile networks.[447] Telstra submits that it is likely that granting the exemption will result in Optus being stimulated to invest in its HFC network, rather than withdraw from the market.[448] Telstra submits that Optus' further investment in its HFC network will lead to the provision of services such as VoB, or upgrading of the DOCSIS data technology used by Optus, which will provide direct competition to Telstra's offerings.[449] Furthermore, Telstra submits that if Optus exploited its HFC network to its full potential in the proposed exemption areas, competition for downstream retail broadband services would also increase regardless of whether Optus offered a wholesale product.[450]

Telstra contends that granting the exemption will increase its own incentives to invest in its copper or HFC network in response to greater competition from Optus and 'because narrower regulation will reduce the threat of non-compensatory access and expropriation.'[451]

Telstra further submits that strengthening infrastructure-based competition is important given imminent next generation networks:[452]

> The opportunity to "roll forward" existing infrastructure-based competition in a way that reduces the need for, and risks of, regulation in an NGN environment places a very high value on the establishment of viable infrastructure-based competition with today's networks.[453]

Telstra argues that the benefits of infrastructure-based competition outweigh the costs of regulation and any costs faced by Optus as a consequence of granting the exemption.[454] In its June 2008 submission, Telstra provides a report from Henry Ergas to support its arguments concerning the regulatory costs of continuing to allow Optus to have regulated access to its services that are the subject of its exemption application.[455]

Telstra in particular points to two 'adverse outcomes' for competition that it submits result from Optus being able to use both the ULLS and HFC, submitting that:

- Optus does not compete in triple play services which have been identified as a key driver of cable network upgrades overseas

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[447] Telstra, Initial submission in support of exemption application, December 2007, p. 75.
[448] ibid.
[449] Telstra, Response to ACCC Discussion Paper, March 2008, p. 31.
[450] ibid.
[451] Telstra, Initial submission in support of exemption application, December 2007, p. 76.
[452] ibid.
[453] ibid.
[454] ibid, p. 77.
[455] Ergas, *Expert Report*, June 2008.

- Optus has not invested in higher broadband speeds on its HFC, possibly in order to preserve its ULLS access or allow consistency in advertising.[456]

Telstra considers that the 0.8m out of 2.2m houses treated by Optus as unserviceable is not a realistic number, and particularly points to evidence that Telstra and overseas cable operators regard only around 7% of houses as unserviceable.[457] Telstra also raises queries about Optus' claimed internal business rule that it uses HFC in preference to ULLS for all homes that it considers serviceable.[458]

Telstra submits that granting the exemption may have some impact on competition in the relevant wholesale market as Optus supplies wholesale services by means of its DSLAMs in areas where it has its HFC network.[459] However, Telstra contends that the wholesale market is only relevant to the extent that it impacts on retail markets.[460] In this regard, Telstra submits that retail competition will not be harmed by any effect of the exemption on the wholesale market as there are several providers of retail services using DSLAMs, wireless and 3G within the HFC network footprint.[461]

Telstra contends that if the ACCC is concerned about potential harm in the wholesale market from granting the exemption, the ACCC should consider that:

- Optus may choose to offer wholesale services via HFC.

- Telstra may continue to supply services to Optus on a reasonable commercial basis.

- Optus could continue to use its DSLAMs in ESAs that do not have 100 per cent HFC coverage. Telstra submits there would be no net loss of competition because any lessening in the number of DSLAM operators would be compensated for by Optus becoming a vigorous cable competitor.

- Other access seekers will continue to have regulated access to Telstra's wholesale services. Telstra submits that, as set out in its exemption application for WLR and LCS, the entry of the first ULLS based operator is good evidence of the economic viability of other DSLAM operators entering an ESA. Therefore, in ESAs where Optus is currently the only DSLAM operator, others may enter. Where Optus provides wholesale services in these ESAs, Optus has an incentive to substitute cable-based wholesale services to retain its wholesale business. Alternatively, another operator may enter and deploy a DSLAM to provide wholesale services.[462]

Conversely, Optus submits that granting the exemption will not promote competition. Optus submits that it is a key competitor due to its size, resources and breadth of

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456 Telstra, Response to ACCC Discussion Paper, March 2008, pp. 5-6.
457 Telstra, Initial submission in support of exemption application, December 2007, p. 33; Telstra, Response to ACCC Discussion Paper, March 2008, p. 8.
458 Telstra, Response to ACCC Discussion Paper, March 2008, p. 8.
459 Telstra, Initial submission in support of exemption application, December 2007, p. 78.
460 ibid.
461 ibid.
462 ibid, pp. 78-9.

competitive activity.[463] Optus further submits that granting the exemption would diminish the choices for end users as it would not be able to offer a service to many of the customers it currently serves via ULLS.[464]

Specifically in relation to the broadband retail market, Optus submits that smaller telecommunications companies such as iiNet and AAPT are unlikely to place the same degree of competitive constraint on Telstra.[465]

Optus also considers that granting the exemption would have more severe consequences on the level of competition in the 'corporate and government market segment.'[466]

In relation to the promotion of full-facilities based competition, Optus contends that the ACCC cannot be satisfied that the full facilities-based competition that is envisaged by the exemption will improve the conditions or environment for competition.[467]

Optus argues that the ULLS cannot be dismissed as an 'access service' and thereby be deemed to be inferior to the 'facilities-based service' that could be provided by the HFC network.[468] Optus submits that although ULLS is often described as 'partial' or 'quasi' facilities based competition, it is effectively a service that provides facilities-based competition.[469] Optus states that:

> …DSL technology using the ULLS continues to be the most important technology for broadband competition in Australia.[470]

In support of its position, Optus submits that in 2007, DSL was used for 74 per cent of broadband services in Australia whereas cable accounted for around 14 per cent.[471] Optus further submits that broadband penetration in Australian households has increased from 49 per cent in 2006 to 64 per cent in 2007. It asserts that this has occurred due to the current access-based competition regime and states that:

> …the proposed exemption both underestimates the utility of Optus' access to ULLS to allow it to compete but also more fundamentally puts at risk the gains that have already been made.[472]

Optus submits that the contention that facilities-based competition is always superior is 'untested and uncertain' and that the ACCC therefore cannot be satisfied that infrastructure-based competition is always in the LTIE.[473] Optus submits that efficiencies from infrastructure-based competition are only in the LTIE if they are translated into lower prices or better services.[474]

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463 Optus, Response to ACCC Discussion Paper, March 2008, p. 35.
464 ibid.
465 ibid.
466 ibid, pp. 35-6.
467 ibid, p. 36.
468 ibid.
469 ibid, pp. 36-37.
470 ibid, p. 37.
471 ibid.
472 ibid, pp. 37-38.
473 ibid, p. 38.
474 ibid.

In relation to the impact of granting the exemption on the level of competition in wholesale markets, Optus submits that the competitive tension for the supply of wholesale services in Sydney, Melbourne and Brisbane would be reduced as it would limit Optus' ability to provide a competitive wholesale offering via its DSLAM network.[475] Optus submits that even if a wholesale product was available on its HFC network, it would not reduce the impact of the exemption, as it is unlikely to be an attractive option for wholesale customers for two reasons:

- The operational processes required to be carried out in order to connect a new HFC customer are significantly more costly and time-consuming than for a DSL customer.[476]

- The HFC network coverage is limited to selected suburbs of Sydney, Melbourne and Brisbane. Furthermore, a large proportion of end user premises within Optus' HFC footprint are unserviceable and therefore, if the exemption was granted, wholesale customers' addressable premises would be reduced by a significant proportion.[477]

In its submission in response to the ACCC's draft decision, Telstra reiterates its position that granting the exemption will improve the conditions and environment in which competition can occur.[478]

Telstra's response to the draft decision argues somewhat differently in relation to infill investment by Optus, compared to previous submissions.[479] In particular, Telstra submits that the ACCC is undervaluing competitive dynamic effects and that 'it is not necessary that each and every possible customer can exercise choice'.[480] Having reference to the 65 per cent coverage rules used by Ofcom and the 75 per cent coverage threshold used by the FCC, Telstra submits that Optus should be treated as an effective competitor within the area covered by its HFC network.[481] It submits that consideration of the premises currently treated by Optus as unserviceable is 'overly narrow'.[482]

Telstra argues that more emphasis should be placed on network upgrades rather than infill.[483] It submits that Optus will not have incentives to deploy network upgrades because Optus employs a marketing strategy whereby it offers the same broadband speeds across its cable and DSLAM infrastructure. Telstra submits that Optus has not disputed that this is because it maintains flexibility to dual source.[484] Telstra submits that, without access to the ULLS, Optus will be more likely to make upgrades such as deploying DOCSIS 2 or 3.

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475 Optus, Supplementary submission, May 2008, p. 15.
476 ibid.
477 ibid.
478 Telstra, Response to ACCC draft decision, October 2008, p. 68.
479 ibid, p. 9.
480 ibid, p. 9.
481 ibid, p. 10.
482 ibid, p. 10.
483 ibid, p. 11.
484 ibid, p. 11.

Telstra also submits that other competitors, including Telstra, would then respond in the market to Optus' upgrades and commence a 'speed war'.[485] It submits that this will occur irrespective of whether Optus is able to service more of the premises it currently treats as unserviceable, as competitors will be unlikely to compete based on whether customers lived in MDUs or SDUs. It provides examples of advertising from broadband companies that it submits demonstrates that marketing is typically advertised to all customers.[486]

Overall, Telstra asserts that the exemption will lead to Optus:[487]

- serving more premises by connecting houses currently treated as unserviceable
- upgrading technology and platforms on its HFC network
- competing over a larger segment of the value chain and leading to a more diverse range of services and ability to innovate
- competing more intensely for marginal customers to better utilise its fixed cost base
- increasing customer numbers to reduce its unit costs.

It submits that without the exemption, such behaviour will not occur, that Optus' 'HFC investment will continue to stagnate' and that:

> SingTel Optus will continue to compete on the basis of dual-sourced inputs, constraining the features of its cable broadband service to retain equivalence with ULLS-based broadband services. [488]

Telstra also repeats submissions that this will lead to other facility owners, including Telstra, to respond by using their own networks and service offerings, leading to an increase in full-facilities-based competition. Telstra submits such competition has significant advantages over access-based and ULLS-based competition.[489] It also submits that the limitations in price and non-price discrimination in mass market services will mean such benefits extend to areas outside Optus HFC-serviceable homes. Telstra submits that such competition at the retail level will be in markets for bundled services, voice, broadband and pay TV. It also repeats submissions that wholesale competition will not be harmed due to low barriers to self-provision, spare DSLAM port capacity, intense retail competition and the possibility of Optus wholesaling on HFC.[490]

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485 ibid, p. 11.
486 ibid, p. 12, 88.
487 ibid, p. 69.
488 ibid, p. 69.
489 ibid, p. 69-70.
490 ibid, p. 71-72.

Telstra also submits that it will have commercial incentives to provide Optus with the exempted services, allowing Optus to address more premises that are more difficult to connect.[491]

Eisenach, on behalf of Telstra, considers that the proposed exemption would not reduce ULLS-based competition.[492] This is because of the presence of DSLAMs owned by other alternative suppliers in the ESAs covered by the Optus HFC network.

In its response to the draft decision, Optus submits that the exemption would not promote competition.[493] It submits that removing the ability of Australia's second largest competitor to compete would have a 'significant negative impact upon competition'.[494] It submits that it is the most effective competitor to Telstra and has introduced products that have driven competition. It cites its consultant, CEG, who finds that Optus is better able to use the ULLS than other access seekers.[495] Optus notes that there will be at least some homes that it is unable to service.

Optus also submits that, were it to no longer have regulated access to the ULLS, Telstra would be likely to charge $30 a month for the service.[496] In contrast, Telstra submits that it would not pursue a strategy of shifting Optus onto commercial resale services by pricing at a level just below the level at which it would be economically feasible for Optus to connect more customers to its HFC.[497] It submits that it would be unable to price at such a level, arguing that this would lead to losses. It also submits that it would be unable to execute such a strategy over a variety of voice and broadband products. However, it also argues that it would have commercial incentives to continue providing a full set of wholesale products.

***ACCC's view***

Telstra raises two main potential competitive benefits from granting this exemption. Firstly, it submits that Optus will connect a greater number of premises within its geographic footprint, thus bringing potential benefits of end-to-end facilities-based competition to more premises than are currently served. Secondly, it submits that Optus will be likely to make more general investments in the HFC network such as deploying an upgrade of its DOCSIS technology or utilising a different type of voice technology. Telstra submits that such an upgrade will also lead to competitive response from other carriers that it has characterised as a 'speed race'.[498]

As noted above, the ACCC considers that the relevant markets to consider in this application are:

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491 ibid, p. 72.
492 Eisenach, *Evidence relating to the ACCC's draft decision denying Telstra's exemption application for the Optus HFC footprint*, 13 October 2008, p. 12.
493 Optus, Response to ACCC draft decision, October 2008, p. 24.
494 ibid, p. 24.
495 Optus, Response to ACCC draft decision, October 2008, p. 24; CEG, *Assessing the likely effects of asymmetric access regulation in Australia,* 14 October 2008, p. 35.
496 Optus, Response to ACCC draft decision, October 2008, p. 25.
497 Telstra, Response to ACCC draft decision, October 2008, p. 59.
498 ibid, p. 1, 69.

- retail and wholesale markets for fixed voice services
- retail and wholesale markets for broadband services, and a possible bundled market of voice and broadband services
- a retail pay TV market.

The ACCC also considers that it should adopt a purposive approach to the geographic market in considering this decision and largely concentrate on the area defined by the proposed exemption area and the layout of the Optus HFC network.

As noted above, to assist in it determining whether granting the exemption will promote competition at the retail level, the ACCC intends to compare the state of competition in the "future without" the exemptions (i.e. where regulated access to the declared services continues to be available) to the state of competition in the "future with" the exemptions (i.e. where Optus has no regulated access to the declared services in the Optus HFC footprint). As noted above, when assessing the promotion of competition, the ACCC will examine whether the conditions or environment for improving competition are improved with the exemptions than they would be otherwise.[499]

### *Retail fixed voice and broadband markets*

The ACCC considers that the relevant considerations when assessing the future with and the future without the exemption apply equally to retail voice and broadband services.

*'Future without'*

At present at the retail level, (and also likely in the future were the exemption not granted) consumers may acquire fixed voice, broadband and a bundle of fixed voice and broadband services from various sources including:

- an end-to-end infrastructure operator (such as from Telstra via its PSTN or Optus via its HFC network)
- a ULLS-based or LSS-based access seeker
- a competitor that is re-selling fixed voice services and broadband supplied by Telstra or another operator on commercially negotiated terms
- a competitor that is re-selling fixed voice services supplied by an operator utilising regulated access to LCS and WLR (except to the extent that such services are not already unavailable due to the ACCC granting exemptions for these services).

As set out above in the 'state of competition' section, the ACCC considers that, while competition is increasing in the supply of retail fixed voice and broadband services, as

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[499] Seven Network Limited (No 4) [2004] ACompT 11, para [123] to [124].

evidenced by the recent trend of strong take-up of ULLS and a decreased market share for Telstra in retail fixed voice and broadband services, competition is still not strong, with Telstra remaining the dominant supplier of retail fixed voice and broadband services. The Optus HFC network also provides a constraint on the offerings made by Telstra.

ULLS take-up is likely to increase in the foreseeable future based on recent trends, even in the absence of granting this exemption. This is because access seekers, including Optus, will have the option of acquiring the ULLS in all exchange areas. Following the ACCC's recent decision to grant LCS and WLR exemptions in 248 ESAs, and PSTN OA exemptions in 265 ESAs, the ACCC considers that ULLS take-up might in fact increase more rapidly than it has in recent times. This is because parties losing their access to the regulated resale services may be encouraged to compete via ULLS-based competition instead.

The ACCC considers that growth in use of the ULLS as compared to resale services will better lead to competitors competing on greater dimensions of supply, such as price and quality, which allows them to dynamically innovate their services and leads to more sustainable competition.[500]

In relation to Optus in particular, Optus would continue to have access to both the HFC and the ULLS in its HFC footprint. Part of the 2.2m premises or so that are passed by the Optus HFC network would be served by HFC, while others would be served by ULLS. The ACCC's draft decision stated that it considered that Optus would continue to use the HFC for Optus' 1.4 million currently serviceable premises, and use the ULLS in the remaining premises. This would be consistent with Optus' stated internal business rule of using HFC in preference to ULLS and resale services. In its draft decision, the ACCC considered that it would accept that Optus did in fact follow such an internal business rule.[501] The ACCC noted that, given the sunk nature of the HFC network asset, it would make sense for Optus to use the HFC network for homes that are readily serviceable in order to gain economies of scale.[502]

However the ACCC notes Telstra's submissions that Optus may be using the ULLS in preference to the HFC for premises among the 1.4 million homes.[503] In its response to the ACCC's draft decision, Telstra submits that there are doubts about whether Optus follows this claimed rule.[504] It presents a house-by-house analysis from Eisenach using Google Streetview and a map of an ESA provided by Optus that appears to demonstrate very similar houses where one house may be considered serviceable and another unserviceable.[505] Telstra submits that, in the absence of internal documentation from

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500 ACCC, *Telstra's local carriage service and wholesale line rental exemption applications—final decision and class exemption*, August 2008, p. 106.

501 ACCC, *Telstra's exemption application in respect of the Optus HFC network—draft decision,* September 2008, p. 88.

502 ACCC, *Telstra's exemption application in respect of the Optus HFC network—draft decision,* September 2008, p. 88.

503 Telstra, Response to ACCC Discussion Paper, March 2008, p. 8.

504 Telstra, Response to ACCC draft decision, October 2008, p. 21.

505 Eisenach, *Evidence relating to the ACCC's draft decision denying Telstra's exemption application for the Optus HFC footprint*, 13 October 2008, p. 9-10; and accompanying diagrams and CDs of the Google Streetview output.

Optus detailing the operation of the business rule, the ACCC should make assumptions that Optus is in fact not following the rule.[506]

The ACCC does not consider that it is necessary for it to have full visibility over the internal business decisions of Optus, nor does it consider that it is relevant to consider this exemption application at the house-by-house level. The ACCC aims to set cost-reflective prices for the declared services it regulates, which allows appropriate provisioning decisions to be made. The ACCC is not satisfied it likely that Optus would seek to incur the once-off connection fee and perpetual ongoing costs of ULLS in preference to the one-off lead-in cost and minimal ongoing marginal costs of HFC for houses that are readily serviceable.

The ACCC has considered a simple example of the relative costs that would be faced by Optus if it chose to service a customer at readily serviceable premises by ULLS or by making a new lead-in from its HFC network. Telstra submitted in its initial supporting submission that the cost of connecting a new lead-in for an SDU is $340, while CEG states that Optus has informed it that HFC installation at serviceable premises costs **[c-i-c starts] [c-i-c ends]**.[507] The ACCC would expect that the ongoing marginal costs of servicing the end-user customer would be fairly minimal, given the fixed cost nature of the network. Comparatively, the ACCC's indicative price for ULLS connections in Band 2 for 2008-09 is $53.10, with the ongoing charge being $16 a month. Based on these figures, after 15 to 20 months using the ULLS, Optus would have incurred a charge greater than the cost of the HFC connection. The time period would be shorter were Telstra's commercial connection charges and monthly charges for the ULLS used, or if other charges faced by Optus, such as TEBA costs for exchange access, included in the analysis.[508] Furthermore, Optus would continue to incur ongoing costs and would face further ULLS connection fees to connect up that premises again in the future. Based on this analysis, the ACCC does not consider it plausible that Optus is using ULLS in preference to HFC for readily serviceable premises, as this would not seem to be a cost-effective option for a rational firm.

However, Optus may be using ULLS for premises which are not readily serviceable, as it has submitted it does.

The ACCC accordingly does not consider it necessary, in this context, to have complete visibility over all of Optus' business systems and rules about its use of the HFC, nor to second-guess Optus' decisions about how best to service individual premises. While there may be some anomalies, as noted by Eisenach, the ACCC considers that any systematic failure to use HFC for readily serviceable houses is unlikely.

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506 Telstra, Response to ACCC draft decision, October 2008, p. 20.

507 Telstra, Initial submission in support of exemption application, December 2007, p. 84; CEG, *Assessing the likely effects of asymmetric access regulation in Australia*, p. 8.

508 Telstra has previously proposed a $98 connection charge for Band 2 ULLS connections – see, e.g. ACCC, *Assessment of Telstra's ULLS and LSS undertakings relating to connection and disconnection charges—draft decisions*, December 2005, p. 8, and in its most recent undertaking has proposed a Band 2 ULLS price of $30 – see ACCC, *Telstra's access undertaking for the Unconditioned Local Loop Service—discussion paper*, June 2008, p. 18.

The ACCC further notes that Telstra's arguments about Optus' use of its HFC network are to some extent contradictory – while it argues that Optus may in fact be using ULLS in preference to HFC for serviceable houses, it also submits that Optus is competing vigorously using its HFC network to connect serviceable houses.[509]

The ACCC notes Telstra's arguments about the lack of potential for a speed race and innovation if the exemption is not granted.[510] Telstra argues that this is because of two aspects:[511]

- Optus will not upgrade the speed of its HFC network because it desires to retain equivalent speeds with its ULLS offering

- other carriers, including Telstra, will not improve their own network and service offerings.

The ACCC has concerns with each of these propositions. Firstly, the ACCC does not consider that it is clear why Optus would need to restrain its HFC speeds purely to retain parity with its ULLS offerings. Telstra appears to suggest that this may be because Optus needs or desires to maintain consistent pricing and advertising between the services provided over the two different networks.[512] However, the ACCC does not consider that it would be difficult for Optus to distinguish its pricing between different types of services. The ACCC notes that Telstra itself distinguishes the pricing between its cable and ADSL broadband services,[513] distinguishes the availability of ADSL and cable services to end-users,[514] distinguishes the availability of different speeds on its cable network,[515] and notes that its ADSL2+ service is 'not available to all customers in all areas'.[516]

Other broadband providers similarly distinguish between their services in different areas – for example iiNet provides information on the availability of its DSLAM network,[517] and provides differing packages depending on whether the service is acquired on-net or off-net.[518] The ACCC has also examined marketing for neighbourhood cable and TransACT, both of whom provide ADSL services over Telstra's network in addition to their networks. TransACT provides varying services in

509 Telstra, Initial submission in support of exemption application, December 2007, p. 29, 45.

510 Telstra, Response to ACCC draft decision, October 2008, p. 69.

511 ibid.

512 Telstra, Response to ACCC discussion paper, March 2008, p. 3-4, 20-1, 41; Telstra, Response to ACCC draft decision, October 2008, p. 1.

513 Telstra, *Internet Plans*, www.bigpond.com/internet/plans, accessed 27 October 2008.

514 Telstra, *Is BigPond Cable or ADSL available in my area?*, http://bigpond.custhelp.com/cgi-bin/bigpond.cfg/php/enduser/std_adp.php?p_faqid=117&p, accessed 27 October 2008.

515 Telstra, *How can I access BigPond Cable Extreme 30Mbps* speeds?*, http://bigpond.custhelp.com/cgi-bin/bigpond.cfg/php/enduser/prnt_adp.php?p_faqid=13589&p_created=1189733145&p_sid=9sNQXmhjm accessed 27 October 2008.

516 Telstra, *Broadband ADSL*, http://my.bigpond.com/internetplans/broadband/adsl/overview/default.jsp, accessed on 27 October 2008.

517 iiNet, *Network coverage*, http://www.iinet.net.au/iinetwork/coverage.html, accessed on 27 October 2008.

518 iiNet, *Broadband plans*, http://www.iinet.net.au/products/broadband/plans.html, accessed on 27 October 2008.

different suburbs based on the available technology type.[519] Neighbourhood Cable also sells three different packages – Premium+ Broadband, Cable Broadband and ADSL Broadband – that depend on availability.[520]

Accordingly the ACCC is not satisfied that Optus would face particular difficulties if it were to market different services based on different speeds or networks under the 'future without' the exemptions. Different services being provided based on availability does not seem to be difficult to achieve or unusual in the telecommunications industry. The ACCC therefore does not see why, in the 'future without' the exemptions, Optus would artificially constrain the speeds of its HFC network. Optus' incentives to upgrade the speed of its HFC network would not seem to be altered by the availability of the regulated ULLS.

The ACCC also considers it unusual that Telstra submits that it and other telecommunications companies require Optus to upgrade its network before they will perform network upgrades or innovate.[521] The ACCC has noted in the past that Telstra has made competitive responses such as increasing its own broadband speeds where competitors have, for example, begun rolling out ADSL2+ services.[522] Accordingly it is true that a competitive process can start where companies innovate and upgrade their services and there is a response from other players in the market. However, in the context of this exemption application, if Telstra can see important competition benefits from an upgrade in the capabilities of its own HFC network, such an upgrade is open to it now. The ACCC is not satisfied that Telstra would have to wait for Optus to deploy a network upgrade first in a 'future without' the exemption.

Similarly, the ACCC also considers that access seekers using the ULLS would have considerable incentive to innovate in order to obtain customers in a 'future without' the exemptions. The ACCC notes that access seeker parties have made upgrades to their networks to deploy ADSL2+ services, and that Telstra has upgraded its HFC broadband speeds, while Optus has had access to the ULLS. These upgrades do not appear to have needed Optus to initiate them, and the ACCC considers that similar incentives would apply in a 'future without' the exemption.

*'Future with'*

<u>Disincentive issue</u>

As a threshold issue, the ACCC considers that a significant feature of the 'future with' the exemptions relates to the disincentive effect that Telstra's proposed discriminatory

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519 TransACT, *Service availability by suburb*, http://www.transact.com.au/servicesearch/ServiceAvailability.pdf, accessed on 27 October 2008; TransACT, *Packages and prices*, http://www.transact.com.au/packages/default.aspx, accessed on 28 October 2008.

520 Neighbourhood Cable, *Company information*, http://www.ncable.net.au/_site/about.asp?cat=19; *Broadband*, http://www.ncable.net.au/_site/products.asp?cat=2; *Premium+ Broadband*, http://www.ncable.net.au/_site/products-single.asp?cat=2&ID=233; *Cable Broadband*, http://www.ncable.net.au/_site/products-single.asp?cat=2&ID=211; *ADSL Broadband*, http://www.ncable.net.au/_site/products-single.asp?cat=2&ID=232; all accessed on 27 October 2008.

521 Telstra, Response to ACCC draft decision, October 2008, p. 69.

522 see, e.g., ACCC, *Telecommunications competitive safeguards for 2005-06,* 24 April 2007, p. 28.

access approach would have on investment, and the flow-on effect to competition. The ACCC considers that this issue is relevant to all markets and accordingly considers this point, and its effect on the conditions or environment for improving competition, first before considering markets individually.

- *Parties' submissions*

In relation to the argument that the exemption would discourage future 'build' decisions because it would result in an immediate loss of access, Telstra states:

> If that were the case…then there can be no justification for access because the infrastructure is replicable but for the existence of regulation – in which case the best approach might well be to deregulate in *advance* of the build as the best means of ensuring that such build occurs.[523]

Cave also considers this potential disincentive effect:

> It can be argued, as noted in Section 2 above, that a discriminating access policy will create disincentives for investment in the future: an operator will fear that if it invests, it (and it alone) will be forced to negotiate for access on commercial terms, or be denied access, (a future version of bitstream, for example) which continues to be available to other competitors which have undertaken less infrastructure investment.[524]

Cave notes the potential disincentive as a 'serious issue' but considers that the disincentive could be overcome by regulatory policy statements:

> This is a serious issue, but one which I believe a regulator could resolve by clearly limiting the set of circumstances in which such an exceptional policy could be adopted. It would be confined to circumstances, such as the present one, in which an operator had constructed for itself nearly all the assets permitting it to self-supply, but none the less sought access products from a competitor which was broadly equivalently endowed. Such a statement of intent would, if it were believed, prevent the routine application of different access arrangements for different operators. [525]

Cave later considers that here is not much evidence of Optus intending to expand its network in any case, which may limit the materiality of the disincentive.[526] Ergas reaches a similar view.[527] Ergas also considers that the argument is less relevant if:

> declarations are made and exemptions granted broadly (as opposed to in any specific case) on the basis of conditions that access seekers investment actions do not directly influence, and
>
> the regulatory environment in no way guarantees that access, once imposed, will only be withdrawn if access seekers actually make facility-based investment.[528]

Optus submits that granting the exemption would not promote efficient investment in infrastructure as it is likely to deter Optus and other operators from investing in

523 ibid, p. 38.
524 Cave, *Applying the ladder of investment in Australia*, p. 14.
525 ibid.
526 Cave, *A note on Two Points in Optus' Submission*, June 2008, p. 2.
527 Ergas, *Expert Report*, June 2008, p. 18.
528 ibid, pp. 18-19.

infrastructure related projects in the future.[529] Optus states that the exemption will create a disincentive for:

- Optus to invest in its HFC network outside of the exempt area; and
- Other interconnecting carriers to develop their own networks at all,

> for fear that any investment in new networks or network extensions would cause them to lose access to Telstra's fixed line services in accordance with the precedent set by the exemption application.[530]

In its response to the ACCC's draft decision, Telstra repeats submissions that there should not be concerns about the fact that the exemption only targets one particular access seeker.[531] Telstra submits that:

- concerns about disincentives to invest are overstated, and withdrawing regulation would provide greater incentives to invest
- the exemption would not require the picking of technology winners but instead encourage the efficient use of infrastructure that has been built
- granting the exemption would remove distortions in investment decisions.

Telstra submits that investment incentives are clearly distorted under current arrangements and that there is little practical likelihood of there being a chilling effect on efficient investment by new entrants.[532] It considers that there is no substantive evidence of a chilling effect and that any effect is purely theoretical.[533] It submits that there should be more evidence, and cites Cave's submission that quantitative assessments should be developed.[534]

Telstra submits more generally that there is an inverse relationship between regulation and investment, and cites some studies reaching that conclusion.[535] In particular, it cites its consultant Eisenach, who considers that the goal of access regulation must be to ensure that a competitor with its own infrastructure relies on that infrastructure, and that it is appropriate to target particular competitors.[536] Eisenach considers in fact that the consideration is not just about whether Optus will make further investment but also about whether it is disinvesting in its HFC network and letting it erode.

Telstra then submits that there will be little possibility of any further expansion of the Optus HFC footprint, and that as a result the exemption would be unlikely to present

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529 Optus, Response to ACCC Discussion Paper, March 2008, p. 4.
530 ibid, pp. 30-1.
531 Telstra, Response to ACCC draft decision, October 2008, p. 41.
532 ibid, p. 41.
533 ibid, p. 42.
534 Telstra, Response to the ACCC's draft decision, October 2008, p. 43; Cave, Letter to Peter Waters, 14 October 2008, p. 3.
535 Telstra, Response to the ACCC's draft decision, October 2008, p. 43.
536 Telstra, Response to the ACCC's draft decision, October 2008, p. 43; Eisenach, *evidence relating to the ACCC's draft decision denying Telstra's exemption application for the Optus HFC footprint*, 13 October 2008, p. 17.

the growth of the HFC network.[537] It also submits that there is limited prospect of other fixed line network deployment. In relation to wireless competitors, Telstra submits that these competitors typically do not utilise fixed line infrastructure. It also repeats submissions that the ACCC could minimise any disincentive by making it clear that Optus is a ‘special case’.[538]

Telstra’s response to the draft decision also submits that its own incentives to invest are relevant.[539] It states that its investment in its network, including an NBN, would increase in response to greater competition from Optus, and cites evidence from the UK that appears to demonstrate a similar dynamic between BT and VirginMedia.

Telstra also submits more generally that the ladder of investment is itself discriminatory in that different parties will have different declared services at different times.[540] It submits that the ACCC has previously decided matters which affect Telstra in particular, and that particular firms will inevitably be affected differently to others by regulatory decisions. Telstra argues that the ACCC should deal with concerns about chilling effects by not declaring services that are capable of efficient duplication.[541]

Finally, Telstra submits that any consideration of its own dual sourcing of fixed line infrastructure would be inappropriate. It submits that doing so would:

> …deter Telstra itself from developing a wider range of facilities, as asymmetries between it and access seekers in the range of facilities might then be used to justify continued declaration, even when competing alternatives were clearly available.[542]

In its response to the draft decision, Optus supports the conclusion that the discriminatory nature of the exemption would lead to disincentives for investment by all competitive carriers.[543] It also submits that there is a broader consideration that justifies the rejection of the exemption application. In particular, it submits, with reference to the report prepared by its consultant CEG, that the continued existence of competitors who have access to regulated fixed line services impacts directly on Optus making infill investment that Telstra has argued will occur.[544]

Optus also points to the views of CEG that granting the exemption would ‘carry a significant risk of deterring efficient new investment’.[545] CEG considers that arguments against the significance of this disincentive effect are unconvincing.[546] It considers that the fundamental arguments made by Telstra apply equally to future situations as much

537 Telstra, Response to the ACCC’s draft decision, October 2008, p. 45; Cave, Letter to Peter Waters, 14 October 2008, p. 4.
538 Telstra, Response to the ACCC’s draft decision, October 2008, p. 46.
539 ibid, p. 47.
540 ibid, p. 49.
541 ibid, p. 49.
542 ibid, p. 51.
543 Optus, Response to the ACCC’s draft decision, October 2008, p. 5.
544 Optus, Response to the ACCC’s draft decision, October 2008, p. 5; CEG, *Assessing the likely effects of asymmetric access regulation in Australia*, p. 9.
545 Optus, Response to the ACCC’s draft decision, October 2008, p. 9; CEG, *Assessing the likely effects of asymmetric access regulation in Australia*, p. 5.
546 CEG, *Assessing the likely effects of asymmetric access regulation in Australia*, p. 13.

as to the existing Optus HFC network.[547] It also considers that Cave's proposed solution that the ACCC specify particular scenarios for the application being successful are uncertain, and also submits that Cave fails to consider the effect on other investors rather than just Optus. CEG also submits that Ergas fails to consider that investment decisions are not certain and that the eventual costs and competitiveness of a technology may not be known.[548]

- *ACCC's views*

The ACCC has a major concern about the 'future with' the HFC exemption application and the resulting effect on competition (and investment in infrastructure). This stems from the fact that the application relates to the supply of declared services to Optus alone (whether purchased directly or through a third party company). The ACCC considers that the granting of an exemption containing such a discriminatory access policy could lead to a disincentive for all competitive carriers, not just Optus, to deploy infrastructure, and therefore discourage the promotion of competition, and not lead to a better conditions and environment for improving competition.

The HFC exemption application differs from others recently submitted by Telstra in that Telstra is applying for an exemption from direct and indirect supply of services to Optus only, based on Optus' ownership of the HFC network. In contrast, the other exemption applications recently submitted by Telstra in relation to the LCS, WLR, PSTN OA and transmission services seek exemptions from supply to *all* carriers, on the premise that sufficient competition exists such that no access regulation is needed for the service. In the ACCC's recent decisions to grant certain LCS/WLR and PSTN OA exemptions to Telstra, the ACCC granted Telstra an exemption from supply to all carriers (as well as making a class exemption for supply of the services generally).[549]

Telstra's proposed approach also appears to differ to the typical overseas approaches to similar applications. Telstra points to various exemption-style processes, such as Federal Communications Commission forbearance decisions in the USA,[550] which involve *all* access seekers losing regulated access to declared services where an application is granted.[551] While Telstra describes its approach as 'conservative',[552] the ACCC considers the approach problematic.

In general, the ACCC considers that its approach to regulation under the TPA should be concerned with 'competition, not competitors'.[553] That is, the ACCC's major concern

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[547] ibid, p. 13.

[548] ibid, p. 14.

[549] ACCC, *Telstra's local carriage service and wholesale line rental exemption applications—final decision and class exemption*, August 2008; ACCC, *Telstra's PSTN Originating Access exemption applications – CBD and Metro areas—Final Decision and Class Exemption*, October 2008.

[550] e.g. Federal Communications Commission, *In the Matter of Petitions of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Denver, Minneapolis-St. Paul, Phoenix, and Seattle Metropolitan Statistical Areas WC Docket No. 07-97 MEMORANDUM OPINION AND ORDER*, (FCC 08-174), 25 July 2008. See also Telstra, Initial submission in support of exemption application, December 2007, p. 66.

[551] Telstra, Initial submission in support of exemption application, December 2007, p. 61.

[552] ibid.

[553] see, e.g. ACCC, 'ACCC protects competition, not competitors' (media release), 12 October 2007.

relates to the process of competition, and the conditions and environment for improving competition generally, rather than focusing on the role of particular competitors. Telstra's proposed approach instead focuses on a particular competitor.

The ACCC considers that any competitive carrier will be reluctant to make facilities-based investment if they could then be singled out and lose their access rights. Granting such an exemption would create for operators the reasonable expectation that any investment will lead to it and it alone being denied access (or forced to negotiate for access without the possibility of arbitration) while other competitors continue to get access. The ACCC's view is that this would have a significant chilling effect on investment generally, not just in HFC, if adopted as an approach by the ACCC.

The ACCC considers that this would not be in the LTIE as such a chilling effect would lead to reduced competition by access seekers who would not have the benefits of having deployed their own infrastructure. The ACCC considers that the discriminatory access policy which would result from granting this exemption would not create the conditions or environment for competition from what it would be otherwise (that is, the 'future without' the exemption). The exemption would lead to reduced sustainable full-facilities-based and ULLS-based competition.

This can be contrasted with general exemptions where all carriers lose access rights and investors are not singled out for their particular investments. In the present case, such an approach would be to seek an exemption from the supply of declared services to all carriers in the HFC footprint. When such exemptions are granted, infrastructure owners are probably better off than players without infrastructure, as they have some possibility of self-supply. Comparatively, Telstra's proposed approach singles out and disadvantages infrastructure owners relative to other operators. This could reduce the competition gains from efficient investment, as infrastructure investors would not be likely to seek a disadvantage relative to their competitors. This would lead to reduced competitive constraint from competition other than resellers.

In relation to Telstra's argument that the ladder of investment is itself discriminatory because different businesses may commence provision at different times, the ACCC considers that there are problems with this position. Firstly, the ACCC notes again that it considers the ladder of investment to be a useful conceptual tool, but not a central part of its approach to regulation. Secondly, the ACCC considers that this mistakes the ACCC's concerns about discrimination. Telstra's exemption application targets a particular access seeker for removal of all access rights. The ACCC's general exemption decisions lead to removal of access regulation where it is no longer necessary due to the level of competition in the market. Accordingly, new entrants are not disadvantaged by the fact that general exemptions have been granted.

Significantly, the disincentive effect relates to more than just Optus' HFC network. The ACCC considers that this disincentive effect could affect wider investment such as other end-to-end fixed–line infrastructure, DSLAM infrastructure or wireless networks, which as noted above may be becoming more substitutable with fixed line services over time. The proposed approach effectively limits any potential competition benefits to the current HFC footprint and to benefits that may arise from that network. The discriminating access policy could also limit future competition gains both from operators considering deploying their own end-to-end networks and existing alternative infrastructure owners (such as TransACT) considering expansion. Another operator may fear that if it invests, it will be forced to negotiate for access on commercial terms, or be denied access, which continues to be available to other competitors which have undertaken less infrastructure investment.[554] Relevantly, there is nothing unique in the nature of the arguments made by Telstra in relation to the Optus HFC network that would not apply to other infrastructure, whether complete end-to-end infrastructure or not. For example, similar arguments could equally be applied on an ESA by ESA basis to DSLAM infrastructure, such as a carrier-specific application of similar concepts to those used in the ACCC's recent consideration of LCS/WLR exemption applications.

The ACCC is also concerned that such an approach would punish any operator who invests in being able to compete through the use of more than one type of delivery method for telecommunications services – as they could be forced to essentially choose between one of their delivery approaches. An outcome of the discriminatory access approach could be to require Optus to use its HFC instead of copper. The ACCC considers that it would be unusual for a regulator to choose which investments a company can and cannot make, and to lock carriers into a particular technology. The ACCC sets access prices to the ULLS and other services on a cost-reflective efficient basis. Accordingly productive efficiency considerations would support the ability of companies to utilise alternative technologies in competing in their provision of telecommunications services. As noted by Optus, the competitiveness of a particular piece of infrastructure is not perfectly foreseeable at the time of making an investment. The ACCC would essentially be picking a method of delivery for a company's services that may lock them into a service that becomes uneconomic or otherwise unviable over time.

Relevantly, the ACCC notes Telstra's arguments that it should be allowed to dual source its fixed line infrastructure, and that to take its dual sourcing as a relevant consideration would deter it from developing a wider range of facilities.[555] The ACCC considers that such an argument equally applies to other competing firms and is a relevant consideration in assessing the nature of the HFC exemption application.

The ACCC notes that Telstra has presented arguments that any disincentive effect is minor or can be limited. As noted above, Cave considers that there is a possible solution to what he considers could be a 'serious issue' of a potential disincentive effect on investment. Cave contends that this issue could be resolved by ensuring that, when granting the exemption, it is made explicit that this is an unusual situation and there are limited circumstances in which the ACCC would adopt such a policy.[556] Cave cites those circumstances as being a situation:

> ... in which an operator had constructed for itself nearly all the assets permitting it to self-supply, but nonetheless sought access products from a competitor which was broadly equivalently endowed.[557]

The ACCC is not satisfied that adopting Cave's suggested solution would address the disincentive effect and the resulting damage to competition. Firstly, as Optus notes,

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[554] Cave, *Applying the ladder of investment in Australia,* p. 14.
[555] Telstra, Response to ACCC draft decision, October 2008, p. 51.
[556] Cave, *Applying the ladder of investment in Australia, p. 14.*.
[557] ibid.

there is no legislative provision under which the ACCC could formally establish a policy that restricts its future exemption processes.[558] That is not to say that the ACCC could not put out policy documents or make speeches concerning its likely approach. For example, the ACCC could consider that it would generally not grant such exemptions until a new competing network had been in place for a certain period of time.

However, the ACCC considers that policy only would not provide particular certainty for access seekers. Relevantly, the ACCC notes that carriers, rather than the ACCC, will typically initiate exemption processes and that any statement of policy would not prevent such applications being made. The ACCC must assess such applications against the statutory criteria. Perhaps relevantly, Telstra states in its supporting submission to the exemption application that it considers other infrastructure-based competitors may be exhibiting the same behaviour that Telstra is seeking to address in Optus.[559] The ACCC notes that TransACT and Neighbourhood Cable are two firms that similarly operate their own end-to-end networks as well as acquiring some PSTN-based services from Telstra. There is nothing unique about the nature of the Optus HFC exemption application that would prevent similar arguments being applied to these networks or other investments.

The ACCC also notes that, even were such a policy enacted, there would be a potential disincentive effect anyway. Carriers with existing networks may have incentives to actively seek to avoid the 'highly unusual' circumstances that would result in the granting of a similar exemption. This in turn would not create the conditions or environment for infrastructure-based competition to be achieved and would limit the likelihood of efficient investment. This is even assuming that the circumstances can be adequately specified. As Optus submits, concepts such as 'nearly all the assets permitting it to self-supply' may not be a simple concept to define.

The ACCC notes the point made by Cave and Ergas that there is little expectation of Optus expanding its network, or of other extensive end-to-end fixed line access networks being rolled out. However, the ACCC considers that this misconstrues the potential disincentive effect on other networks or infrastructure. There is significant investment being made in telecommunications generally that could be discouraged by granting the exemption. The ACCC also notes again that it is concerned that the approach that would be adopted by granting the exemptions would limit any potential gains from infrastructure-based competition to the exemption area and significantly reduce any potential benefits outside that area. The ACCC notes again that it considers that there is nothing about the arguments made by Telstra in support of its exemption application that relates specifically to the scenario of Optus' already existing HFC network or even specifically to end-to-end infrastructure. Rather, similar logic as that submitted in support of the HFC exemption application would equally apply to other pieces of infrastructure such as DSLAMs or transmission lines, which have recently been the subject of ACCC consideration in other exemption applications. The ACCC considers that exemptions are more properly considered in processes that seek

[558] Optus, Response to ACCC Discussion Paper, March 2008, p. 30.
[559] Telstra, Response to ACCC Discussion Paper, March 2008, p. 14.

exemptions from applying to all access seekers on the basis of general market conditions.

In relation to Telstra's submission that wireless operators typically would not also use the ULLS as well, the ACCC agrees that there are pure wireless operators such as Unwired that do not also provide fixed-line infrastructure. However, the ACCC also considers that, with wireless potentially becoming a more viable alternative to fixed-line infrastructure, the possibility of wireless investment being relevant is important.

Finally, the ACCC notes Ergas' comment about the case for declarations and exemptions not being made on conditions that access seekers investment actions directly influence. The ACCC considers that this does not match the nature of the application that has been made by Telstra, which is primarily concerned with the particular investments made by Optus.

In conclusion, the ACCC's view is that it considers that the discriminatory access policy proposed by Telstra could lead to a lessening of competition, and damage the conditions and environment for improving competition. In the 'future without' the exemption, parties will retain incentives to make investments and to provide competitive constraint using such investments. In the 'future with' the exemptions, investment could be chilled due to parties seeking to avoid being singled out and losing access rights as a result of future targeted exemptions. This could lead to reduced sustainable competitive constraint using such investments, which could be of a variety of investment types. The ACCC notes again its general view that it should be concerned with competition, not competitors.[560]

The reduced facilities-based competition that could result from granting the exemption would discourage the benefits of infrastructure-based competition and the development of alternative infrastructure choices both within and beyond the geographic region relevant to this application. This could limit any potential competition benefits of the type that have been identified by Telstra, as there will be reduced sustainable competition and dynamic innovation and fewer new technologies. The ACCC notes that this issue affects the potential for the exemption to promote competition across all relevant markets to this application and to broader geographic markets as well. The ACCC further considers the economically efficient use of and investment in infrastructure later in this decision, but notes the close relationship between the conclusions here and under that criterion.

<u>Retail voice and broadband market issues</u>

Were the exemption to be granted, consumers within the Optus HFC footprint would broadly be able to acquire retail fixed voice and broadband services from the same sources as noted above. However, they would not be able to acquire ULLS-based or LSS-based services from Optus or its wholesale customers, nor services that Optus or its wholesale customers provide using the regulated LCS, WLR and PSTN OA from Telstra.

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[560] see, e.g. ACCC, 'ACCC protects competition, not competitors' (media release), 12 October 2007.

Given that Optus acquires negligible LSS, the ACCC considers that this would not be a significant change to the 'future without' scenario. Further, given that the ACCC has already granted LCS and WLR exemptions in a substantial number of exchanges that intersect with the Optus HFC footprint, and that Optus in any case is reducing its use of resale services, the effect of Optus not being able to use the LCS and WLR is perhaps minimal compared to the 'future without'. Accordingly, the ACCC considers that the major consideration when considering the 'future with' the exemptions is the effect on the promotion of competition of Optus not having regulated access to the ULLS.

There are a variety of potential outcomes from Optus losing regulated access to the ULLS. The likely outcome depends on the extent of the barriers to entry discussed above in the ACCC's consideration of the present state of competition, and Telstra's competitive response. However it is significant that a negative effect on Optus' ability to compete does not necessarily mean that competition in general is negatively affected, as other competitors are also able to enter the market or expand their existing presence. It is also relevant that Optus has both the second largest deployment of DSLAMs and the highest number of ULLS acquired (**[c-i-c starts] [c-i-c ends]** of all ULLS lines taken).

Telstra submits that two main outcomes will arise from granting the exemption:

- in-fill investment to address premises currently considered as unserviceable
- upgrades of the HFC network technology, such as a DOCSIS upgrade.

A distinction may have to be drawn between those houses currently regarded by Optus as serviceable and not regarded by Optus as serviceable. Those homes currently treated as serviceable already have access to the Optus HFC network if they wish to obtain Optus services. Accordingly the first type of investment is more relevant to the general competitive effect caused by service provision to the 0.8 million currently unserviceable homes, which if the investment was made may be able to access HFC services in addition to currently available ULLS-based services from other competitive carriers. Accordingly, if the exemption was granted, it is relevant to consider whether such in-fill would actually take place.

The ACCC noted that there were some significant barriers to infill expansion of the Optus HFC network. Firstly, some houses were genuinely unserviceable by either Optus or Telstra using their respective HFC networks. Secondly, and more significantly, there were significant barriers to connections of MDUs to the HFC. A crucial reason for this barrier to expansion was the situation created by the market structure for pay TV content and the inability of Optus to access content that would allow it to access economies of scope over its HFC network from its pay TV service, leading to a long payback period for investment and an inability to defray connection costs. An additional barrier was the potential for customer inertia. The ACCC considers overall that it would be unlikely that Optus would make such connections of MDUs given these barriers to entry, particularly the barrier created by the Telstra ownership of its 50 per cent interest in Foxtel and the high content costs faced by Optus. As noted by Cave, there may be some marginal connections made as a result of the exemption, as connection of currently unserviceable homes is not an 'all-or-nothing' proposition. However, the ACCC notes its discussion above in consideration of the 'future without' the exemption about the incentives Optus has in any case to connect readily serviceable houses to its HFC network. It is more relevant in this context to consider what would happen to those premises that are more difficult to connect.

Uncertainty about the NBN may also have some minor, but probably not significant, effect. However, the ACCC considers that it should also take account of the effects of granting the exemption on the possible scenarios once an NBN was built. The ACCC notes that one implication of adopting the approach taken in the exemption may be that, were Optus not the successful bidder for the NBN, it would not have rights to access services over the NBN in the Optus HFC footprint.

To the extent the ACCC considers that infill investment is unlikely, competition would be unlikely to be promoted by the granting of the exemption. The 800,000 premises would lose a potential supplier of ULLS-based competition and not gain an alternative full-facilities-based infrastructure based competitor. It is significant that other competitors may and probably would compete with Telstra for these customers, including those customers currently supplied by Optus who would no longer be able to access services from Optus. However, given Optus' relatively large presence in the current market, these competitors may not be able to provide the competitive constraint that Optus currently provides, at least in the short to medium term, and may also have negative competitive outcomes in the longer term. The ACCC considers that there would be a loss of competitive tension within the Optus HFC footprint area. It notes the arguments of CEG that, given other parties would retain their access to declared services, Optus would be left facing higher costs while other parties did not. The ACCC considers that this is another aspect of the discriminatory access policy proposed by Telstra.

The ACCC notes Telstra's arguments in its submission in response to the ACCC's draft decision suggesting that the extent of additional infill may not matter, as Optus may have significant enough presence within its HFC footprint to provide a competitive constraint anyway.[561] The ACCC does not consider that this is a likely outcome, as an inability to service a large number of premises within an area would be likely to limit the competitive constraint provided by a particular firm. The ACCC considers it more likely that granting the exemption, were Optus unable to efficiently provide services to end-users using its HFC network, would lead to higher prices to end-users in the proposed exemption area.

Alternatively, Optus may sell its DSLAMs to another competitor as a result of the exemption, as it may no longer be able to obtain sufficient customers given the loss of the ability to service HFC-unserviceable homes. The ACCC notes that this would essentially constitute a horizontal structural separation of Optus' business in certain geographic regions.

The ACCC also considers that a related point is that, were the exemption granted, Optus would potentially utilise unregulated wholesale services from Telstra, rather than respond by connecting up new services. This is because, in such a context, the ACCC considers that Telstra would have the incentive to provide resale services to Optus at an unregulated price level. Telstra would provide services at a price that encourages Optus

561 Telstra, Response to ACCC draft decision, October 2008, p. 9-10.

to stay using Telstra's wholesale services, on which Telstra achieves high revenues, rather than have Optus actually connect more premises to the HFC. Accordingly, Telstra may increase resale prices up to a point just below the price where it would be rational for Optus to move to provision by HFC. The ACCC considers that this would mean that there would be likelihood of a decrease in facilities-based competition from the exemption, as the largest ULLS-based provider would move to provision by Telstra-resale voice and broadband services. This would reduce the competitive constraint on Telstra and other companies, and likely lead to higher prices for end-users. As Telstra noted, it has an incentive to continue providing wholesale services to customers over its own network.[562] Telstra argues that the ACCC has not identified how Telstra would recoup losses from following this strategy. However, the ACCC does not consider that it is evident that there would be losses in the provision of such services in this way. This is because Telstra argues that WLR/LCS would involve substantially more costs than the HFC lead-in. However this fails to recognise that the relevant premises to consider are those premises that are more difficult to connect and incur high costs of connections.

The ACCC's view is that this incentive for Telstra to encourage use of its wholesale services may provide relevant context to the HFC exemption application and make it less likely that infill investment would occur. Optus, who previously was a significant resale customer of Telstra's, has publicly stated that it is moving from the use of low-margin Telstra resale services to higher-margin ULLS-based access services.[563] This represents a lowering of profits to Telstra. The ACCC considers that it would accordingly be rational for Telstra to seek an exemption which leads to the loss of ULLS access for Optus and lead to Optus both losing retail customers and returning to use of Telstra's wholesale services. Accordingly it is the ACCC's view that a desirable outcome for Telstra in seeking this exemption may be an increased wholesale and retail use of its own copper network. The ACCC notes that Telstra rejects this characterisation of its motives in making the exemption application, arguing that it instead seeks the same opportunity to compete free from regulatory burdens. However, it is unclear to the ACCC how seeking an exemption from provision to one particular competitor would go towards achieving this aim.

In relation to the second type of potential investment, the ACCC considers that there would be potential competitive benefits were speeds provided over the Optus HFC network increased by an upgrade of the network's DOCSIS specification. Telstra argues that such an upgrade would lead to a 'speed race' in service provision as it would lead to a competitive response from Telstra over its HFC network or from other competitors using ULLS. The type of competitive response could perhaps be similar to that already seen in upgrades to HFC speeds by both Telstra and Optus during the last twelve months.[564] This has broadly occurred at the same time as an increased take-up of ADSL2+ plans. The ACCC considers that end-users will generally benefit from this kind of improved service offering being made available by competitors in the marketplace.

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[562] ibid, p. 59.

[563] Optus, Response to ACCC Discussion Paper, March 2008, p. 6.

[564] see, e.g. Telstra, *BigPond launches 30 Mbps Cable for Sydney and Melbourne*, (media release), 12 September 2007; Optus, *Optus cable network hits high speed*, (media release), 17 December 2007.

Accordingly it is relevant to consider whether such investment would be likely to occur if the exemption was granted. The cost of such investment has been estimated by Optus as being in the order of **[c-i-c starts] [c-i-c ends]**. However, given that Optus has previously stated that it is considering DOCSIS 3.0 upgrades, this cost appears unlikely to be insurmountable or overly difficult to incur. Were the exemptions granted, Optus would perhaps be more likely to make an investment of that sort rather than investment in DSLAMs or similar equipment. However, as the ACCC set out in its consideration of the 'future without' scenario, the ACCC does not consider it likely that there would be significantly larger prospects of Optus, Telstra or other companies innovating in this way if the exemption was granted. In relation to Optus, it has a significant customer base already on its HFC network and may already have adequate incentives to deploy such an upgrade. As the ACCC notes, Optus has been quoted as considering the deployment of DOCSIS 3.0, and there have been speed upgrades on both Telstra's and Optus' HFC networks in the last year. In relation to other companies, these parties would appear to clearly already have the incentive to seek to upgrade or differentiate their product offering. Accordingly, the ACCC is not convinced that, to the extent network investments are affordable, that investment such as a DOCSIS upgrade would be significantly more likely due to the exemptions being granted, as it considers that the motivation for such investments exists in any case.

The ACCC notes that one factor that may prevent such an upgrade would be the pending NBN process, as this kind of core network infrastructure would have the potential to be stranded by the NBN process. However it is unclear that this effect would be significant. The ACCC also notes that with DOCSIS 3.0 being a somewhat new technology there may be some tendency to wait for that technology to mature before deployment.

*Comparing 'future without' and 'future with'*

The ACCC is not satisfied that granting the exemption (most significantly the ULLS exemption) would lead to the promotion of competition in the market for retail fixed voice and broadband services. It does not consider that granting the exemption would lead to better conditions or environment for improving competition.

The ACCC firstly notes its concerns about the potential for the discriminatory access policy proposed by Telstra to discourage competition, which it considers affects all relevant markets.

The ACCC considers that there would appear to be significant barriers to expansion that make it unlikely that Optus would respond to the granting of the exemption by connecting up premises currently treated as unserviceable. The most significant barrier to expansion stems from the structure in the market for pay TV content and the difficulty faced by Optus in accessing content. Further, to the extent that any upgrade of DOCSIS technology or similar might occur, the ACCC considers that Optus would likely have incentives to deploy that technology anyway. Similarly, other industry parties already have sufficient incentives to innovate or upgrade their services.

However, were the exemption granted, there would be the possibility of reduced competition in the market from the exit of Optus from ULLS-based provision, and reduced facilities-based competition. Telstra, as the dominant provider of fixed voice and broadband services, would be best positioned to acquire such customers.

Accordingly, the ACCC is not satisfied that granting the exemption would promote competition in retail voice and broadband markets.

### *Wholesale fixed voice and broadband markets*

The question of whether granting the exemption is likely to promote competition at the wholesale level is perhaps less relevant, given that the focus of the LTIE test is upon end-users. That said, were competition to be affected considerably at the wholesale level this may have flow-on effects at the retail level. Accordingly, it is appropriate to consider any effects at the wholesale level. Furthermore, as the ACCC is not satisfied that granting the exemptions will lead to increased competition at the retail level, the effect at the wholesale level becomes a more relevant concern.

*"Future without"*
At the wholesale level, in relation to the "future without" scenario (i.e. where the exemption application is not granted) access seekers, including Optus, seeking to acquire a wholesale fixed voice or broadband services would have the following options available:

- reselling voice services using regulated access to LCS and WLR from Telstra (where not already unavailable due to exemptions that have previously been granted)
- reselling voice services using a commercially negotiated voice or broadband service, such as wholesale DSL, from Telstra, or from Optus or another access seeker that utilises the ULLS
- entering via ULLS take-up (i.e. installing a DSLAM or MSAN in a Telstra exchange).

As noted in its consideration of the state of competition, it is the ACCC's view that upstream markets for the provision of fixed voice and broadband services do not display the characteristics of competitive markets. The ACCC considers that, in general terms, there is currently minimal competition in the wholesale market for the supply of fixed voice and broadband services to access seekers (as Telstra is the supplier of the majority of inputs relevant to competition at this level). That said, the ACCC notes that competition may be increasing in this market, as it understands that various ULLS-based competitors are increasingly offering wholesale services to access seekers.

In its recent final decision on Telstra's LCS and WLR exemption application, the ACCC considered whether granting those exemptions would promote competition. A key issue was the extent to which access seekers can compete in the downstream market for fixed voice services via use of the ULLS in the absence of regulated access to the LCS and WLR. The ACCC considered that ULLS-based provision was a key factor in ensuring that wholesale level competition could be maintained.[565] In the ‘future without’ scenario Optus, as well as other access seekers, would maintain an ability to provide this constraint.

Furthermore, in that decision the ACCC considered that increased ULLS-based competition would stimulate the provision of wholesale fixed voice services from ULLS-based competitors seeking to exploit unused capacity on their ULLS-based networks. This could in turn provide increased competitive tension at the wholesale level and possibly constrain Telstra’s ability to price its LCS and WLR services at supra-competitive levels.[566]

The ACCC considers that Optus would be unlikely to commence provision of wholesale services over HFC under this scenario.

*“Future with”*

At the wholesale level, in relation to the “future with” scenario, access seekers seeking to acquire fixed voice and broadband services would have the above options available to them, but would not be able to acquire ULLS-based services from Optus or its wholesale customers (or at least to acquire a service priced on top of a regulated ULLS price).

In assessing the likely state of competition in the “future with” scenario, the ACCC must consider whether wholesale prices for fixed voice and broadband services (and service levels where relevant) would be higher, lower or the same as in the “future without” scenario.

Were the exemption granted, Optus would lose its ability to provide services based on the ULLS. As noted, Optus is the major wholesale competitor to Telstra, through its use of the ULLS, and provides a constraint on Telstra’s wholesale price offerings. A key issue is therefore whether Optus would commence wholesaling over its HFC and whether this would provide an adequate constraint at the wholesale level, or whether such constraint could come from another company.

The ACCC understands that HFC is not currently used for wholesaling in Australia and that it is not typically a wholesaled product overseas. However, the ACCC noted above that certain of the arguments presented by Optus against wholesaling seem somewhat questionable. It is not clear, for example, why entire additional IT wholesale systems would be needed to wholesale an additional product. However, the ACCC considered above that there were some significant barriers to wholesaling over HFC. These related to significant switching costs and a lack of control over the quality of the services offered over the HFC. The ACCC considers that moving between HFC and copper-based technologies could cause expenses and significant disruptions for many end-users. Significantly, such switching costs apply even if the premises are serviceable by HFC. These switching costs would appear likely to be greater at the wholesale level than at the retail level, given that wholesale customers would typically be larger scale

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565 ACCC, *Telstra’s local carriage service and wholesale line rental exemption applications—final decision and class exemption*, August 2008, p. 109.

566 ibid, p. 112.

and required to transfer a much larger number of end-user customers. As such, even were Optus to commence wholesaling over HFC, it is unclear that this would constitute an attractive alternative to CAN-based provisioning, and Optus could potentially provide less of a constraint in the wholesale market than it would without the exemptions being granted.

Telstra, as the dominant provider of fixed wholesale services, would be best positioned to pick up wholesale customers lost from Optus' wholesale business. The ACCC considers that such an outcome could be considered a negative effect on the competitive process in wholesale markets. However, other companies could potentially fill in the wholesale role currently filled by Optus. The ACCC has previously noted that current resellers or existing DSLAM users may be encouraged to install and compete with otherwise unused capacity on DSLAMs, which would lead to more sustainable competition. However there are barriers to entry into wholesaling and the ACCC considers that there may be at least significant short to medium-term damage to competition in provision of wholesale services were Optus prevented from providing wholesale services based on acquiring regulated access to the ULLS (noting that at present there are only two other providers of ULLS based wholesale voice services — AAPT-PowerTel and Nextep).[567] Such damage would also have the potential to lead to long-term damage to competition. This reflects the fact that wholesaling would require some scale and expertise, as well as wholesaling systems for interaction with other companies.

Such a result would also have implications for the analysis conducted in the ACCC's final decision made in respect of Telstra's WLR/LCS exemption application. In that decision, the ACCC considered that it was not satisfied that all access seekers currently acquiring regulated LCS and WLR from Telstra would be able to acquire a similar service on commercially negotiated terms. However, the ACCC considered that an increase in competitive tension in the ULLS-based wholesale market would encourage Telstra to supply a fixed voice bundle on similar prices and terms to the regulated service.[568]

*Comparing future without and future with*

In light of the above, the ACCC is of the view that if this exemption were granted, there would be likely to be a reduction in competition at the wholesale level. Such a result would have the danger of undermining the provision of wholesale services such as the LCS, WLR or wholesale DSL services. This could result in a reduction in the number of resale-based competitors in retail markets, and subsequently, a deterioration of the conditions for competition in retail markets.

The ACCC also considers that the disincentive effect discussed above would apply equally to wholesale markets and damage the potential for infrastructure to provide competition at the wholesale level.

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567 Telstra, *Telstra submission to the ACCC – Response to Questions from ACCC Discussion Paper of August 2007*, November 2007, p. 26.

568 ACCC, *Telstra's local carriage service and wholesale line rental exemption applications—final decision and class exemption*, August 2008, p. 113.

### *Pay TV markets*

The market for pay TV is constrained by the need for it to be supplied over HFC. As noted, the ACCC does not consider that IPTV offerings are at this stage substitutable for pay TV services. The ACCC does not consider that there is a relevant wholesale market for pay TV services.

The ACCC considers that the effect of granting the exemption on competition in the retail pay TV market is largely related to the issues about infill connection to the Optus HFC network, as discussed above in the ACCC's consideration of retail voice and broadband markets. The ACCC notes Telstra's submission in response to the draft decision that competition in pay TV would be promoted by the exemption.[569] However, the ACCC considers that the issues related to access to content mean that Optus is unable to access benefits from providing pay TV and/or triple-play services, and accordingly would not be able to profitably increase its competitive pressure in that market.

Accordingly the ACCC is not satisfied that granting the exemption would promote competition in the market for retail pay TV services.

### *Will granting the exemption remove obstacles to end-users?*

The ACCC has considered the extent to which granting the exemption may remove obstacles to end-users gaining access to the services in question. The ACCC considers that the reduced competition that may result from granting the exemptions would tend to create price obstacles to acquiring services.

Further, as the ACCC discussed above, the ACCC considers that the disincentive effect on investment caused by the discriminatory nature of the exemption application could affect the promotion of competition, and mean that the conditions or environment for competition would not be promoted. This is because it will discourage the benefits of infrastructure-based competition and the development of alternative infrastructure choices beyond the geographic region relevant to this application. In turn, this will limit any potential competition benefits of the type that have been identified by Telstra, as there will be reduced sustainable competition and dynamic innovation and fewer new technologies. This could also be considered an obstacle to obtaining services.

## 3.4 ACCC's view

In light of the above, the ACCC is not satisfied that granting this exemption will promote competition in the relevant markets, and in turn promote the LTIE. The ACCC has concerns about the effect of granting the exemptions at both the retail and wholesale level. The ACCC's major concerns about the promotion of competition relate to the disincentive effect of the proposed discriminatory access policy, and Telstra's interest in Foxtel, the high content costs that result and the effect this may have on Optus' ability to connect subscribers such as those that live in MDUs.

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[569] Telstra, Response to ACCC draft decision, October 2008, p. 71.

# 4. Any-to-any connectivity

The objective of 'any-to-any' connectivity is achieved if, and only if, each end-user of a service that involves communication between end-users is able to communicate, by means of that service or a similar service, with every other end-user even where they are connected to different telecommunication networks.[570]

Telstra submits that granting the exemption would not adversely impact on any-to-any connectivity.[571] Optus did not make a submission in relation to this issue.

The ACCC considers that granting the exemptions would not be expected to detract from the achievement of any-to-any connectivity.

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[570] see s.152AB(8) of the TPA.
[571] Telstra, Response to ACCC Discussion Paper, March 2008, p. 35.

# 5. Economically efficient use of, and investment in, infrastructure

## 5.1 Introduction

In determining whether granting the exemption orders will promote the LTIE, the ACCC must have regard to the extent to which granting the exemption is likely to result in the achievement of the objective of encouraging the economically efficient use of, and the economically efficient investment in:

- the infrastructure by which listed services are supplied; and
- any other infrastructure by which listed services are, or are likely to become, capable of being supplied.[572]

In determining the above, regard must be had to:

- whether it is, or is likely to become, technically feasible for the services to be supplied and charged for having regard to:
    - the technology that is in use, available or likely to become available;
    - whether the costs that would be involved in supplying, and charging for, the services are reasonable or likely to become reasonable; and
    - the effects, or likely effects that, supplying and charging for the services, would have on the operation or performance of telecommunications networks;
- the legitimate commercial interests of the supplier or suppliers of the services, including the ability of the supplier or suppliers to exploit economies of scale and scope; and
- the incentives for investment in:
    - the infrastructure by which the services are supplied; and
    - the other infrastructure by which the services are or are likely to become capable of being supplied.[573]

In determining the incentives for investment, regard must be had to the risks involved in making the investment.[574]

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572 TPA paragraph 152AB(2)(e)
573 TPA subsection 152AB(6)
574 TPA subsection 152AB(7A)

The phrase “economically efficient use of, and economically investment in… infrastructure” requires an understanding of the concept of economic efficiency. This concept consists of three components:

- *Productive efficiency*- this is achieved where individual firms produce the goods and services that they offer at least cost.

- *Allocative efficiency*- this is achieved where the prices of resources reflect their underlying costs so that resources are allocated to their highest valued uses (i.e. those that provided the greatest benefit relative to costs).

- *Dynamic efficiency*- this reflects the need for industries to make timely changes to technology and products in response to changes in consumer tastes and in productive opportunities.

The Australian Competition Tribunal has noted that:

> The inclusion of the term “economically” in s. 152AH(1)(f) suggests that the concepts of allocative, productive and dynamic efficiency should be considered. Allocative efficiency will be best promoted where the price of a service reflects the underlying marginal cost of providing the service.[575]

The key question is the extent to which granting the exemption is likely to encourage productive, allocative and dynamic efficiency. Whether such efficiencies will be, in fact, improved, is highly relevant to, but not determinative of, this issue. As noted above, the key issue is whether granting the exemption will create an environment whereby the participants have increased incentives to undertake efficient use of, and efficient investment in, infrastructure.[576]

As the level of competition in downstream markets increases, whether it is through declaration of a service or through market forces, productive and dynamic efficiency should increase because competition should stimulate service providers to innovate and reduce the costs of providing services. This should also lead to allocative efficiency as access providers and access seekers seek to reduce the final prices paid by end-users, as a mechanism to compete in the downstream market.

***Relationship between “competition” and “efficiency”***

There is a strong relationship between the assessment of promotion of competition and the assessment of encouraging the efficient use of, and the economically efficient investment in infrastructure.

Certain submissions and analysis relating to efficient use of and investment in infrastructure have also been addressed in the ACCC’s consideration of the promotion of competition above. As stated above, there are common issues that arise when

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575 *Telstra Corporation Limited* [2006] ACompT 4 at [94].

576 ACCC, *Telecommunications services- Declaration Provision: A Guide to the Declaration Provisions of Part XIC of the Trade Practices Act*, July 1999. While this publication specifically referred to declaration provisions of the TPA, the ACCC is of the view that the relevant comments made are equally applicable to assessment of exemption applications.

assessing competition and efficiency benefits. Most obviously, the discussion about the feasibility of connecting MDUs has implications for the promotion of competition due to this factor being a potential barrier to expansion as well as being a consideration about the efficiency of investment and the technical feasibility of investing.

In the above analysis of whether the granting of the exemptions will promote competition, the ACCC considered whether competition in the supply of retail fixed voice and broadband services might arguably be promoted due to benefits from dynamic expansion. However the possibility of expansion depended significantly on the feasibility of connecting up unserviceable premises. The ACCC also noted that it had some concerns about competition in the retail and wholesale markets for voice and broadband.

***Trade-offs between short term and long term efficiency***

When assessing the relative "efficiencies" involved in the removing or retaining of access regulation, the ACCC is concerned primarily with the impact on "long term" efficiency as this reflects the "long-term" focus of the LTIE test.

With regard to the interpretation of the phrase "long-term" within the LTIE test, the Australian Competition Tribunal has stated that:

> "the long-term will be the period over which the full effects of the […] will be felt. This means some years, being sufficient time for all players (being existing and potential competitors […] to adjust to the outcome, make investment decisions and implement growth- as well as entry and/or exit strategies."[577]

## 5.2 Parties' submissions

In addition to the submissions outlined below, the ACCC has also considered parties' submissions relating to the potential disincentive effects on investment in its consideration of the promotion of competition above.

*Efficient use of infrastructure*

Telstra submits that Optus' HFC network is currently underutilised and granting the exemption will encourage Optus to use its HFC infrastructure more efficiently. Telstra submits that Optus will have an incentive to use the network for homes that it currently treats as unserviceable.[578]

In regards to the serviceability of MDUs, Telstra contends that Optus' problem is that it is not using an efficient technical solution for its telephony service.[579] Telstra provides two reports by Harris who expresses the opinion that Optus could follow the practice of some North American cable companies and upgrade the technology used on the HFC network to DOCSIS 3.0 and use Voice over Broadband (VoB) to make more premises serviceable.

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577 *Seven Network Limited (no 4)* [2004] ACompT 11 at [120].
578 Telstra, Response to ACCC Discussion Paper, March 2008, p. 80.
579 Telstra, Supplementary submission, June 2008, p. 12.

Telstra contends that the increase in connections will lead to dynamic infrastructure based competition and this in turn will result in both Optus and Telstra using their networks more efficiently.[580]

Optus submits that granting the exemption would not result in Optus making additional investments to make the HFC network suitable for business and wholesale services or to connect currently unserviceable premises to its network.[581] Optus contends that Telstra's copper CAN should be considered enduring bottleneck infrastructure, as it submits that the CAN possesses natural monopoly characteristics. Optus submits that the current access regime leads to an efficient use of the network.[582] Optus further submits that Telstra's CAN has ample capacity and all existing demand for telephony and internet services could be served at least cost via the copper CAN as opposed to the CAN plus other access networks.[583]

In its response to the ACCC's draft decision, Telstra submits that the exemption would better encourage Optus to use its existing HFC infrastructure.[584]

*Efficient investment in infrastructure*

Telstra submits that granting the proposed exemption would stimulate efficient investment in infrastructure. Telstra contends that any duplication of infrastructure resulting from the exemption will be efficient as investment will be constrained by the combined effects of the 75 metre threshold, Optus' ability to commercially negotiate access from Telstra, and the number of other networks that might service retail customers.[585] Furthermore, Telstra submits that its own incentives to invest will be increased as:

- Telstra will be required to innovate to compete as Optus becomes a more robust rival

- Telstra would not be required to share with Optus the benefits of any upgrades it makes to its network, resulting in a greater return from, and incentive to make, those upgrades.[586]

Telstra submits that any investment Optus will make in its HFC network will be economically efficient as investment that has already been made in the main HFC network is sunk and many customer drops and some backbone cabling are already in place.[587] Telstra contends that the costs to Optus will be relatively small when compared to the benefits of infrastructure based competition because:

- Optus will have the incentive to reduce its connection costs by making additional modest investments in its HFC network

580 Telstra, Response to ACCC Discussion Paper, March 2008, p. 80.
581 Optus, Response to ACCC Discussion Paper, March 2008, p. 28.
582 ibid.
583 ibid
584 Telstra, Response to ACCC draft decision, October 2008, p. 73.
585 Telstra, Initial submission in support of exemption application, December 2007, p. 80.
586 Telstra, Response to ACCC Discussion Paper, March 2008, p. 36.
587 ibid, p. 39.

- as Optus adds more customers, its economies of scale will increase
- Optus has alternatives such as 3G and negotiating commercial access with Telstra for those customers that are expensive to connect via 3G. [588]

Telstra recognises that there may be immediate productive efficiency losses but argues this would be outweighed by gains to dynamic efficiency as:

> …the right investment signals would be sent, and "squatting" practices on lower rungs of the ladder will be discouraged.[589]

In relation to third party investment incentives, Telstra suggests that granting the exemption would lead to more intense competition from Optus' HFC network and this in turn, may encourage investment and innovation from DSLAM-based competitors.[590]

Optus submits that granting the exemption would not promote efficient investment in infrastructure as:

- even if the exemption did motivate additional investment, this investment would not be efficient
- the exemption is likely to deter Optus and other operators from investing in infrastructure related projects in the future
- Optus currently maintains a program of investment in the HFC network which would continue regardless of whether the exemption was granted.[591]

Optus contends that granting the exemption would not significantly alter its investment incentives. Optus submits that its reasons for this largely relate to **[c-i-c starts] [c-i-c ends]** and Telstra's overbuild of the HFC network**.**[592] Optus argues that making ULLS commercially available did not change the way Optus used and developed its HFC network, and that therefore the ACCC cannot be satisfied that its removal will have any impact.[593]

Optus submits that granting this exemption will strand its DSLAM investments in approximately 150 ESAs and that the size of the investment at risk is 'significant.'[594] Optus argues that this could lead to a disincentive effect on investment for both Optus and other carriers.[595]

Optus submits that the best way to encourage efficient investment in infrastructure in the relevant markets is to set a cost-reflective ULLS access price and allow access seekers to make their own investment decisions on that basis.[596] Telstra disagrees and

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588 Telstra, Initial submission in support of exemption application, December 2007, p. 77.
589 Telstra, Response to ACCC Discussion Paper, March 2008, p. 39.
590 ibid.
591 Optus, Response to ACCC Discussion Paper, March 2008, p. 4.
592 Optus, Supplementary submission, May 2008, p. 5.
593 Ibid, p. 9.
594 ibid, p. 13.
595 ibid.
596 Optus, Response to ACCC Discussion Paper, March 2008, p. 30.

submits that, in practice, the likelihood of access prices being set correctly is small.[597] Telstra goes on to state:

> Even if access prices were set at the "right" level, the inefficiencies wrought by unnecessary regulation would continue and the wider benefits of inter-platform competition…would not be secured.[598]

Ergas' report discusses the costs of regulation including costs of compliance, rent seeking, regulatory risk and regulatory error.[599]

Optus submits that the ACCC cannot be satisfied that it will be economically feasible for Optus to invest in its HFC network in order to expand the range of serviceable customers.[600] Optus states that the following issues impact on the feasibility of any further investment:

- High network access build costs and low penetration are the two major issues confronting rollout of HFC telephony and broadband to multi dwelling units (MDUs);
- Optus' commercial analysis of investment to connect to MDUs has produced negative results with a low NPV and long pay back period;
- Comparison with other cable companies is misleading, since the circumstances facing those cable companies are very different from the circumstances facing Optus in Australia.[601]

Optus submits that it would be 'entirely unsafe' to rely on Cave's ladder of investment theory to predict that Optus will make investments to connect unserviceable premises if the exemption were granted.[602] Optus states that the theory has 'serious flaws' and 'does not represent a theoretical basis upon which the ACCC could be satisfied that the exemption sought will be in the LTIE' because it does not address the following issues:

- Risks associated with investments;
- Necessary conditions for profitable investments;
- Appropriate levels of investment;
- Appropriate timing and sequencing of investment; and
- Different historical, political, economic and regulatory environments that different telecommunications firms operate in,[603]

In its response to the ACCC's draft decision, Telstra submits that the exemption would encourage efficient investment in infrastructure.[604] It submits that Optus would be more likely to invest in additional MDU and SDU connections, as well as upgrades to its

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597 Telstra, Supplementary submission, June 2008, p. 26.
598 ibid.
599 Ergas, *Expert Report*, June 2008.
600 Optus, Response to ACCC Discussion Paper, March 2008, p. 16.
601 ibid, pp. 16-17.
602 ibid, p. 26.
603 ibid.
604 Telstra, Response to ACCC draft decision, October 2008, p. 73.

network capabilities. Telstra also submits that this would be more likely to necessitate a competitive response from Telstra and access seekers.[605]

In contrast, Optus submits in its response to the draft decision that, even if it invested in its HFC network as a result of the exemption, this would not be economically efficient.[606] It submits that such connections over HFC would not be the least cost option. Optus also submits that the existing access regime encourages efficient build/buy decisions through the setting of efficient cost-reflective prices.[607] It cites research by its consultant CEG that international developments indicate that cable has lost market share internationally and that DSL is often a more efficient and lower cost method of provision.[608]

Optus also submits that the exemption would strand a large number of its DSLAMs or significantly reduce the value of the Optus DSLAM investment.[609] It submits that the value of stranded assets would be around **[c-i-c starts] [c-i-c ends]** while the total value of affected DSLAM assets would be about **[c-i-c starts] [c-i-c ends]**.

## 5.3 ACCC's view

As noted above, a number of issues raised by the parties' submissions relate to issues that are also relevant to a consideration of the promotion of competition. In particular, the disincentive effect and issues relating to the cost of infill investment are directly referable.

***ACCC's view - efficient use of infrastructure***

The ACCC is required to assess whether granting the exemption would have an impact upon the efficient use of infrastructure. In this regard, the technical feasibility of supplying various voice, broadband and declared services as well as the legitimate commercial interests of Telstra as the supplier of voice and broadband services, as well as the various declared services, are relevant.[610]

The ACCC notes that a consideration of the technical feasibility of investment requires the ACCC to consider the technology that is available, the costs that would be involved and the likely effect on operation or performance of telecommunications networks. This is most directly relevant to the ACCC's consideration of the costs of connecting MDUs. In respect of such connections, the ACCC considers that, while feasible, there would appear to be high costs associated with making such connections.

The ACCC considers that, in relation to the CAN infrastructure currently used to provide the declared services, efficient use will be supported so long as Telstra is able

605 ibid, p. 73.
606 Optus, Response to ACCC draft decision, October 2008, p. 10.
607 ibid, p. 10.
608 Optus, Response to ACCC draft decision, October 2008, p. 11; CEG, *Assessing the likely effects of asymmetric access regulation in Australia*, p. 24.
609 Optus, Response to ACCC draft decision, October 2008, p. 12.
610 TPA paragraphs 152AB(6)(a) and (b)

to gain a market return on its investment. In this regard, the ACCC's pricing principles and determinations in access disputes are designed to ensure that price and non-price terms of access are appropriate under the relevant legislative matters. In this sense, Telstra's legitimate commercial interests are protected.

Telstra argues that granting the exemption may lead to an increased number of Optus' HFC connections that may encourage the use of that sunk asset. Generally, the ACCC considers that it would be efficient, all other things being equal, to increase the use of a sunk asset. Equally, however, were such connections not made, there would be less use of unused capacity on Optus' DSLAM networks as the size of the addressable market would be reduced (although the extent of this would vary). The ACCC has previously noted that ULLS-based competitors may seek to exploit unused capacity on their ULLS-based networks.[611] This will provide increased competitive tension at the wholesale level.

The ACCC notes its view above that exempting Telstra from providing Optus with regulated ULLS access could reduce competitive tension at the wholesale level, which would mean Telstra's ability to price wholesale services at supra-competitive levels would be less constrained. To the extent that Telstra uses this market power and 'charges more and gives less' for wholesale services, there would be a reduction in the efficient use of the CAN.

In respect of Telstra's submissions about the exemption better encouraging Optus to use its existing HFC infrastructure, the ACCC agrees that, in general, it is more efficient to make greater use of a fixed asset such as the HFC network than less. However, the ACCC considers that it is important that the investment required to make such use of the piece of infrastructure is itself efficient. In that context, the ACCC refers to its assessment above of the costs of making additional lead-in connections to high-cost premises within the Optus HFC network footprint.

Finally, as discussed above, a discriminating access policy may discourage infrastructure investment by competitive carriers. If as a result, operators choose to 'buy' rather than 'build' when build may be the more efficient alternative, the CAN or parts of the CAN may be overused relative to the efficient level of use.

***ACCC's view - efficient investment in infrastructure***

The ACCC considers that there are a number of relevant considerations in considering the effect of granting the exemption on the economically efficient use of and investment in infrastructure. In assessing the objective of whether granting the exemption is likely to promote efficient investment in infrastructure, regard must also be had to the incentives for investment in infrastructure, including the risks involved in making the investment.[612]

The ACCC has discussed above, during its consideration of the promotion of competition, its significant concern with the fact that the application relates to the

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611 ACCC, *Telstra's local carriage service and wholesale line rental exemption applications—final decision and class exemption*, August 2008, p. 119.

612 TPA ss. 152AB(6)(c)

supply of declared services to a particular competitor alone. Inherent to the ACCC's concerns about the effect on competition is the ACCC's concern that a discriminatory access policy would lead to a disincentive for all competitive carriers, not just Optus, to deploy competitive infrastructure, and therefore discourage the economically efficient use of and investment in infrastructure. In general, the ACCC considers that its approach to regulation under the TPA should be concerned with 'competition, not competitors'.[613] The ACCC considers that Telstra's proposed approach, which instead focuses on the investment made by a particular competitor, is problematic.

The ACCC considers that competitive carriers will be reluctant to make facilities-based investment if they could then be singled out and lose their access rights. An operator will fear that any investment will lead to it and it alone being denied access (or forced to negotiate for access without the possibility of arbitration) while other competitors continue to get access. The ACCC's view is that this would have a significant chilling effect on investment generally, not just in HFC, if adopted as an approach by the ACCC. The ACCC considers that this would discourage efficient investment (and therefore lead to reduced competition by access seekers who would not have their own infrastructure).

The ACCC considers overall that a discriminatory access policy would not create the conditions or environment for efficient investment compared to what it would be otherwise (that is, without the exemption being granted). Were the exemption not granted, access seekers would not have an expectation that any investment will lead to it and it alone being denied regulated access. The ACCC considers that this disincentive effect affects wider investment than just potential expansion of the Optus HFC network, such as investment in other end-to-end fixed –line infrastructure, DSLAM infrastructure or wireless networks.

The ACCC also considers that such a discriminatory access approach would punish any operator who invests in more than one type of delivery method for telecommunications services – as they could be forced to essentially choose between one of their delivery approaches. The ACCC considers that it would be unusual for a regulator to choose which investments a company can and cannot make. The ACCC aims to set access prices to the ULLS on a cost-reflective efficient basis that allows firms to make productively efficient technology choices and investments as appropriate. Accordingly productive efficiency considerations would support the ability of companies to utilise alternative technologies in their provision of telecommunications services.

As noted above, the ACCC does not consider that arguments presented by Telstra that such a disincentive effect is minor or can be limited, including presenting supporting arguments by Cave and Ergas, adequately deal with the ACCC's concerns.

Aside from the major issue of the disincentive effect created by such a discriminatory access policy, granting this exemption may impact on Optus' 'build/buy' decisions, because the declared services would not be available to 'buy' on a regulated basis. In theory, removing Optus' regulated access to the listed services could have a positive impact upon its incentives for investment in their HFC network. However, it is crucial

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[613] see, e.g. ACCC, 'ACCC protects competition, not competitors' (media release), 12 October 2007.

to the ACCC's consideration of this objective whether or not such investment would be efficient. The ACCC notes its conclusions above concerning the barriers to expansion through such connections that are created by high content costs and the long payback period for connecting MDUs. It is unclear to the ACCC, even if such in-fill investment did occur as a result of granting the exemption, that the investment would be efficient, due to the effect of factors such as the market structure for pay TV content. These connections would be relatively high cost and would not be the least cost method of provisioning services to end-users. The ACCC notes again that the ACCC aims to set ULLS prices on an efficient cost-reflective basis, and that the ACCC has signalled and set geographically de-averaged cost-based prices.[614] While the ACCC notes Telstra's submissions about a possible option value to access, the ACCC considers that its approach allows an appropriate choice between technologies on a productively efficient basis.

The ACCC notes Telstra's arguments that there could be dynamic efficiency benefits from upgrades to HFC technology. These benefits could be somewhat more likely to arise where Optus' regulated ULLS access was removed, as Optus would be less likely to invest in DSLAM infrastructure and more likely to invest in HFC. However, the ACCC does not consider that this potential dynamic efficiency gain overcomes the ACCC's other concerns. In any case, it notes its conclusion above that Optus would have significant incentives to make such investments either with or without the exemptions, and that other operators would similarly have such incentives.

The ACCC notes Optus' submissions that its DSLAM infrastructure may be stranded by the exemption application and that this would have a disincentive effect on investment.[615] The ACCC notes that this may discourage investment in DSLAMs, but that this may depend on the payback period for DSLAMs and the period of time for which those DSLAMs have been in place.

Finally, although the ACCC does not consider it a major issue, the ACCC notes that the potential uncertainty about the NBN process may make it somewhat more difficult to assess the efficiency of investments in infrastructure.

***Overall ACCC view***

Having considered the issues above, the ACCC is not satisfied that making the exemptions order would promote the efficient use of and investment in infrastructure, and in turn promote the LTIE.

The ACCC's major concern relates to the significant disincentive effect on other infrastructure owners that would be created were what the ACCC considers to be a discriminatory access policy to be adopted. The ACCC considers that there would be significant dynamic efficiency losses were there to be a chilling effect on investment created by the granting of this exemption. In the ACCC's view the granting of the

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614 ACCC, *Unconditioned Local Loop Service - Pricing Principles and Indicative Prices*, June 2008; ACCC, *Unconditioned Local Loop Service - Access dispute between Telstra Corporation Limited (access provider) and Optus Networks Pty Limited (access seeker) - Statement of reasons for final determination*, 21 April 2008.

615 Optus, Response to ACCC draft decision, October 2008, p. 12.

exemption would not create an environment whereby participants have increased incentives to undertake efficient use of, and investment in infrastructure, relative the position without the exemptions being granted.

The ACCC also notes that the effect of barriers to expansion such as those imposed by Telstra's 50 per cent interest in Foxtel and ownership of the HFC network, and the resulting effect on access to content, have significant implications on whether investment in in-fill, even if it occurred, would be efficient. It also notes that the incentives for network speed upgrades for both Optus and its competitors do not appear to be significantly altered by the granting of the exemption.

# 6 Conclusion

The ACCC has weighed up the extent to which granting this exemption would promote any or all of the objectives required to be considered under section 152AB and 152AT of the TPA, in determining whether it is satisfied that the exemption will promote the LTIE, and, on balance, its decision is that it is not satisfied that granting the exemption would not be in the LTIE.

The ACCC's decision is informed by its views that it is not satisfied that the exemption would promote competition in the relevant markets or encourage the economically efficient use of, and investment in, infrastructure. The ACCC does not consider that granting the exemption would have any significant effect on any-to-any connectivity.

The two more significant issues informing this decision are, as discussed in the ACCC's assessment of the limbs of the LTIE, related to:

- the effect of the current situation relating to access to content and Telstra's ownership of the HFC network and 50 per cent interest in Foxtel
- the disincentive effects created by the discriminatory access policy proposed by Telstra.

Furthermore, the ACCC notes that other relevant issues relate to:

- potential negative effects on wholesale markets
- uncertainty relating to the NBN process

In light of its assessment of the factors affecting the LTIE, the ACCC's decision is to not grant the exemption application.

# Appendix A: Legislative background

Part XIC of the TPA sets out a telecommunications access regime. This section of the discussion paper outlines the provisions of the access regime relevant to the exemption application.

## A.1 Declaration and the SAOs

The ACCC may determine that particular carriage services and related services are declared services under section 152AL of the TPA. A carrier or carriage service provider that provides a declared service to itself or other persons is known as an access provider. Once a service is declared, access providers are subject to a number of SAOs pursuant to section 152AR of the TPA. Terms of access can be governed by the terms of an undertaking or, in the absence of an accepted undertaking, by ACCC determination in an access dispute.

In summary, the SAOs require that an access provider, if requested by a service provider, must:

- supply the declared service
- take all reasonable steps to ensure that the technical and operational quality of the service supplied to the service provider is equivalent to that which the access provider is supplying to itself
- take all reasonable steps to ensure that the fault detection, handling and rectification which the service provider receives in relation to the declared service is of equivalent technical and operational quality as that provided by the access provider to itself
- permit interconnection of its facilities with the facilities of the service provider
- take all reasonable steps to ensure that the technical operational quality and timing of the interconnection is equivalent to that which the access provider provides to itself
- take all reasonable steps to ensure that the service provider receives interconnection fault detection, handling and rectification of a technical and operational quality and timing that is equivalent to that which the access provider provides to itself
- if a standard is in force under section 384 of the *Telecommunications Act 1997*, take all reasonable steps to ensure that the interconnection complies with the standard
- if requested by the service provider, provide billing information in connection with matters, or incidental to, the supply of the declared services

- if an access provider supplies an active declared service by means of conditional-access customer equipment, the access provider must, if requested to do so by a service provider supply any service that is necessary to enable the service provider to supply carriage services and/or content services by means of the declared service and using the equipment.

The ACCC must only declare a service if, following a public inquiry, it considers that declaration would promote the LTIE. Section 152AB of the TPA states that, in determining whether declaration promotes the LTIE, regard must be had only to the extent to which declaration is likely to result in the achievement of the following objectives:

- promoting competition in markets for listed services

- achieving any-to-any connectivity in relation to carriage services that involve communication between end-users

- encouraging the economically efficient use of, and the economically efficient investment in, the infrastructure by which telecommunications services are supplied or are, or are likely to become, capable of being supplied.

Section 152AB also provides guidance in interpreting these objectives. The three objectives are discussed further below.

## A.2 Exemptions from SAOs

Exemptions can be granted from the SAOs. This can occur in two ways:

- a class exemption under section 152AS of the TPA

- an individual exemption under section 152AT of the TPA.

In the case of an individual exemption application, a carrier or carriage service provider may apply to the ACCC for a written order exempting it from any or all of the SAOs that apply to a declared service.[616]

If the ACCC is of the opinion that the making of an exemption order would be likely to have a material effect on the interests of a person, the ACCC must publish the application for an exemption and invite submissions from the public.[617] The ACCC must consider any submissions received within the time specified.

The ACCC must not grant an exemption order unless the ACCC is satisfied that the making of the order will promote the LTIE.[618] An exemption order can be unconditional or subject to such conditions or limitations as are specified in the order.[619]

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616 TPA subsection 152AT(1).
617 TPA subsection 152AT(9).
618 TPA subsection 152AT(4).
619 TPA subsection 152AT(5).

The ACCC has a six month period in which to make the decision to accept or reject the exemption order.[620] However the six month period does not include any period where the ACCC has published the application and invited people to make submissions within a specific time limit, or where there is an outstanding response to an information request.[621] The ACCC may also extend the six month period by a further three months in certain circumstances.[622]

After considering the application, the ACCC must either make a written exemption order or refuse the application.[623]

A class exemption under section 152AS of the TPA similarly can only be made if the ACCC believes that the exemption will promote the LTIE. However the exemption applies to a specified class of carrier or carriage service provider, and there is no six month time limit on consideration of a class exemption.

## A.3 Long-term interests of end-users

Both a decision to declare a service and a decision to grant an exemption from the SAOs for a declared service—the latter being the matter currently under consideration—can only be made if the ACCC considers that making the declaration or granting the exemption will be likely to promote the LTIE.

As noted above, section 152AB of the TPA states that, in determining whether declaration promotes the LTIE, regard must be had only to the extent to which the exemption is likely to result in the achievement of the following objectives:

- promoting competition in markets for listed services
- achieving any-to-any connectivity in relation to carriage services that involve communication between end-users
- encouraging the economically efficient use of, and the economically efficient investment in, the infrastructure by which telecommunications services are supplied or are, or are likely to become, capable of being supplied.

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

The following discussion provides an overview of what the ACCC must consider in assessing each of these objectives.

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[620] TPA subsection 152AT(10).
[621] TPA subsection 152AT(11).
[622] TPA subsection 152AT(12).
[623] TPA subsection 152AT(3).

## Promotion of competition

Subsections 152AB(4) and (5) of the TPA provide that, in interpreting this objective, regard must be had to, but is not limited to, the extent to which the arrangements will remove obstacles to end-users gaining access to listed services. The Explanatory Memorandum to Part XIC of the TPA states that:[624]

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

This requires the ACCC to make an assessment of whether or not the exemption would be likely to promote competition in the markets for listed services.

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

In general terms, competition is the process of rivalry between firms, where each market participant is constrained in its price and output decisions by the activity of other market participants. The Trade Practices Tribunal (now the Australian Competition Tribunal) stated that:[625]

> In our view effective competition requires both that prices should be flexible, reflecting the forces of demand and supply, and that there should be independent rivalry in all dimensions of the price-product-service packages offered to consumers and customers.
>
> Competition is a process rather than a situation. Nevertheless, whether firms compete is very much a matter of the structure of the markets in which they operate.

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

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

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

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[624] Trade Practices Amendment (Telecommunications) Act 1997 (Cth) Explanatory memorandum.

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

Section 4E of the TPA provides that the term ‘market’ includes a market for the goods or services under consideration and any other goods or services that are substitutable for, or otherwise competitive with, those goods or services. Accordingly, substitution is key to market definition.

The ACCC’s approach to market definition is discussed in its *Merger Guidelines*, June 1999 and is also canvassed in its second position paper, *Strategic Review of Fixed Services*, April 2007. The ACCC is currently undertaking public consultation on a revision of its *Merger Guidelines*. The *Draft Merger Guidelines*, February 2008, outlines the ACCC's current approach to market definition, which is described below. Once finalised following public consultation, the *Draft Merger Guidelines*, February 2008, will replace the *Merger Guidelines*, June 1999.

The approach to market definition set out in the ACCC's *Draft Merger Guidelines*, February 2008 focuses on two key dimensions of substitution: the product dimension and the geographic dimension. Accordingly, the ACCC generally characterises markets in terms of a product dimension and a geographic dimension.

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

The ACCC considers that denial to service providers of access to necessary upstream services on reasonable terms is a significant obstacle to end users gaining access to services. In this regard, declaration can remove such obstacles by facilitating entry by service providers, thereby providing end users with additional services from which to choose. For example, access to a mobile termination service may enable more service providers to provide fixed to mobile calls to end-users. This gives end-users more choice of service providers.

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

In the context of considering whether an exemption will promote competition, it is therefore appropriate to examine the impact of the existing declaration on each relevant market, the likely effect of reduced access obligations on the relevant market, and compare the state of competition in that market with and without the exemption. In examining the market structure, the ACCC considers that competition is promoted when market structures are altered such that the exercise of market power becomes more difficult; for example, because barriers to entry have been lowered (permitting more efficient competitors to enter a market and thereby constrain the pricing behaviour of the incumbents) or because the ability of firms to raise rivals’ costs is restricted.

## Any-to-any connectivity

Subsection 152AB(8) of the TPA provides that the objective of any-to-any connectivity is achieved if, and only if, each end-user who is supplied with a carriage service that involves communication between end-users is able to communicate, by means of that service, or a similar service, with other end-users whether or not they are connected to the same network. The reference to 'similar' services in the TPA enables this objective to apply to services with analogous, but not identical, functional characteristics, such as fixed and mobile voice telephony services or Internet services which may have differing characteristics.

The any-to-any connectivity requirement is particularly relevant when considering services that involve communications between end-users. When considering other types of services (such as carriage services that are inputs to an end-to-end service or distribution services such as the carriage of pay television), the ACCC generally considers that this criterion will be given less weight compared to the other two criteria.

## Efficient use of, and investment in, infrastructure

Subsections 152AB(6) and (7A) of the TPA provide that, in interpreting this objective, regard must be had to, but is not limited to, the following:

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

In determining the extent to which a particular aspect is likely to encourage the efficient investment in other infrastructure, the ACCC must have regard to the risks involved in making the investment.

Economic efficiency has three components.

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

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

- Dynamic efficiency refers to the efficient deployment of resources between present and future uses such that the welfare of society is maximised over time. Dynamic efficiency incorporates efficiencies flowing from innovation leading to the development of new services, or improvements in production techniques.

The ACCC will need to ensure that the access regime does not discourage investment in networks or network elements where such investment is efficient. The access regime also plays an important role in ensuring that existing infrastructure is used efficiently where it is inefficient to duplicate investment in existing networks or network elements.

*The technical feasibility of supplying and charging for particular services*

This incorporates a number of elements, including the technology that is in use or available, the costs of supplying, and charging for, the services and the effects on the operation of telecommunications networks.

In many cases, the technical feasibility of supplying and charging for particular services given the current state of technology may be clear, particularly where (as in the present case) the service is already declared and there is a history of providing access. The question may be more difficult where there is no prior access, or where conditions have changed. Experience in other jurisdictions, taking account of relevant differences in technology or network configuration, will be helpful. Generally the ACCC will look to an access provider to demonstrate that supply is not technically feasible.

*The legitimate commercial interests of the supplier or suppliers, including the ability of the supplier to exploit economies of scale and scope*

A supplier's legitimate commercial interests encompass its obligations to the owners of the firm, including the need to recover the cost of providing services and to earn a normal risk-adjusted return on its capital employed on the investment in infrastructure. The ACCC considers that allowing for a normal commercial return on investment will provide an appropriate incentive for the access provider to maintain, improve and invest in the efficient provision of the service.

A significant issue relates to whether or not capacity should be made available to an access seeker. Where there is spare capacity within the network, not assigned to current or planned services, allocative efficiency would be promoted by obliging the owner to release capacity for competitors.

Paragraph 152AB(6)(b) of the TPA also requires the ACCC to have regard to whether the access arrangement may affect the owner's ability to realise economies of scale or scope. Economies of scale arise from a production process in which the average (or per unit) cost of production decreases as the firm's output increases. Economies of scope arise from a production process in which it is less costly in total for one firm to produce two (or more) products than it is for two (or more) firms to each separately produce each of the products.

Potential effects from access on economies of scope are likely to be greater than on economies of scale. A limit in the capacity available to the owner may constrain the number of services that the owner is able to provide using the infrastructure and thus prevent the realisation of economies of scope associated with the production of multiple services. In contrast, economies of scale may simply result from the use of the capacity of the network and be able to be realised regardless of whether that capacity is being used by the owner or by other carriers and service providers. Nonetheless, the ACCC will assess the effects of the supplier's ability to exploit both economies of scale and scope on a case-by-case basis.

### *The impact on incentives for investment in infrastructure*

Firms should have the incentive to invest efficiently in infrastructure. Various aspects of efficiency have been discussed already. It is also important to note that while access regulation may have the potential to diminish incentives for some businesses to invest in infrastructure, it may also ensure that investment is efficient and reduces the barriers to entry for other (competing) businesses or the barriers to expansion by competing businesses.

There is also a need to consider the effects of any expected disincentive to investment from anticipated increases in competition to determine the overall effect of granting an exemption on the LTIE. The ACCC is careful to ensure that services are not declared where there is a risk that incentives to invest may be dampened, such that there is little subsequent benefit to end users from the access arrangements.

# Appendix B: Submissions

The ACCC received the following submissions to its decision process for consideration of the HFC exemption application. Certain of the submissions were provided with accompanying expert reports and supporting documents.

***Telstra***

Telstra, *Application for exemption from Standard Access Obligations in respect of the SingTel Optus HFC Network,* 17 December 2007 (Telstra, Initial submission in support of exemption application, December 2007).

Telstra, *Response to Optus' letter to the ACCC dated 21 February 2008,* 28 March 2008.

Telstra, *Response to ACCC Discussion Paper on Telstra's exemption application relating to Singtel Optus' HFC Network,* 25 March 2008 (Telstra, Response to ACCC Discussion Paper, March 2008).

Telstra, *Submission in reply to Singtel Optus' submissions to the ACCC on Telstra's application for exemption from Standard Access Obligations in respect of the Singtel Optus HFC network dated 17 December 2007,* June 2008 (Telstra, Supplementary submission, June 2008).

Telstra, *Response to draft decision regarding Telstra's exemption application in respect of the SingTel Optus HFC network,* 15 October 2008 (Telstra, Response to ACCC draft decision, October 2008).

***Optus***

Optus, *Letter to the ACCC regarding Telstra's HFC exemption application,* 21 February 2008.

Optus, *Optus submission to the ACCC on Telstra's December 2007 exemption application for fixed line services in the Optus HFC area*, March 2008 (Optus, Response to ACCC Discussion Paper, March 2008).

Optus, *Response to Telstra's letter to the ACCC dated 28 March 2008,* 3 April 2008.

Optus, *Presentation to the ACCC- HFC exemption application*, 2 May 2008.

Optus, *Optus supplementary submission to the ACCC on Telstra's December 2007 exemption application for fixed line services in the Optus HFC area,* May 2008 (Optus, Supplementary submission, May 2008).

Optus, *Optus Confidential Submission to the Australian Competition and Consumer Commission in response to its Draft Decision on Telstra's Exemption Application in respect of the Optus HFC Network,* October 2008 (Optus, Response to ACCC draft decision, October 2008).

### *Foxtel*

Foxtel, letter from Josephine Johnston to Richard Home of the ACCC, 15 October 2008 (Foxtel, Response to ACCC draft decision, October 2008).

### *Other*

The ACCC also received a further confidential submission from a fourth party in response to the discussion paper. The ACCC made the substance of that submission available to interested parties.

# Appendix C – List of documents examined by the ACCC in the course of making the decision

Section 152AXA of the TPA requires that, where the ACCC makes a decision under section 152AT or 152ATA of the TPA and gives a person a written statement setting out the reasons for the decision, the statement must specify the documents that the ACCC examined in the course of making the decision. The table below sets out those documents.

In addition to the submissions listed below by the ACCC, Telstra also provided the ACCC with the documents referenced within its submissions, along with indexes of that reference material. Copies of those indexes are included below.

| Doc No | Details | Author | Party who submitted document | Date | | |
|---|---|---|---|---|---|---|
| | | | | D | M | Y |
| 1 | Telstra Application for Exemption from Standard Access Obligations in respect of the SingTel Optus HFC Network (incorrectly dated 17 Dec 2007) | | Telstra | 18 | 12 | 2007 |
| 2 | Telstra Application for Exemption from Standard Access Obligations in respect of the SingTel Optus HFC Network – Schedule A (Incorrectly dated 17 Dec 2007) | | Telstra | 18 | 12 | 2007 |
| 3 | Schedule B: Draft Exemption Order, attachment to Telstra Application for Exemption from Standard Access Obligations in respect of the SingTel Optus HFC Network (Document 1) | | Telstra | 18 | 12 | 2007 |
| 4 | Applying the ladder of investment in Australia, Annexure 1 to Telstra Application for Exemption from Standard Access Obligations in respect of the SingTel Optus HFC Network – Schedule A (Document 2) | Martin Cave | Telstra | | | |
| 5 | Expert report - Use of HFC to deliver broadband services prepared for Peter Waters & Associates, Annexure 2 to Telstra Application for Exemption from Standard Access Obligations in respect of the SingTel Optus HFC Network – Schedule A (Document 2) | Michael G. Harris | Telstra | 12 | 12 | 2007 |
| 6 | Response to ACCC Discussion Paper on Telstra's exemption application relating to SingTel Optus' HFC network | | Telstra | 25 | 3 | 2008 |

| Doc No | Details | Author | Party who submitted document | Date | | |
|---|---|---|---|---|---|---|
| | | | | D | M | Y |
| 7 | Optus Submission to Australian Competition and Consumer Commission on Telstra's December 2007 Exemption Application for Fixed Line Services in the Optus HFC Area (replaced an earlier version) | | Optus | | 3 | 2008 |
| 8 | Excel Spreadsheet on Telstra ESAs and Optus HFC Footprint, Appendix B to Optus Submission to Australian Competition and Consumer Commission on Telstra's December 2007 Exemption Application for Fixed Line Services in the Optus HFC Area (Document 7) | | Optus | | 3 | 2008 |
| 9 | HFC Serviceability in Miller TESA (Map), Appendix C to Optus Submission to Australian Competition and Consumer Commission on Telstra's December 2007 Exemption Application for Fixed Line Services in the Optus HFC Area (Document 7) | | Optus | | 3 | 2008 |
| 10 | Presentation to ACCC: HFC Exemption Application | | Optus | 2 | 5 | 2008 |
| 11 | Optus Supplementary Submission to Australian Competition and Consumer Commission on Telstra's December 2007 Exemption Application for Fixed Line Services in the Optus HFC Area | | Optus | | 5 | 2008 |
| 12 | HFC and ULLS Connection Cost Estimates, Appendix A to Optus Supplementary Submission to Australian Competition and Consumer Commission on Telstra's December 2007 Exemption Application for Fixed Line Services in the Optus HFC Area (Document 11) | | Optus | | 5 | 2008 |
| 13 | Wholesale Interface Cost Estimate, Appendix B to Optus Supplementary Submission to Australian Competition and Consumer Commission on Telstra's December 2007 Exemption Application for Fixed Line Services in the Optus HFC Area (Document 11) | | Optus | | 5 | 2008 |
| 14 | Optus HFC footprint and DSLAM footprint in Sydney, Appendix C to Optus Supplementary Submission to Australian Competition and Consumer Commission on Telstra's December 2007 Exemption Application for Fixed Line Services in the Optus HFC Area (Document 11) | | Optus | | 5 | 2008 |

| Doc No | Details | Author | Party who submitted document | Date D | M | Y |
|---|---|---|---|---|---|---|
| 15 | Optus HFC footprint and DSLAM footprint in Melbourne, Appendix D to Optus Supplementary Submission to Australian Competition and Consumer Commission on Telstra's December 2007 Exemption Application for Fixed Line Services in the Optus HFC Area (Document 11) | | Optus | | 5 | 2008 |
| 16 | Optus HFC footprint and DSLAM footprint in Brisbane, Appendix E to Optus Supplementary Submission to Australian Competition and Consumer Commission on Telstra's December 2007 Exemption Application for Fixed Line Services in the Optus HFC Area (Document 11) | | Optus | | 5 | 2008 |
| 17 | Customer Numbers for DSLAM Rollout, Appendix F to Optus Supplementary Submission to Australian Competition and Consumer Commission on Telstra's December 2007 Exemption Application for Fixed Line Services in the Optus HFC Area (Document 11) | | Optus | | 5 | 2008 |
| 18 | Optus HFC coverage within the Chatswood TESA, Appendix G to Optus Supplementary Submission to Australian Competition and Consumer Commission on Telstra's December 2007 Exemption Application for Fixed Line Services in the Optus HFC Area (Document 11) | | Optus | | 5 | 2008 |
| 19 | Restrictions on Incumbent Involvement in Pay TV, Appendix H to Optus Supplementary Submission to Australian Competition and Consumer Commission on Telstra's December 2007 Exemption Application for Fixed Line Services in the Optus HFC Area (Document 11) | | Optus | | 5 | 2008 |
| 20 | Telstra's Overbuild of the Optus HFC Network, Appendix I to Optus Supplementary Submission to Australian Competition and Consumer Commission on Telstra's December 2007 Exemption Application for Fixed Line Services in the Optus HFC Area (Document 11) | | Optus | | 5 | 2008 |
| 21 | Broadband and telephony services over cable television networks, DSTI/ICCP/TISP(2003)1, referenced in appendix I Telstra's Overbuild of the Optus HFC Network (Document 20) | OECD | Optus | 7 | 11 | 2003 |

| Doc No | Details | Author | Party who submitted document | Date D | M | Y |
|---|---|---|---|---|---|---|
| 22 | Optus' Pay TV Product, Appendix J to Optus Supplementary Submission to Australian Competition and Consumer Commission on Telstra's December 2007 Exemption Application for Fixed Line Services in the Optus HFC Area (Document 11) | | Optus | | 5 | 2008 |
| 23 | Submission by [c-i-c] | [c-i-c] | [c-i-c] | 28 | 5 | 2008 |
| 24 | Telstra submission in reply to SingTel Optus' submission to the Australian Competition and Consumer Commission on Telstra's application for exemption for standard access obligations in respect of the SingTel Optus HFC network dated 17 December 2007 | | Telstra | 26 | 6 | 2008 |
| 25 | Expert report – Issues arising from Optus' submissions on Telstra's proposed HFC exemption prepared for Gilbert & Tobin, Appendix A to Telstra submission in reply to SingTel Optus' submission to the Australian Competition and Consumer Commission on Telstra's application for exemption for standard access obligations in respect of the SingTel Optus HFC network dated 17 December 2007 (Document 24) | Michael G. Harris | Telstra | 23 | 6 | 2008 |
| 26 | A Note on Two Points in Optus' Submission, Appendix B to Telstra submission in reply to SingTel Optus' submission to the Australian Competition and Consumer Commission on Telstra's application for exemption for standard access obligations in respect of the SingTel Optus HFC network dated 17 December 2007 (Document 24) | Martin Cave | Telstra | | 6 | 2008 |
| 27 | Expert Report: Comparative Analysis of Communications Markets as it Relates to the Economic Viability of Optus' HFC Newtwork and Telstra's Proposed HFC Exemption prepared for Gilbert & Tobin, Appendix C to Telstra submission in reply to SingTel Optus' submission to the Australian Competition and Consumer Commission on Telstra's application for exemption for standard access obligations in respect of the SingTel Optus HFC network dated 17 December 2007 (Document 24) | Dr. Jeffery A. Eisenach | Telstra | 23 | 6 | 2008 |

| Doc No | Details | Author | Party who submitted document | Date | | |
|---|---|---|---|---|---|---|
| | | | | D | M | Y |
| 28 | Expert Report – Henry Ergas, Appendix D to Telstra submission in reply to SingTel Optus' submission to the Australian Competition and Consumer Commission on Telstra's application for exemption for standard access obligations in respect of the SingTel Optus HFC network dated 17 December 2007 (Document 24) | Henry Ergas | Telstra | 4 | 6 | 2008 |
| 29 | Presentation to the ACCC: Application for exemption from fixed service regulation in Optus cable areas | Dr. Jeffery A. Eisenach | Telstra | 22 | 8 | 2008 |
| 30 | Letter to ACCC from Foxtel in response to ACCC draft decision | | Foxtel | 15 | 10 | 2008 |
| 31 | Response to draft decision regarding Telstra's exemption application in respect of the SingTel Optus HFC network | | Telstra | 15 | 10 | 2008 |
| 32 | Letter from Martin Cave to Gilbert & Tobin, Annexure A to Response to draft decision regarding Telstra's exemption application in respect of the SingTel Optus HFC network (Document 31) | Martin Cave | Telstra | 14 | 10 | 2008 |
| 33 | Expert Report: Evidence Relating to the ACCC's Draft Decision Denying Telstra's Exemption Application for the Optus HFC Footprint, prepared for Gilbert & Tobin, Annexure B to Response to draft decision regarding Telstra's exemption application in respect of the SingTel Optus HFC network (Document 31) (including exhibits to statement) | Dr. Jeffrey A. Eisenach | Telstra | 13 | 10 | 2008 |
| 34 | Video of Google Street View examination of [c-i-c] [c-i-c ends] (attachment to Document 33) | | Telstra | | | |
| 35 | Video of Google Street View examination of [c-i-c] [c-i-c ends] (attachment to Document 33) | | Telstra | | | |
| 36 | Video of Google Street View examination of [c-i-c] [c-i-c ends] (attachment to Document 33) | | Telstra | | | |

| Doc No | Details | Author | Party who submitted document | Date | | |
|---|---|---|---|---|---|---|
| | | | | D | M | Y |
| 37 | Broadband Infrastructure in the UK. The Competitive Relationship between British Telecom and Virgin Media, Annexure C to Response to draft decision regarding Telstra's exemption application in respect of the SingTel Optus HFC network (Document 31) | Human Capital | Telstra | | 9 | 2008 |
| 38 | Statement of [c-i-c] [c-i-c ends] | [c-i-c] [c-i-c ends], Telstra | Telstra | 21 | 10 | 2008 |
| 39 | Excel spreadsheet of Sample [c-i-c] [c-i-c ends], Attachment B to Statement of [c-i-c] [c-i-c ends] (document 38) | | Telstra | 19 | 09 | 2008 |
| 40 | Optus Submission to the Australian Competition and Consumer Commission in response to its Draft Decision on Telstra's Exemption Application in respect of the Optus HFC Network (replaced an earlier version) | | Optus | | 10 | 2008 |
| 41 | Assessing the likely effects of asymmetric access regulation in Australia: Telstra's Proposed HFC Exemption, Attachment 1 to Optus Submission to the Australian Competition and Consumer Commission in response to its Draft Decision on Telstra's Exemption Application in respect of the Optus HFC Network (Document 38) | CEG | Optus | 14 | 10 | 2008 |
| 42 | Letter to ACCC from Telstra dated 27 December 2007 responding to ACCC's request for information of 21 December 2007 | Tony Warren, Telstra | Telstra | 27 | 12 | 2007 |
| 43 | Letter to ACCC from Optus dated 21 February 2008 regarding the validity of the exemption application and the ACCC's proposed approach | Tim Sparks, Optus | Optus | 21 | 2 | 2008 |
| 44 | Letter to ACCC from Telstra dated 28 March 2008 responding to Optus' letter of 21 February 2008. | Tony Warren, Telstra | Telstra | 28 | 3 | 2008 |
| 45 | Letter to ACCC from Optus dated 3 April 2008 regarding the scope and likely effect of the exemption application | Tim Sparks, Optus | Optus | 3 | 4 | 2008 |

| Doc No | Details | Author | Party who submitted document | Date | | |
|---|---|---|---|---|---|---|
| | | | | D | M | Y |
| 46 | Letter to ACCC from Gilbert & Tobin on behalf of Telstra dated 26 June 2008 lodging Telstra's submission in response to Optus' submissions | Moya Dodd, Gilbert & Tobin | Telstra | 26 | 6 | 2008 |
| 47 | Letter to ACCC from Gilbert & Tobin on behalf of Telstra dated 27 October 2008 lodging discs on behalf of Telstra containing Google Street View videos | Moya Dodd, Gilbert & Tobin | Telstra | 27 | 10 | 2008 |
| 48 | Letter to the ACCC from Gilbert & Tobin on behalf of Telstra dated 30 October 2008 regarding index of source materials and comments about US and Netherlands | Kate Stoeckel, Gilbert & Tobin | Telstra | 30 | 10 | 2008 |
| 49 | Telstra's exemption application relating to SingTel Optus' HFC network – Discussion Paper | ACCC | | | 1 | 2008 |
| 50 | Telstra's exemption application in respect of the Optus HFC network – Draft Decision | ACCC | | | 9 | 2008 |
| 51 | Telstra's local carriage service and wholesale line rental exemption applications – draft decision and proposed class exemption | ACCC | | | 4 | 2008 |
| 52 | Telstra's local carriage service and wholesale line rental exemption applications - final decision and class exemption | ACCC | | | 8 | 2008 |
| 53 | Telstra's PSTN Originating Access exemption applications – CBD and Metro areas – Draft Decision | ACCC | | | 9 | 2008 |
| 54 | Telstra's PSTN Originating Access exemption applications – CBD and Metro areas – Final Decision and Class Exemption. | ACCC | | | 10 | 2008 |
| 55 | Telstra's domestic transmission capacity service exemption applications – Draft Decision | ACCC | | | 9 | 2008 |

| Doc No | Details | Author | Party who submitted document | Date | | |
|---|---|---|---|---|---|---|
| | | | | D | M | Y |
| 56 | Local services review – draft decision | ACCC | | | 3 | 2006 |
| 57 | Local services review – final decision | ACCC | | | 7 | 2006 |
| 58 | Declaration of local telecommunications services | ACCC | | | 7 | 1999 |
| 59 | Declaration inquiry for the ULLS, PSTN OTA and CLLS – final determination | ACCC | | | 7 | 2006 |
| 60 | Deeming of telecommunications services | ACCC | | 30 | 6 | 1997 |
| 61 | Review of the Line Sharing Service Declaration – final decision | ACCC | | | 10 | 2007 |
| 62 | Line sharing service – final decision | ACCC | | | 8 | 2002 |
| 63 | Fixed Services Review – a second position paper | ACCC | | | 4 | 2007 |
| 64 | A strategic review of the regulation of fixed network services – ACCC position paper | ACCC | | | 6 | 2006 |
| 65 | A strategic review of the regulation of fixed network services – An ACCC discussion paper | ACCC | | | 12 | 2005 |
| 66 | Telecommunications services – Declaration provisions – a guide to the declaration provisions of Part XIC of the TPA | ACCC | | | 7 | 1999 |

| Doc No | Details | Author | Party who submitted document | Date | | |
|---|---|---|---|---|---|---|
| | | | | D | M | Y |
| 67 | Assessment of Telstra's PSTN and LCS Undertaking – Final Decision | ACCC | | 26 | 11 | 2006 |
| 68 | Telecommunications competitive safeguards for 2006-2007 | ACCC | | | 5 | 2008 |
| 69 | Telecommunications competitive safeguards for 2005-2006 | ACCC | | 23 | 5 | 2007 |
| 70 | Telecommunications market indicator report 2005-06 | ACCC | | | 8 | 2007 |
| 71 | Unconditioned local loop service – pricing principles and indicative prices | ACCC | | | 6 | 2008 |
| 72 | Emerging market structures in the communications sector | ACCC | | | 6 | 2003 |
| 73 | Assessment of Telstra's ULLS and LSS undertakings relating to connection and disconnection charges – draft decisions | ACCC | | | 12 | 2005 |
| 74 | Telstra's access undertaking for the Unconditioned Local Loop Service – discussion paper | ACCC | | | 6 | 2008 |
| 75 | Assessment of Foxtel's Special Access Undertaking in relation to the Digital Set Top Unit Service – Final Decision | ACCC | | | 3 | 2007 |
| 76 | Access Dispute Between Optus Networks Pty Limited (Access Seeker) and Telstra Corporation Limited (Access Provider) Provisioning Of Unconditioned Local Loop Service To Multi-Dwelling Units | ACCC | | 30 | 11 | 2007 |

| Doc No | Details | Author | Party who submitted document | Date | | |
|---|---|---|---|---|---|---|
| | | | | D | M | Y |
| 77 | Public version of Pricing principles and indicative prices – LCS, WLR, PSTN OTA – final determination and explanatory statement | ACCC | | 29 | 11 | 2006 |
| 78 | Draft Merger Guidelines | ACCC | | | | 2008 |
| 79 | Unconditioned Local Loop Service – Access dispute between Telstra Corporation Limited (access provider) and Optus Networks Pty Limited (access seeker) – Statement of reasons for final determination | ACCC | | 21 | 4 | 2008 |
| 80 | Audit of Telecommunications Infrastructure Assets – Record Keeping Rules 2007 | ACCC | | 19 | 12 | 2007 |
| 81 | Telstra Customer Access Network Record Keeping and Reporting Rule – section 151BU of the TPA 1974 | ACCC | | | 9 | 2007 |
| 82 | ACMA Communications report 2006-07 | ACMA | | | 2 | 2008 |
| 83 | 'Regulation, market structure and performance in telecommunications' *OECD Economics Studies*, no. 32, 2001/1. | Olivier Boylaud and Giuseppe Nicoletti | | 6 | 6 | 2001 |
| 84 | Indicators for the Assessment of Telecommunications Competition DSTI/ICCP/TISP | OECD | | | | 2001 |
| 85 | Report on ULLS migration processes | Communications Alliance | | | 8 | 2008 |
| 86 | Canadian Radio-television Telecommunications Commission (CRTC) decision on Forbearance from the regulation of retail local exchange services (the Local Forbearance Decision) in Canada | CRTC | | 16 | 12 | 2008 |

| Doc No | Details | Author | Party who submitted document | Date | | |
|---|---|---|---|---|---|---|
| | | | | D | M | Y |
| 87 | Report on deregulating the UK's wholesale broadband markets | Ofcom | | 21 | 5 | 2008 |
| 88 | Very high speed Points of reference and outlook | ARCEP | | 10 | 11 | 2006 |
| 89 | FttH in France: orientation of regulation | Bertrand Vandeputte, ARCEP | | 11 | 4 | 2008 |
| 90 | Pay TV second consultation: Access to premium content | Ofcom | | | 9 | 2008 |
| 91 | Request for proposals to roll-out and operate a national broadband network for Australia, DCON/08/18 | Department of Broadband, Communications and the Digital Economy | | 11 | 4 | 2008 |
| 92 | 'Subscription television in Australia' (Screen Australia website) | Bob Peters | | | 8 | 2008 |
| 93 | In the Matter of Petitions of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Denver, Minneapolis-St. Paul, Phoenix, and Seattle Metropolitan Statistical Areas WC Docket No. 07-97 MEMORANDUM OPINION AND ORDER (FCC 08-174) | FCC | | 25 | 7 | 2008 |
| 94 | In the Matter of Petition of ACS of Anchorage, Inc. Pursuant to Section 10 of the Communications Act of 1934, as Amended (47 U.S.C. § 160(c)), for Forbearance from Certain Dominant Carrier Regulation of Its Interstate Access Services, and for Forbearance from Title II Regulation of Its Broadband Services, in the Anchorage, Alaska, Incumbent Local Exchange Carrier Study Area WC Docket No. 06-109 MEMORANDUM OPINION AND ORDER (FCC 07-149) | FCC | | 20 | 8 | 2007 |

| Doc No | Details | Author | Party who submitted document | Date | | |
|---|---|---|---|---|---|---|
| | | | | D | M | Y |
| 95 | FCC 07-149 - Joint Statement of Commissioner Michael J. Copps and Commissioner Jonathan S. Adelstein concurring in part, dissenting in part [re: Anchorage forbearance decision] | Michael J. Copps and Jonathan S. Adelstein, FCC | | 20 | 8 | 2007 |
| 96 | FCC 07-149 – Statement of Chairman Kevin J. Martin [re: Anchorage forbearance decision] | Kevin J.Martin, FCC | | 20 | 8 | 2007 |
| 97 | FCC 07-149 – Statement of Commissioner Robert M. McDowell [re: Anchorage forbearance decision] | Robert M. McDowell, FCC | | 20 | 8 | 2007 |
| 98 | FCC 07-149 – Statement of Commissioner Deborah Taylor Tate [re: Anchorage forbearance decision] | Deborah Taylor Tate, FCC | | 20 | 8 | 2007 |
| 99 | In the Matter of Petition of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Omaha Metropolitan Statistical Area WC Docket No. 04-223 MEMORANDUM OPINION AND ORDER (FCC 05-170) | FCC | | 2 | 12 | 2005 |
| 100 | FCC 05-170 – Concurring Statement of Commissioners Michael J. Copps and Jonathan S. Adelstein [re: Omaha forbearance decision] | Michael J. Copps and Jonathan S. Adelstein, FCC | | 2 | 12 | 2005 |
| 101 | FCC 05-170 – Statement of Chairman Kevin J. Martin [re: Omaha forbearance decision] | Kevin J. Martin | | 2 | 12 | 2005 |
| 102 | Ed Willett's speech to the AFR Fourth National Infrastructure Summit, Sydney, August 2005 | Ed Willett, Commissioner, ACCC | | | 8 | 2005 |
| 103 | Confidential Expert Report on Access Deficit | Henry Ergas, CRA | | | 5 | 2005 |
| 104 | Encouraging infrastructure competition via the ladder of investment | Martin Cave | | | | 2006 |

| Doc No | Details | Author | Party who submitted document | Date | | |
|---|---|---|---|---|---|---|
| | | | | D | M | Y |
| 105 | Ownership Structure of Cable Networks and Competition in Local Access | Duarte Brito and Pedro Pereira | | | 4 | 2005 |
| 106 | Telecom Decision CRTC 2003-45 – Provision of telecommunications services to customers in multi-dwelling units | CRTC | | 30 | 6 | 2003 |
| 107 | Developments in wholesale customer interaction strategies | David James, Ovum | | 12 | 8 | 2008 |
| 108 | Report of Fixed-mobile Substitution and Fixed-mobile Convergence in Australia | ACMA | | | 7 | 2008 |
| 109 | Telecommunications today – consumer attitudes to take-up and use | ACMA | | | 9 | 2007 |
| 110 | Report on the Australian VoIP market – the supply and take-up of VoIP in Australia | ACMA | | | 4 | 2008 |
| 111 | Direction under Section 106(3) of the Communications Act 2003 applying the electronic communications code in the case of H2O Networks Ltd | Ofcom | | 3 | 9 | 2008 |
| 112 | Convergence and diversification in cable industry: An empirical analysis of the deployment pattern of cable telephony in US local telecommunications markets, *Telecommunications Policy* 32 (2008) | Sangho Seo | | | | 2008 |
| 113 | Glossary of industrial organisation economics and competition law | OECD | | | | |
| 114 | The perfect wholesale SLA – dream or reality? | David James, Ovum | | 4 | 9 | 2008 |

| Doc No | Details | Author | Party who submitted document | Date | | |
|---|---|---|---|---|---|---|
| | | | | D | M | Y |
| 115 | Next Generation Networks: Fibre Optic Access, ARCEP presentation to 3rd International Conference on Broadband Internet, Athens | Nicolas Curien, ARCEP | | | | |
| 116 | Submission by AAPT Limited and PowerTel Limited to the Australian Competition and Consumer Commission in response to Telstra's PSTN Originating Access exemption applications – CBD and Metro areas Draft Decision and Proposed Class Exemption | AAPT/PowerTel | | | 9 | 2008 |
| 117 | Shareholder risks associated with the National Broadband Network | ACTU | | | 10 | 2008 |
| 118 | Cullen International – EU Telecom Regulatory Report 132 | James Thomson, Cullen International | | 25 | 8 | 2008 |
| 119 | Singapore Telecom – Risk and reward: Out of Balance | Ian Martin and Arthur Pineda, ABN AMRO | | 25 | 9 | 2008 |
| 120 | Determination on the TelstraClear Application for Determination of "Wholesale" Designated Access Services, Decision 497 | New Zealand Commerce Commission | | 12 | 5 | 2003 |
| 121 | Determination on the TelstraClear Application for Determination for 'Residential Wholesale' Designated Access Services, Decision 525 | New Zealand Commerce Commission | | 14 | 6 | 2004 |
| 122 | Telstra submission to the ACCC – Response to Questions from ACCC Discussion Paper of August 2007 | Telstra | | | 11 | 2007 |
| 123 | Optus Submission to the Australian Competition and Consumer Commission on Telstra Application for LCS and WLR Exemptions | Optus | | | 11 | 2007 |
| 124 | Statement by [c-i-c] [c-i-c ends] Annexure H to Telstra's Application for exemption in respect of the PSTN Originating Access service - Response to ACCC information request dated 12 March 2008 | [c-i-c] | | 2 | 4 | 2008 |

| Doc No | Details | Author | Party who submitted document | Date D | M | Y |
|---|---|---|---|---|---|---|
| 125 | Letter to ACCC from Telstra dated 10 April 2008 regarding capped exchanges | Tony Warren, Telstra | | 10 | 4 | 2008 |
| 126 | Response to inaccurate citations by the ACCC of previous expert reports by Henry Ergas | Henry Ergas, CRA | | | 9 | 2005 |
| 127 | Labour Price Index, June 2008, 6345.0 | ABS | | 13 | 8 | 2008 |
| 128 | Internet Activity, Australia, ABS 8153.0, March 2007 | ABS | | 1 | 6 | 2007 |
| 129 | Internet Activity, Australia, ABS 8153.0, December 2007 | ABS | | 24 | 4 | 2008 |
| 130 | Internet Activity, Australia, ABS 8153.0, June 2008 | ABS | | 22 | 9 | 2008 |
| 131 | Value Partners/IIA Broadband Index, Seventh Edition (Q3 2008) | Value Partners/ Internet Industry Association | | 28 | 10 | 2008 |
| 132 | Spectrum/IIA Broadband Index, Sixth Edition (Q1 2008) | Spectrum Value Partners/ Internet Industry Association | | 24 | 4 | 2008 |
| 133 | Spectrum/IIA Broadband Index, Fifth Edition (Q4 2007) | Spectrum Value Partners/ Internet Industry Association | | 14 | 1 | 2008 |
| 134 | Singapore Telecommunications Limited and Subsidiary Companies, Management Discussion and Analysis of Financial Condition, Results of Operations and Cash Flows for the First Quarter ended 30 June 2008 | Singapore Telecommunications Limited and Subsidiary Companies | | 12 | 8 | 2008 |

| Doc No | Details | Author | Party who submitted document | Date | | |
|---|---|---|---|---|---|---|
| | | | | D | M | Y |
| 135 | Singapore Telecommunications Limited and Subsidiary Companies, Management Discussion and Analysis of Financial Condition, Results of Operations and Cash Flows for the Fourth Quarter and Financial Year ended 31 March 2008 | Singapore Telecommunications Limited and Subsidiary Companies | | 13 | 5 | 2008 |
| 136 | Telstra annual report 1996-97 | Telstra | | | | 1997 |
| 137 | Full year results and operational review – June 2008 | Telstra | | 13 | 8 | 2008 |
| 138 | Annual Report 2006-07 | Telstra | | | | 2007 |
| 139 | Full Year 2008 Financial Results – CEO/CFO Analyst briefing presentation | Telstra | | 13 | 8 | 2008 |
| 140 | 2007 Annual Report | Virgin Media | | 7 | 4 | 2008 |
| 141 | Telstra CAN RKR Data for September Quarter 2007 | Telstra | | 07 | 11 | 2007 |
| 142 | Telstra CAN RKR Data for December Quarter 2007 | Telstra | | 22 | 01 | 2008 |
| 143 | Telstra CAN RKR Data for March Quarter 2008 | Telstra | | 28 | 04 | 2008 |
| 144 | Telstra CAN RKR Data for June Quarter 2008 | Telstra | | 28 | 07 | 2008 |

| Doc No | Details | Author | Party who submitted document | Date | | |
|---|---|---|---|---|---|---|
| | | | | D | M | Y |
| 145 | Optus HFC Network Data submitted to Audit of Telecommunications Infrastructure Assets – Record Keeping Rules 2007 | Optus | | 5 | 3 | 2008 |
| 146 | Seven Network Limited (No 4) [2004] ACompT 11 | | | | | 2004 |
| 147 | Seven Network Limited v News Limited [2007] FCA 1062 | | | | | 2007 |
| 148 | Re Queensland Co-operative Milling Association Ltd and Defiance Holding Ltd (1976) 25 FLR 169 | | | | | 1976 |
| 149 | Australia Meat Holdings v Trade Practices Commission (1989) ATPR 40-932 | | | | | 1989 |
| 150 | Telstra Corporation Limited [2006] ACompT 4 | | | | | 2006 |
| 151 | Telstra Corporation Ltd (No 3) [2007] ACompT 3 | | | | | 2007 |
| 152 | Re Sydney Airports Corporation Ltd (2000) 156 FLR 10 | | | | | 2000 |
| 153 | Telecommunications Act 1997 | | | | | |
| 154 | Trade Practices Act 1974 (Cth) | | | | | |
| 155 | Trade Practices Amendment (Telecommunications) Bill 1996 (Cth) | | | | | |

| Doc No | Details | Author | Party who submitted document | Date | | |
|---|---|---|---|---|---|---|
| | | | | D | M | Y |
| 156 | Trade Practices Amendment (Telecommunications) Bill 1996 – Explanatory Memorandum | | | | | 1996 |
| 157 | Trade Practices Amendment (Telecommunications) Bill 1996 – Supplementary Explanatory Memorandum | | | | | 1997 |
| 158 | Telecommunications Legislation Amendment (Competition and Consumer Issues) Bill 2005 – Explanatory Memorandum | | | | | 2004/ 2005 |
| 159 | Trade Practices Amendment (Telecommunications) Act 1997 (Cth) Explanatory memorandum. | | | | | 1997 |
| 160 | Telecommunications Competition Bill 2002 – Explanatory Memorandum | | | | | 2002 |
| 161 | 'Caps, broadcasters hurt IPTV take-up' (News article – Australian Financial Review) | Ben Woodhead | | 23 | 9 | 2008 |
| 162 | 'ACCC protects competition, not competitors' (media release) | ACCC | | 12 | 10 | 2007 |
| 163 | 'Cablevision Rolling Out DOCSIS 3.0' (News article – Broadband Reports website) | Karl Bode | | 31 | 7 | 2008 |
| 164 | 'Cablevision Begins Wideband Assault' (News article – Light Reading.com) | Jeff Baumgartner | | 31 | 7 | 2008 |
| 165 | 'Comcast Enters the Wideband Era' (News article – Light Reading.com) | Jeff Baumgartner | | 2 | 4 | 2008 |
| 166 | 'Videotron Hits the Gas' (News article – Light Reading.com) | Jeff Baumgartner | | 6 | 2 | 2008 |

| Doc No | Details | Author | Party who submitted document | Date | | |
|---|---|---|---|---|---|---|
| | | | | D | M | Y |
| 167 | ‘Virgin Media Reports Second Quarter 2008 Results Showing Strong Cash Generation and OCF, with Continued Low Churn’ (Media release) | Virgin Media | | 7 | 8 | 2008 |
| 168 | ‘Britt: DOCSIS 3.0 Coming to NYC’ (News article – Light Reading.com) | Jeff Baumgartner | | 30 | 5 | 2008 |
| 169 | Ethernet over DOCSIS: Reaching Out to SMBs (Article – Cable260.net) | John Lombardi and Bradley Bignall, Cisco Systems | | 1 | 8 | 2008 |
| 170 | ‘The week in retrospect’ (News article – Exchange Vol.20 No. 35) | 3rd Wave Communication | | 12 | 9 | 2008 |
| 171 | ‘ACCC thwarts Telstra’s ploy to force Optus to use HFC for telephony’ (News article – Exchange, Vol.20 No. 37) | 3rd Wave Communication | | 26 | 9 | 2008 |
| 172 | ‘Optus/Telstra planning cable speed boost’ (News article – APC magazine) | Dan Warne | | 17 | 7 | 2007 |
| 173 | ‘NBN: Should HFC competition be actively encouraged?’ (News article – Communications Day) | Luke Coleman | | 12 | 8 | 2008 |
| 174 | ‘Trujillo’s ‘transformation’ reaches point of no return’ (News article – The Australian) | Michael Sainsbury | | 16 | 9 | 2008 |
| 175 | ‘ACCC thwarts Telstra’s ploy to force Optus onto HFC network for telephony’ (New article – iTWire.com) | Stuart Corner | | 22 | 9 | 2008 |
| 176 | ‘ACTU calls for Telstra co-operation not conflict on NBN’ (News article – Exchange, Vol.20 No.42) | 3rd Wave Communication | | 31 | 10 | 2008 |
| 177 | ‘Telstra turns heat up on Optus HFC net, says ACCC ignores own stepping stone theory’ (News article – Communications Day) | Grahame Lynch | | 19 | 12 | 2007 |

| Doc No | Details | Author | Party who submitted document | Date | | |
|---|---|---|---|---|---|---|
| | | | | D | M | Y |
| 178 | 'ACCC rejects Telstra arguments that cheaper ULL depresses HFC investment' (News article – Communications Day) | Grahame Lynch | | 21 | 1 | 2008 |
| 179 | 'ACCC denies it pre-empted Telstra HFC exemption request as new report defines negative effects of unbundling' (News article – Communications Day) | Grahame Lynch | | 31 | 1 | 2008 |
| 180 | 'Father of stepping stone competition theory tells ACCC: make Optus use its network' (News article – Communications Day) | Grahame Lynch | | 26 | 3 | 2008 |
| 181 | 'An unnecessary, unwanted forced march to HFC?' (Opinion article – Communications Day) | Richard Chirgwin | | 31 | 3 | 2008 |
| 182 | 'Telstra to slash thousands of jobs' (News article – The Australian) | Deborah Brewster | | 18 | 4 | 1996 |
| 183 | 'Internode offers naked ADSL2+ via Optus resale' (News article – Exchange, Vol. 20 Issue 9) | 3rd Wave Communication | | 14 | 3 | 2008 |
| 184 | 'One win, one loss for Telstra in ACCC draft decisions' (News article – Communications Day) | Luke Coleman | | 23 | 9 | 2008 |
| 185 | 'Is there a plan B after the NBN bidding war is over?' (Letter to the Editor – Communications Day) | Dermot Cox, C-COR Broadband Australia | | 24 | 10 | 2008 |
| 186 | 'Optus loses customers but lifts margins' (News article – Australian Financial Review) | Tracy Lee | | 6 | 2 | 2008 |
| 187 | 'Privatisation threat to Telstra control: Blount' (News article – Australian Financial Review) | David Shires | | 23 | 8 | 1995 |
| 188 | 'Investments and profit up, price down at Telstra' (Media release) | Telstra | | 13 | 9 | 1996 |

| Doc No | Details | Author | Party who submitted document | Date | | |
|---|---|---|---|---|---|---|
| | | | | D | M | Y |
| 189 | 'BigPond launches 30 Mbps Cable for Sydney and Melbourne' (Media release) | Telstra | | 12 | 9 | 2007 |
| 190 | 'Optus cable network hits high speed' (Media release) | Optus | | 17 | 12 | 2007 |
| 191 | 'IDA grants partial exemption for SingTel from access obligations' (News article – Communications Day) | Grahame Lynch | | 28 | 8 | 2008 |
| 192 | 'ONO! Another DOCSIS 3.0 Story' (News article – Light Reading.com) | Ray Le Maistre | | 19 | 9 | 2008 |
| 193 | Optus Internet Cable Internet Service – Service Description (Consumer) (SFOA) | Optus | | 3 | 1 | 2008 |
| 194 | Optus Cable Internet Service – Standard Pricing Table (Consumer) SFOA | Optus | | 15 | 2 | 2008 |
| 195 | Optus 'yes' Fusion website | Optus | | | | |
| 196 | Optus Plans & Rates: Wireless Broadband website | Optus | | | | |
| 197 | SelecTV packages website | SelecTV | | | | |
| 198 | iPrimus Speedster Mobile Broadband website | Primus | | | | |
| 199 | Vodafone Wireless Internet Deals website | Vodafone | | | | |

| Doc No | Details | Author | Party who submitted document | Date | | |
|---|---|---|---|---|---|---|
| | | | | D | M | Y |
| 200 | Telstra BigPond ADSL Overview website | Telstra | | | | |
| 201 | Telstra BigPond ADSL Plans & Offers website | Telstra | | | | |
| 202 | Telstra BigPond Check Broadband Availability website | Telstra | | | | |
| 203 | Telstra BigPond Internet FAQ – How can I access BigPond Cable Extreme 30Mbps* Speeds? website | Telstra | | | | |
| 204 | Telstra BigPond Broadband Cable website | Telstra | | | | |
| 205 | Telstra BigPond Cable Broadband Plans & Offers website | Telstra | | | | |
| 206 | Telstra BigPond Internet Plans website | Telstra | | | | |
| 207 | Telstra BigPond Help Centre – Is BigPond Cable or ADSL available in my area? Website | Telstra | | | | |
| 208 | iiNet Broadband 1 Internet Plans website | iiNet | | | | |
| 209 | iiNet Broadband 2+ Internet Plans website | iiNet | | | | |
| 210 | iiNet Network Coverage website | iiNet | | | | |

| Doc No | Details | Author | Party who submitted document | Date | | |
|---|---|---|---|---|---|---|
| | | | | D | M | Y |
| 211 | Neighbourhood Cable ADSL Broadband website | Neighbourhood Cable | | | | |
| 212 | Neighbourhood Cable Company Information website | Neighbourhood Cable | | | | |
| 213 | Neighbourhood Cable Broadband website | Neighbourhood Cable | | | | |
| 214 | Neighbourhood Cable Premium + Broadband website | Neighbourhood Cable | | | | |
| 215 | Neighbourhood Cable Cable Broadband website | Neighbourhood Cable | | | | |
| 216 | Optus Broadband Check Connection website | Optus | | | | |
| 217 | Optus FAQs: Broadband website | Optus | | | | |
| 218 | TPG FAQs for TPG ADSL2+ Customers website | TPG | | | | |
| 219 | TPG ADSL2+ Plans website | TPG | | | | |
| 220 | TransACT: Broadband internet services – TransWEB website | TransACT | | | | |
| 221 | TransACT Packages and Prices website | TransACT | | | | |

| Doc No | Details | Author | Party who submitted document | Date | | |
|---|---|---|---|---|---|---|
| | | | | D | M | Y |
| 222 | TransACT Service availability by Suburb website | TransACT | | | | |

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**This is an index of sources cited in Schedule A of Telstra's exemption application submitted on 17 December 2007.**

| Tab no. | Description | Footnote reference(s) |
|---|---|---|
| 1 | Prof. Cave, *Encouraging infrastructure competition via the ladder of investment*, 2006 Telecommunications Policy 30: | 1, 15 |
| 2 | European Regulators Group, *ERG common position on the approach to appropriate remedies in the new regulatory framework*, 23 April 2004 | 2, 18 |
| 3 | Canadian Competition Bureau, Evidence of the Commissioner of Competition before the CRTC in *Review of regulatory framework for wholesale services and definition of essential service*, 15 March 2007 | 3, 117 |
| 4 | ACCC (2007), *The regulation of Australia's broadband market,* Mr Michael Cosgrave, Group General Manager, Communications Group. Speech given at AFR Broadband Australia 2007 Conference, 21 August 2007. | 4 |
| 5 | Competitive Carriers' Coalition, Revitalising Competition in Australian Telecommunications, Proposals for Policy Reform Discussion Draft, January 2005. | 5 |
| 6 | Prof. Shepherd, (2004) *Access pricing, innovation and effective competition*, address to ACCC Regulatory Conference, 29 July 2004. | 6 |
| 7 (see annex 1) | Prof. Cave, (2007) *Applying the ladder of investment in Australia* | 8, 10, 19, 22, 64, 81, 84-86, 88, 94, 114, 122 |
| 8 | ACCC Position Paper (2007), *Fixed services review: A second position paper*, April 2007 | 9 |
| 9 | OPTA (2005), Regulating Emerging Markets, Economic Policy Note, No. 5, April 2005. | 11, 87 |
| 10 | Telstra's response to the Commission Proposal "A Strategic Review of the regulation of fixed network services", February 2006 | 12 |
| 11 | M Cave: *Operating the ladder of investment* at *Warwick Business School, Nov. 2004* (2004) | 13, 16 |
| 12 | European Commission, Explanatory Memorandum to *Commission Recommendation 2003/311/EC of 11 February 2003 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communication networks and services*, 11 February 2003. | 14 |
| 13 | Eisenach, Jeffrey A. and Singer, Hal J., "Irrational Expectations: Can a Regulator Credibly Commit to Removing an Unbundling Obligation?" (December 2007), AEI-Brookings Joint Center Working Paper No. 07-28, online at http://ssrn.com/abstract=1065161 | 17, 89, 97, 120 |
| 14 | ACCC, *Declaration of local telecommunications services,* July 1999. | 21 |

| | | |
|---|---|---|
| | http://www.accc.gov.au/content/item.phtml?itemId=803816&nodeId=300f6c2067d7add8175178d612333992&fn=Draft%20record%20keeping%20record%20-%20Audit%20of%20infrastructure%20(19%20Nov%2007).pdf | |

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| Tab no. | Description | Footnote reference(s) |
|---|---|---|
| 1 | ACCC Fixed Services Review, second position paper, April 2007 at p.21. | 1, 2 |
| 2 | M Cave 'Encouraging infrastructure investment via the ladder of investment', *Telecommunications Policy*, 2006. | 4, 12, 14 |
| 3 | M. Cave, *The regulation of access in telecommunications: a European perspective*, April 2007. | 5 |
| 4 | TelstraClear Wholesale Determination, 12 May 2003, http://www.comcom.govt.nz/IndustryRegulation/Telecommunications/Wholesale/WholesaleDeterminatons/telstraclear.aspx; | 7 |
| 5 | TelstraClear Residential Wholesale Determination, 14 June 2004, http://www.comcom.govt.nz/IndustryRegulation/Telecommunications/Wholesale/WholesaleDeterminatons/telstraclearresidentialwholesalede.aspx. | 7 |
| 6 | Senate Economics Legislation Committee. *Answers to Question on Notice. Treasury Portfolio*. Additional Estimates 16 February 2006, Question AT 47. | 10 |
| 7 | Speech by Michael Cosgrave, Group General Manager, Communications Group, ACCC, *The regulation of Australia's broadband market*, 21 August 2007. | 11 |
| 8 | R. Inderst and T. Valletti, `Market analysis in the presence of indirect constraints and captive sales`, *Oxford Journal of Competition Law and Economics,2007, pp203-231*. | 13 |

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**This is an index of additional materials relied upon in Michael Harris report at Annex 2 to Telstra's exemption application submitted on 18 December 2007.**

| Tab no. | Description | Paragraph reference |
|---|---|---|
| 9 | Data-Over-Cable Service Interface Specifications: Business Services over DOCSIS®. TDM Emulation Interface Specification. CM-SP-TEI-I03-070803. Issued August 2007. | 1.12 (a) |
| 10 | Data-Over-Cable Service Interface Specifications: Business Services over DOCSIS®. Layer 2 Virtual Private Networks. CM-SP-L2VPN-I05-070803. Issued August 2007. | 1.12 (b) |
| 11 | ACIF C559:2006 ULLS Performance Requirements | 1.12 (c) |

**PUBLIC INDEX TO CD VERSION**

**SOURCES REFERENCED IN THE PUBLIC VERSION OF TELSTRA'S RESPONSE TO**

**ACCC DISCUSSION PAPER ON TELSTRA'S EXEMPTION APPLICATION**

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**LODGED 25 MARCH 2008**

| | Description | Footnote reference(s) |
|---|---|---|
| 1 | Statistics and data sourced from SNL Kagan available at the National Cable and Telecommunications Association | 1 |
| 2 | Rogers Communications Inc. 2002 Annual Report | 2 |
| 3 | Rogers Communications Inc. 2003 Annual Report | 2 |
| 4 | Rogers Communications Inc. 2004 Annual Report | 2 |
| 5 | Rogers Communications Inc. 2005 Annual Report | 2 |
| 6 | Rogers Communications Inc. 2006 Annual Report | 2 |
| 7 | Rogers Communications Inc. 2007 Annual Report | 2 |
| 8 | Norman and Williams, "The analysis of Market and Competition Issues under the Trade Practices Act: Towards the Resolution of Some Hitherto Unresolved Issues" (1983) 11 Australian Business Law Review, 396 | 17 |
| 9 | M Brunt, "Market Definition in Australian and New Zealand Trade Practices Litigation", 18 Australian Business Law Review, 86 | 18 |
| 10 | ACCC, Local Call Services Review Final Decision, July 2006 | 19 |
| 11 | ACCC, Draft Report on declaring DDAS and ISDN, March 2008 | 19 |
| 12 | DSL Business Case Report, Building a Facilities-based Local Loop Infrastructure: Retail & Wholesale Business Case for CLECs. | 22 |
| 13 | T Madiega, "Innovation and Market Definition under the EU Regulatory Framework for Electronic Communications", World Competition 29(1), pp 55-72, 2006. | 23 |
| 14 | Ofcom, Review of the Wholesale Broadband Access Markets 2006/2007, Explanatory Statement and Notification, 15 November 2007 | 24 |
| 15 | Commission for Communications Regulation, Market Analysis: Wholesale Broadband Access, Doc 04/25, 5 March 2004 | 25 |
| 16 | Decisio BV in conjunction with Tilburg University, "The Principle of Indirect Pricing Constraints in Market Analyses", 4 May 2007. | 26 |

| | | |
|---|---|---|
| 17 | G Samuel, Speech to Australian Telecommunications Users Group 2008 Annual Conference, 13 March 2008. | 29 |
| 18 | Ed Willett, speech given to Broadbanding Regional Australia 2006, “Understanding competition in the growth of Australian Broadband”, 21 November 2006. | 33 |
| 19 | Telstra’s Supporting Submission to the ACCC in relation to Telstra’s Local Carriage Service and Wholesale Line Rental Exemption Applications, July 2007. | 35 |
| 20 | Market Clarity press release, *The Australian VoIP Services Market 2004-2011*, 7 March 2006. | 36 |
| 21 | ACCC Final Determination, “Declaration Inquiry for the ULLS, PSTN OTA and CLLS”, July 2006 | 37 |
| 22 | ACCC Telecommunications Reports, “Telecommunications Competitive Safeguards for 2005-2006 and Changes in the prices paid for telecommunications services in Australia 2005-2006”, May 2007 | 38 |
| 23 | French Conseil Concurrence market analysis | 39 |
| 24 | CRTC Telecom Decision, 2005-28, Regulatory Framework for Voice Communication Services Using Internet Protocol, reference: 8663-C12-200402892. | 40 |
| 25 | Post and Telestyrelsen, an Analysis of Residential Customers’ Substitution of Traditional Fixed Telephony with IP based and mobile telephony, Report No PTS-ER-2006: 38, File Reference 06-3845/23, 5 September 2006. | 41 |
| 26 | BundesnetzAgentur Regulation of VoIP in Germany | 42 |
| 27 | Determination on the TelstraClear Application for Determination for “Wholesale Designated Access Services”, New Zealand Commerce Commission Decision 497 dated 12 May 2003 at paragraph 193 | 46-48 |
| 28 | ACCC, Emerging Market Structures in the Communications Sector, June 2003 | 50-51 |
| 29 | Ofcom, Review of the wholesale broadband access markets, Final explanatory Statement and Notification, 13 May 2004 | 52 |
| 30 | Ofcom, Review of the retail leased Lines, symmetric broadband originations and wholesale trunk segments markets, Final Statement, 24 June 2006. | 53 |
| 31 | SingTel: Singapore Telecommunications Limited and Subsidiary Companies: Management Discussion and Analysis of Financial Condition, Results of Operations and Cash Flows for the Third Quarter and Nine Months ended 31 December 2007. | 55, 60, 72-75 |
| 32 | Australian Bureau of Statistics – Patterns of Internet Access in Australia 8146.0.5 5.001, November 2007 | 57 |
| 33 | Australian Film Commission data | 58, 62 |
| 34 | Telstra’s 2007 Annual Report | 59 |

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| Tab | Document | Footnote |
|---|---|---|
| 1 | SingTel, *About Optus* | 68 |
| 2 | ACCC, *Telstra's Local Carriage Service and Wholesale Line Rental Exemption Applications – Draft Decision and Proposed Class Exception*, April 2008 | 64, 104 |
| 3 | Australian Bureau of Statistics, *Pattern of Internet Access in Australia*, November 2007 | 13 |
| 4 | ComCast,*ComCast Reports First Quarter 2008 Results* | 89 |
| 5 | Hazlett, *Germany's Cable Problem,* Wall Street Journal, 30 August 2006 | 114 |
| 6 | Lohr, *Video Road Hogs Stir Fear of Internet Traffic Jam*, New York Times, March 13 2008 | 16 |
| 7 | O'Sullivan, *The Growing Importance of Content for the Telecommunications Industry*, 19 May 2005 | 91 |
| 8 | OECD, Directorate for Science, Technology and Industry, *OECD Broadband Statistics to December 2006* | 11 |
| 9 | OECD, Directorate for Science, Technology and Industry, *Broadband Subscribers per 100 Inhabitants*, December 2007 | 12 |
| 10 | OneTRAK – *Verizon (FiOS) begins overbuilding AT&T (U-verse) in Texas*, 9 June 2008 | 74 |
| 11 | Singapore Telecommunications Limited and Subsidiary Companies, *Management Discussion and Analysis of Financial Condition and Results of Operations for the Fourth Quarter and Year Ended 31 March 2004* | 14 |
| 12 | Singapore Telecommunications Limited and Subsidiary Companies, *Management Discussion and Analysis of Financial Condition, Results of Operations and Cash Flows for the Fourth Quarter and Financial Year ended 31 March 2007* | 69 |

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|---|---|---|
| 13 | Singapore Telecommunications Limited and Subsidiary Companies, *Management Discussion and Analysis of Financial Condition and Results of Operations and Cash Flows for the First Quarter Ended 30 June 2007* | 124 |
| 14 | Singapore Telecommunications Limited and Subsidiary Companies, *Management Discussion and Analysis of Financial Condition and Results of Operations for the Third Quarter and Nine Months Ended 31 December 2007* | 119 |
| 15 | Singapore Telecommunications Limited and Subsidiary Companies, *Management Discussion and Analysis of Financial Condition and Results of Operations for the Fourth Quarter and Year Ended 31 March 2008* | 14, 15, 83, 123, 125 |

## TELSTRA CORPORATION LIMITED

This is an index of sources cited in *Telstra submission in reply to SingTel Optus submissions to the Australian Competition and Consumer Commission on Telstra's application for exemption from Telstra's standard access obligations in respect of the SingTel Optus HFC network dated 17 December 2007*, submitted on 26 June 2008.

| Tab | Document | Footnote |
|---|---|---|
| 16 | SingTel Optus , *Wholesale* | 67 |
| 17 | Telecommunications Policy Review Panel, *Final Report*, March 2006 | 20 |
| 18 | Telstra, *Telstra's Efficient Access Model Overview*, 21 December 2007 | 112 |
| 19 | Virgin Media, *Virgin Media Reports First Quarter 2008 Results* | 88 |

# TELSTRA CORPORATION LIMITED

This is an index of sources cited in Appendix B: Cave Report to *Telstra submission in reply to SingTel Optus submissions to the Australian Competition and Consumer Commission on Telstra's application for exemption from Telstra's standard access obligations in respect of the SingTel Optus HFC network dated 17 December 2007*, submitted on 26 June 2008.

| Tab[1] | Document | Footnote |
|---|---|---|
| 1 | ACCC Fixed Service Review, *Second Position Paper*, April 2007 | 3 |
| See T2 | ACCC, *Telstra's Local Carriage Service and Wholesale Line Rental Exemption Applications – Draft Decision and Proposed Class Exception*, April 2008 | 4 |
| 2 | Eisenach and Singer, *Irrational Expectations: Can a Regulatory Credibly Commit to Removing an Unbundling Obligation?*, 2007 | 13 |
| 3 | Hazlett, *Cable Television* in S Majumdar, I Vogelsang and M Cave (eds) Handbook of Telecommunications Economics, Vol 2, 2005 | 7 |
| 4 | OECD, *Glossary of Industrial Organisation and Competition Law* | 11 |
| 5 | Ofcom, *Pay TV Market Investigation Consultation*, December 2007 | 8 |

[1] Cross references to the main submission are referred to as T1, T2, T3 etc. as it corresponds to the tab in the index of sources referred to in the main submission. Similarly for each of the appendices, cross references are referred to as the Appendix letter and Tab number (e.g. A2 for the second tab in the index of sources to the Harris Report, which is found at Appendix A to the main submission.

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| Tab | Document | Footnote |
|---|---|---|
| 1 | National Cable and Telecommunications Association, *Top 25 MSOs - As of March 2008* | 2, 12, 18 |
| 2 | Comcast, *Comcast Reports Fourth Quarter 2007 Results* | 3 |
| 3 | Cablevision, *Annual Report (SEC Filing 10-K)*, 28 February 2008 | 13 |
| *4* | *SMC Unveils Docsis 3.0 Gear*, *Light Reading's Cable Digital News*, 22 April 2008 | 19 |
| 5 | Arris, *ARRIS Introduces DOCSIS 3.0 E-MTA and Cable Modems*, Press releases, 9 January 2008 | 20 |
| 6 | RAD, *Cable Broadband Access - T1/E1 and Multi-Line Voice over DOCSIS,* Application Notes | 21 |

# TELSTRA CORPORATION LIMITED

This is an index of sources cited in Appendix C: Eisenach Report to *Telstra submission in reply to SingTel Optus submissions to the Australian Competition and Consumer Commission on Telstra's application for exemption from Telstra's standard access obligations in respect of the SingTel Optus HFC network dated 17 December 2007*, submitted on 26 June 2008.

| Tab[1] | Document | Footnote |
|---|---|---|
| 1 | ACCC, *Emerging Market Structures in the Communications Sector*, June 2003 | 41 |
| See B1 | ACCC, *Fixed Services Review, A Second Position Paper*, April 2007 | 102 |
| 2 | ACMA, *Media and Communications in Australian Families 2007*, December 2007 | 48 |
| 3 | Applebaum, *Meet The System: San Antonio: Time Warner Cable Fights AT&T In Its Hometown*, CableFAX's CableWorld, August 13, 2007 | 31 |
| 4 | Astound *About Us* | 69 |
| 5 | Astound, *Home Page* | 71 |
| 6 | AT&T Corp, *General Information* | 64, 74 |
| 7 | AT&T Corp, *U-verse* | 65 |
| 8 | AT&T Corp, *U-verse Media Kits* | 66 |
| 9 | Breznick, *Docsis 3.0: The Competitive Hedge*, Lightreading's Cable Digital News, March 11, 2008 | 91 |
| 10 | Breznick, *Docsis Device Shipments Top 30M in 2007*, Light Reading's Cable Digital News | 36 |
| 11 | Bright House Networks | 80 |
| 12 | Brown *Wide Open West Wrangles Place as Cable Competitor*, Multichannel News, November 5, 2001 | 57 |

[1] Cross references to the main submission are referred to as T1, T2, T3 etc. as it corresponds to the tab in the index of sources referred to in the main submission. Similarly for each of the appendices, cross references are referred to as the Appendix letter and Tab number (e.g. A2 for the second tab in the index of sources to the Harris Report, which is found at Appendix A to the main submission.

| | | |
|---|---|---|
| 13 | Brown, *WOW Now: Cable Challenger jumps ahead with Americast acquisition* Broadband Week, June 4, 2001 | 57 |
| 14 | Cole, *New technology coming to ease open access: systems designed to reduce bandwidth strain*, December 10, 2001 | 28 |
| 15 | Comcast Corporation, *Corporate Overview* | 63 |
| 16 | Comcast Corporation, *The Comcast Triple Play* | 62 |
| 17 | Comcast Presentation, *Merrill Lynch U.S. Media Conference,* June 5, 2008 | 25 |
| 18 | Distaso, Lupiz and Manentix, *Platform Competition and Broadband Uptake: Theory and Empirical Evidence from the European Union,* Joint PURC – University of Florida and LBS 2005 Telecommunications Conference, April 2005 | 104 |
| See B2 | Eisenach and Singer *Irrational Expectations: Can a Regulator Credibly Commit to Removing an Unbundling Obligation?*, AEI-Bookings Joint Center Working Paper No. 07-28, December 2007 | 87 |
| 19 | Eisenach, *Direct Testimony of Dr. Jeffrey A. Eisenach on Behalf of Verizon Virginia Inc. and Verizon South Inc., Application of Verizon Virginia Inc. and Verizon South Inc. For a Determination That Retail Services are Competitive and Deregulating and Detariffing of the Same*, Virginia State Corporation Commission, Case No. PUC-2007-00008, January 31, 2007 | 107 |
| 20 | Eisenach, *Rebuttal Testimony of Jeffrey A. Eisenach on Behalf of Verizon Washington, D.C., In the Matter of Verizon's 2007 Price Cap Plan for the Provision of Local Telecommunications Services in the District of Columbia,* District of Columbia Public Service Commission, Formal Case No. 1057, July 16, 2007 | 107 |
| 21 | European Commission, *Case COMP/35.141 Deutsche Post AG,* s001 O.J. (L 125) | 43 |
| 22 | Farrell, "Debt-Light, *RCN Explores Sellout Options*, Multichannel News, September 18, 2006 | 13, 14, 58 |
| 23 | FCC, *12th Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming,* MB Docket No. 05-525, March 3, 2006 | 4, 9, 10, 15, 27, 29, 32, 98 |

# TELSTRA CORPORATION LIMITED

This is an index of sources cited in Appendix C: Eisenach Report to *Telstra submission in reply to SingTel Optus submissions to the Australian Competition and Consumer Commission on Telstra's application for exemption from Telstra's standard access obligations in respect of the SingTel Optus HFC network dated 17 December 2007*, submitted on 26 June 2008.

| Tab[1] | Document | Footnote |
|---|---|---|
| 24 | FCC, *In the Matter of Exclusive Services Contracts for Provision of Video Services in Multiple Dwelling Units and Other Real Estate Developments, Report and Order and Further Notice of Proposed Rulemaking,* MB Docket No. 07-51, November 13, 2007 | 51, 52 |
| 25 | FCC, *In the Matter of Petition of Qwest Corporation for Forbearance to 47 USC § 160(c) in the Omaha Metropolitan Statistical Area, Memorandum Opinion and Order*, WC Docket No. 04-223, December 2, 2005 | 105, 108 |
| 26 | FCC, *In the Matter of Petition of Verizon New England Petition for Forbearance Pursuant to 47 U.S.C. § 160(c) in Rhode island, Petition of Verizon New England for forbearance*, February 14, 2008 | 114, 115 |
| *27* | FCC, *In the Matter of Petitions of the Verizon Telephone Companies for Forbearance Pursuant to 47 U.S.C. § 160(c) in Cox's Service Territory in the Virginia Beach Metropolitan Statistical Area, Petition of the Verizon Telephone Companies for Forbearance*, March 31, 2008 | 114, 115 |
| 28 | FCC, *In the Matter of Promotion of Competitive Networks in Local Telecommunications Markets,* WT Docket No. 99-127, March 21, 2008 | 51, 52 |
| 29 | FCC, *In the Matters of Appropriate Framework for Broadband Access to the Internet over Wireline* | 19 |

[1] Cross references to the main submission are referred to as T1, T2, T3 etc. as it corresponds to the tab in the index of sources referred to in the main submission. Similarly for each of the appendices, cross references are referred to as the Appendix letter and Tab number (e.g. A2 for the second tab in the index of sources to the Harris Report, which is found at Appendix A to the main submission.

| | | |
|---|---|---|
| | *Facilities, Report and Order and Notice of Proposed Rulemaking*, September 23, 2005 | |
| 30 | FCC, *Petition of ACS of Anchorage, Inc. Pursuant to Section 10 of the Communications Actof 1935, As Amended, For Forebearance From Sections 251(C)(3) And 252(D)1* WC Docket No. 05-281, January 30, 2007 | 105, 108 |
| 31 | FCC, *Petitions of the Verizon Telephone Companies for Forbearance Pursuant to 47 USC § 160(c) in the Boston, New York, Philadelphia, Pittsburgh, Providence and Virginia Beach Metropolitan Statistical Areas,* WC Docket No. 06-172 | 109, 110 |
| 32 | FCC, *Statistical Report on Average Rates for Basic Service, Cable Programming Service, and Equipment*, MM Docket No. 92-266, December 27, 2006 | 10 |
| 33 | Flannery, Cable & Telecom VoIP Success Driving Telco On-Net and Off-Net Video, Morgan Stanley July 23, 2007 | 26 |
| 34 | Flannery, *Telecom Services Cable Makes Further Inroads: CVC Tops VZ; WiFi and WiMAX to Come*, Morgan Stanley, May 11, 2008 | 30 |
| 35 | Ford and Koutsy, *In Delay There is No Plenty: The Consumer Welfare Cost of Franchise Reform Delay*, Phoenix Center Policy Bulletin No.13, January 2006 | 99 |
| 36 | Hurst, *Comcast, AT&T Rivalry Heats Up: Companies Blitz Metro Detroit Consumers with Ads Touting Deals on Digital TV, High-Speed Internet*, The Detroit News, December 18 2007 | 67, 103 |
| 37 | InStat, *The Worldwide Market for Cable Telephony Services*, April 2007 | 20, 21, 33, 84 |
| 38 | Knology, *Form 10-K Fiscal Year 2005* | 76 |
| 39 | Knology, *Form 10-K Fiscal Year 2007* | 75, 77, 78, 79 |

# TELSTRA CORPORATION LIMITED

This is an index of sources cited in Appendix C: Eisenach Report to *Telstra submission in reply to SingTel Optus submissions to the Australian Competition and Consumer Commission on Telstra's application for exemption from Telstra's standard access obligations in respect of the SingTel Optus HFC network dated 17 December 2007*, submitted on 26 June 2008.

| Tab[1] | Document | Footnote |
| --- | --- | --- |
| 40 | Martin, *Remarks to the Georgetown University McDonough School of Business Center for Business and Public Policy*, November 30, 2006 | 101 |
| 41 | Moffett, *U.S. Cable: Welcome to the '100 Club* Bernstein Research, July 19, 2007 | 18 |
| 42 | NCTA, *Industry Statistics* | 5, 92 |
| 43 | NCTA, *Top 25 Cable Systems* | 6 |
| 44 | OECD Policy, *IPTV: Market Developments And Regulatory Treatment,* December 19, 2007 | 90, 96, 97 |
| See T9 | OECD, *Broadband Subscribers per 100 inhabitants, by technology,* December 2007 | 35 |
| 45 | Pelcovits and Haar, *Consumer Benefits from Cable-Telco Competition* Micra Economic Consulting, November 2007 | 100 |
| 46 | RCN Corp press release, *RCN Corporation and Astound Broadband Close Sale of RCN's San Francisco Assets,* March 14, 2007 | 70 |
| 47 | RCN Corp, *Form 10-K Fiscal Year 2007* | 70 |
| 48 | RCN Corp, *Investor Relations* | 83 |
| See T11 | Singapore Telecommunications Limited and Subsidiary Companies, *Management Discussion and Analysis of Financial Condition, Results of Operations and Cash Flows for the Fourth Quarter and Financial Year Ended 31 March 2004* | 46 |
| See T13 | Singapore Telecommunications Limited and Subsidiary Companies, *Management Discussion and Analysis of Financial Condition, Results of Operations and Cash* | 118 |

[1] Cross references to the main submission are referred to as T1, T2, T3 etc. as it corresponds to the tab in the index of sources referred to in the main submission. Similarly for each of the appendices, cross references are referred to as the Appendix letter and Tab number (e.g. A2 for the second tab in the index of sources to the Harris Report, which is found at Appendix A to the main submission.

| | | |
|---|---|---|
| | *Flows for the Fourth Quarter and Financial Year Ended 31 March 2007* | |
| 49 | Singapore Telecommunications Limited and Subsidiary Companies, *Management Discussion and Analysis of Financial Condition, Results of Operations and Cash Flows*, 30 June 2007, 30 September 2007, 31 December 2007, 31 March 2008 | 118 |
| See T15 | Singapore Telecommunications Limited and Subsidiary Companies, *Management Discussion and Analysis of Financial Condition, Results of Operations and Cash Flows for the Fourth Quarter and Financial Year Ended 31 March 2008* | 46, 47, 93, 94 |
| See T17 | Telecommunications Review Panel, *Final Report*, 2006 | 19, 34 |
| 50 | U.S Census Bureau | 56, 68 |
| *51* | United States Court of Appeals for the District of Columbia Circuit *, On Petition for Review of an Order of the Federal Communications Commission, Brief for Petitioners the Verizon Telephone Companies,* Case No. 08-1012, June 3, 2008 | 110, 111, 112 |
| 52 | United States General Accounting Office, *Wire-Based Competition Benefited Consumers in Selected Markets* GA-04-241, February 2004 | 50 |
| 53 | Verizon Communications, *All About Verizon FiOS – Fact Sheet* | 81 |
| 54 | Verizon Communications, *Residential Packages* | 82 |
| 55 | Vittore, *Knology buys up Verizon video assets,* Telephony Online, July 18, 2003 | 76 |
| 56 | Waverman, Meschi, Reillier and Dasgupta, *Access Regulation and infrastructure Investment in the Telecommunications Sector: An Empirical Investigation,* LEGG, September 2007 | 88 |
| 57 | White, *Spending Wave Buoys Makers Of Network Gear* The Wall Street Journal, February 14, 2007 | 95 |
| 58 | Wide Open West, *About Us* | 59 |
| 59 | Wide Open West, *Internet for Business* | 60 |
| *60* | *Wireline Competition Bureau Discloses Cable Coverage Threshold in Memorandum Opinion and Order Granting Qwest Corporation Forbearance Relief in the Omaha Metropolitan Statistical Area*, WC Docket 04-223 Public Notice, 22 FCC Rcd 13561, 2007 | 108 |
| 61 | Wlodarczak, *Equity Research: U.S. Q1'08 Video/Data/Phone Trends*, Wachovia Capital Markets LLC, May 15, 2008 | 16, 23, 29, 32, 61 |

| | | |
|---|---|---|
| 62 | Yahoo! Finance, Knology Inc., Market capitalization as of June 16, 2008 | 11 |
| 63 | Yahoo! Finance, RCN Corp., Market capitalization as of June 16, 2008 | 12 |
| 64 | Yahoo! Finance, US – Australian Dollar exchange Rate as of June 16, 2008 | 121 |

# TELSTRA CORPORATION LIMITED

This is an index of sources cited in Appendix D: Ergas Report to *Telstra submission in reply to SingTel Optus submissions to the Australian Competition and Consumer Commission on Telstra's application for exemption from Telstra's standard access obligations in respect of the SingTel Optus HFC network dated 17 December 2007*, submitted on 26 June 2008.

| Tab[1] | Document | Footnote |
|---|---|---|
| See B1 | ACCC Fixed Service Review, *Second Position Paper*, April 2007 | 47 |
| 1 | ACCC, *Declaration of Local Telecommunications Services*, July 1999 | 47 |
| 2 | ACCC, *New Agenda for Prosperity – Communications*, March 2008 | 47 |
| See T2 | ACCC, *Telstra's Local Carriage Service and Wholesale Line Rental Exemption Applications – Draft Decision and Proposed Class Exception*, April 2008 | 47 |
| 3 | Aghion and Griffith, *Competition and Growth: Reconciling Theory and Evidence*, 2005 | 52 |
| 4 | Ben-David, Harvey and Graham, *Managerial Overconfidence and Corporate Policies*, November 2007 | 26 |
| 5 | *Boral Besser Masonary Ltd v Australian Competition and Consumer Commission* (2003) 195 ALR 609 | 31, 32 |
| 6 | Carlton and Perloff, *Modern Industrial Organisation*, 2005 | 20 |
| 7 | Crandall, Ingraham and Singer, *Do Unbundling Policies Discourage CLEC Facilities-Based Investments?*, Topics in Economic Analysis and Policy, 4(1), 2004 | 36 |
| 8 | *Earthlink v FCC* (2006) 462 F.3d | 38 |
| 9 | *East Australian Pipeline Pty Limited v Australian Competition and Consumer Commission* [2007] HCA 44 | 23 |
| 10 | Ergas, *Wrong Number: Australia's Telecommunications Mess and How to Fix It*, 2008 | 17 |
| 11 | FCC, *Competitive Networks Notice*, July 1999 | 37 |
| 12 | Guthrie, *Regulating Infrastructure: The Impact on Risk and Investment*, Journal of Economic Literature, 44(4), 2006 | 29 |
| 13 | Hahn, *Government Analysis of the Benefits and Costs of Regulation*, 1998 | 20 |

[1] Cross references to the main submission are referred to as T1, T2, T3 etc. as it corresponds to the tab in the index of sources referred to in the main submission. Similarly for each of the appendices, cross references are referred to as the Appendix letter and Tab number (e.g. A2 for the second tab in the index of sources to the Harris Report, which is found at Appendix A to the main submission.

| | | |
|---|---|---|
| 14 | Hausman and Sidak, *Did Mandatory Unbundling Achieve its Purpose? Empirical Evidence from Five Countries*, Journal of Competition Law and Economics, 2005 | 18, 36, 48, 51 |
| 15 | Hausman, *Valuing the effect of regulation on new services in telecommunications*, Brookings Papers on Economic Activity Microeconomics, 1997 | 29 |

# TELSTRA CORPORATION LIMITED

This is an index of sources cited in Appendix D: Ergas Report to *Telstra submission in reply to SingTel Optus submissions to the Australian Competition and Consumer Commission on Telstra's application for exemption from Telstra's standard access obligations in respect of the SingTel Optus HFC network dated 17 December 2007*, submitted on 26 June 2008.

| Tab[1] | Document | Footnote |
|---|---|---|
| 16 | Holt, *Markets, Games and Strategic Behaviour*, 2007 | 25 |
| 17 | *Illinois Bell Telephone Co. Charles E. Box* et al. *Commissioners of the Illinois Commerce Commission and Access One Inc* (2008) | 38 |
| 18 | Laffont, Rey and Tirole, *Competition between telecommunications operations*, European Economic Review, 41, 1997 | 39 |
| 19 | Melitz, *When and how should infant industries be protected?*, October 1999 | 49 |
| 20 | Noll, *Economic perspectives on the politics of regulation* in Schmalensee and Willig (Eds), Handbook of Industrial Organisation, Volume 2, 1989 | 20 |
| 21 | Pindyck, *Mandatory Unbundling and Irreversible Investment in Telecom Networks*, NBER Working Paper No. 10287 | 36 |
| 22 | *Re Duke Eastern Gas Pipeline Pty Ltd* [2001] ACompT 2 (4 May 2001) | 22 |
| 23 | Tullock, *The Welfare Costs of Tariffs, Monopolies and Theft*, Western Economic Journal, 1967 | 24 |
| 24 | *United States Telecom Association v FCC* (2004) 359 F. 3d | 38, 48, 51 |
| 25 | Vickers, *Concepts of Competition*, Oxford Economic Papers, 47, 1995 | 40 |

[1] Cross references to the main submission are referred to as T1, T2, T3 etc. as it corresponds to the tab in the index of sources referred to in the main submission. Similarly for each of the appendices, cross references are referred to as the Appendix letter and Tab number (e.g. A2 for the second tab in the index of sources to the Harris Report, which is found at Appendix A to the main submission.

| Document | Footnote/paragraph reference[1] |
|---|---|
| Australian Competition and Consumer Commission, *Telstra's exemption application in respect of the Optus HFC network: Draft Decision*, September 2008 | 3, 7, 8, 9, 13, 85 ,86, 100, 101, 102, 117, 125, 126, 135, 137, 143, 145, 157, 160, 161, 162, 163, B1, B4, B13, B17, B 22 |
| Telstra Corporation Ltd, *Application for exemption from Standard Access Obligations in respect of SingTel Optus HFC network*, 17 December 2007 | 4, 11, 93, 94, 159, B3 |
| *Seven Network Limited (No. 4)* [2004] ACompT 11 | 5, 6, 46 |
| OfCom, *Review of the wholesale broadband access markets 2006/07,* Explanatory Statement and Notifications, 15 November 2007 | 10 |
| Henry Ergas, Expert Report, Appendix D to *Telstra submission in reply to SingTel Optus' submissions to the Australian Competition and Consumer Commission on Telstra's application for exemption from standards access obligations in respect of SingTel Optus HFC network dated 17 December 2007* | 14 |
| Debra Aron and Robert Crandall, White Paper, *Investment in Next Generation Networks and Wholesale Telecommunications Regulation*, October 2008 | 15, 16 |
| ERG Common Position on the approach to Appropriate remedies in the new regulatory framework, 23 April 2004 | 17 |
| National IT and Telecom Agency, *Mapping of Broadband Access Services in Denmark – Status by mid 2004*, December 2004 | 18 |
| Ofcom, *Final Statements on the Strategic Review of Telecommunications, and undertakings in lieu of a reference under the Enterprise Act 2002,* 22 September 2005 | 19 |
| Commerce, Industry and Technology Bureau, *Legislative Council Brief – Review of Type II Interconnection Policy,* July 2004 | 20 |
| Bell Aliant, 5Mbps | 22 |
| Bell Canada, 7Mbps | 22 |

[1] Documents referred to in Annexes to the October submission are referenced as A, B or C and the footnote reference in the corresponding annexure. For instance, Footnote 1 in Professor Martin Cave's report, found in Annex A is referenced as A1. If it is not otherwise made clear, references in this column are to footnotes.

| Document | Footnote/paragraph reference[1] |
|---|---|
| SaskTel 7Mbps | 22 |
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| Bell Aliant, 10Mbps | 23 |
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| Document | Footnote/paragraph reference[1] |
|---|---|
| Plusnet | 28, C6 |
| Post Office | 28, C6 |
| Sky | 28, C6 |
| TalkTalk | 28, C6 |
| VirginMedia ADSL | 28, C6 |
| TechRadar UK, *Virgin: 50 Mbps broadband for all next year*, 27 November 2007 | 29 |
| VirginMedia HFC | 29, C6 |
| HetNet[2] | 30 |
| KPN | 30 |
| Telfort | 30 |
| XS4 | 30 |
| Internetten.nl – Comparator website[3] | 30, 31,32,33 |
| Concepts ICT, FTTH outside Amsterdam | 31 |
| InterNL, FTTH Amsterdam | 31 |
| BBned | 32 |
| Tele2 | 32 |
| Caiway Cable TV | 33 |
| UPC Cable TV | 33 |

[2] Due to KPN's branding strategies, speeds on HetNet's network have been reduced to 4Mbps.

[3] Speeds set out on this website reflect the constant state of flux of the Dutch market, as they do not provide up-to-date speeds offered by Dutch operators.

| Document | Footnote/paragraph reference[1] |
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| Ziggo Cable TV[4] | 33 |
| AAPT | 34 |
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| OntheNet | 34 |
| People Telecom | 34 |
| SingTel Optus | 34, 35, 177 |
| TPG/Soul | 34 |
| Bigpond Cable | 35 |
| F Caio, *The Next Phase of Broadband UK: Action now for long term competitiveness,* Review of Barriers to Investment in Next Generation Access – Final Report, September 2008 | 36, 118, 150 |
| M Cosgrave, Group General Manager, Communications Group, ACCC, "The regulation of Australia's broadband market", speech to the AFR Broadband Australia 2007 Conference, 21 August 2007, Sydney | 37 |
| ACCC, *Telstra's exemption application relating to SingTel Optus' HFC network: Discussion Paper,* January 2008 | 38, 155 |
| *Seven Network Limited v News Limited* [2007] FCA 1062 | 41, 47, 48, 49, 50, 51, 52, 63, 64, 98, 99 |
| ACCC, *Emerging market structures in the communications sector*, June 2003 | 42, 73, 81 |

[4] Ziggo has recently announced plans to move to DOCSIS 3.0, to offer higher speeds over its network.

| Document | Footnote/paragraph reference[1] |
| --- | --- |
| Ofcom, *Pay TV second consultation*, 30 September 2008 | 43, 44, A5 |
| FOXTEL Management Pty Ltd, *Undertaking to the Australian Competition and Consumer Commission by FOXTEL Management Pty Ltd (for and on behalf of the FOXTEL Partnership) and FOXTEL Cable Television Pty Limited*, November 2002, varied 18 December 2003 and 12 February 2007 | 45 |
| FOXTEL, Explanation of FOXTEL's Undertakings to the Australian Competition and Consumer Commission, September 2002 | 46 |
| C7 Proceedings, Paul Fletcher Witness Statement, 26 October 2004 | 54, 56, 58, 59, 61, 62, 66, 74, 77 |
| C7 Proceedings, Lee Hsien Yang Witness Statement, 16 September 2005 | 55, 57, 60, 98 |
| SingTel Optus press release, *Optus welcomes ACCC's decision,* 13 November 2002 | 65 |
| C Kruger, 'Optus gets FOXTEL digital pay TV', Sydney Morning Herald, 8 April 2005 | 67 |
| C7 Proceedings, Paul Fletcher Second Witness Statement, 28 March 2006 | 67, 69, 75, 76, 78 |
| M Maiden, 'Watershed deal ends FOXTEL pay TV brawl', The Age, 8 April 2005 | 67, 71 |
| Optus, 'Optus to sell FOXTEL Digital in new subscription TV Drive', Media Release, 7 April 2005 | 67, 70 |
| ACCC, *FOXTEL/Optus Arrangements: Issues Paper*, September 2002. | 73 |
| VirginMedia, *Annual Report* 2006 | 80 |
| OECD, Broadband subscribers per 100 inhabitants (Dec. 2007) | 82, B24 |
| VirginMedia, Press release, "Virgin Media boosts Britain's broadband speeds", 28 January 2008 | 83 |
| ACCC, *Access Pricing Principles – Telecommunications: A Guide,*July 2007 | 84 |
| M G. Harris, *Expert report – issues arising from Optus' submissions on Telstra's proposed HFC exemption,* 23 June 2008 | 87 |
| M G Harris, *Expert report – use of HFC to deliver broadband services,* 12 December 2007 | 88 |

| Document | Footnote/paragraph reference[1] |
|---|---|
| *SingTel Management Discussion and Analysis of Financial Condition, Results of Operations and Cash Flows for the First Quarter Ended 30 June 2008* (SingTel Management Discussion June 2008) | 89 |
| *Australian Gas Light (ACN 052 167 405) v Australian Competition and Consumer Commission (No 3)* (2003) ATPR 41-966 | 103, 104 |
| J Eisenach, *Broadband Policy: Does the US have it right after all?* | 107, 108, 148, 149 |
| Hans Frederiszich, Michael Grajek & Lars-Henrik Röller, *ESMT White Paper, Analyzing the relationship between regulation and investment in the telecom sector,* ESMT No. WP-108-01 | 109, 110, A3 |
| ABN Amro, *Singapore Telecom, Risk and reward: out of balance, 25 September 2008* | 115, A2 |
| Australian Bureau of Statistics, *Internet Activity, Australia, June 2008,* 22 September 2008 | 119, 139, 170 |
| Explanatory Memorandum, *Trade Practices Amendment (Telecommunications) Bill 1997 (Cth)* | 121 |
| *Re: Telstra Corporation Ltd (No 3)* (2007) ATPR 42-160 | 122, 123, 124 |
| ACCC, *Local Carriage Service and Wholesale Line Rental Exemption Applications: Final Decision and Class Exemption,* August 2008 | 127, 128, 129, 130 |
| Telstra Corporation Ltd, *Response to ACCC Discussion paper on Telstra's exemption application relating to SingTel Optus' HFC networks,* 25 March 2008, Confidential version | 134 |
| G Yarrow, Annex D to Telstra's *Public submission on vertical integration and separation,* June 2008 | 136 |
| Centre for Economics and Related Business Research Ltd, *The Economic Impact of a Competitive Market for Broadband,* November 2003 | 140 |
| ACIL Tasman, *Regional Economic impacts of broadband adoption in Victoria*, June 2004 | 141 |
| Climate Risk, *Towards a high-bandwith low carbon future: Telecommunications-based opportunities to reduce greenhouse gas emissions'*, November 2007 | 142 |
| Connected Nation Inc., *The economic impact of stimulating broadband nationally,* February 2008 | 142 |
| SingTel Optus, *Response to ACCC Discussion Paper*, March 2008 | 144, 156, 158, 165, 166, B6 |

| Document | Footnote/paragraph reference[1] |
|---|---|
| M Cave, Annex C to Telstra's *Public submission on the roll-out and operation of a National Broadband Network for Australia*, June 2008 | 146, 147 |
| European Commission, *Explanatory note accompanying document to the Commission Recommendation on regulated access to Next Generation Access Networks (NGA) (draft)* | 151 |
| Ofcom, *Delivering super-fast broadband in the UK: setting the right policy framework, Consultation,* 23 September 2008 | 152, C18 |
| *Re Sydney Airports Corp Ltd* (2000) 156 FLR 10 | 153 |
| Comcast, Comcast begins rollout of extreme 50 Mbps High-Speed Internet service, 22 October 2008 | para 210 (d) (iii) |
| National Electricity Law | 154 |
| National Gas Law | 154 |
| SingTel Optus, Optus Supplementary Submission to Australian Competition and Consumer Commission on Telstra's December 2007 Exemption Application for Fixed Line Services in the Optus HFC Area | 164, 165, 167 |
| Telstra Corporation Ltd, *Telstra submission in reply to SingTel Optus' submissions to the Australian Competition and Consumer Commission on Telstra's application for exemption from standard access obligations in respect of the SingTel Optus HFC network dated 17 December 2007*, Confidential Version, June 2008 | 168 |
| ACCC, "Consumers continue to reap benefits from competition in telecommunications", New Release, 13 June 200 | 169 |
| iiNet, *Investor Discussion Pack*, 30 September 2009 | 171, 172 |
| Reuters, Full description of Primus Telecommunications Group Inc | 173 |
| Primus, "Primus Australia Boosts Fibre Optic Network Capacity Ten Fold", Press release, 13 September 2007 | 174 |
| Soul Australia, "SP Telemedia to merge with TPG", ASX/Press release, 7 February 2008 | 175 |
| Bigpond, *Check broadband availability facility on website*" | 176 |

| **Document** | **Footnote/paragraph reference**[1] |
|---|---|
| TPG, *ADSL Plans/ADSL + VoIP Plans* | 178 |
| AAPT, *Can I have it?* | 179 |
| Primus, *Broadband FAQ* | 180 |
| People Telecom, *Broadband checker* | 181 |
| Internode, *About Us* | 182 |
| Internode, *FAQs – Getting connected to ADSL* | 183 |

**Annex A Martin Cave expert report**

| Document | Footnote[5] |
|---|---|
| M Cave, A Note on two points in Optus' submission, June 2008 | A1 |
| ABN Amro, Singapore Telecom – risk and reward out of balance, 25 September 2006 | A2 |
| Hans Frederiszich, Michael Grajek & Lars-Henrik Röller, ESMT White Paper, Analyzing the relationship between regulation and investment in the telecom sector, ESMT No. WP-108-01 | A3 |
| M Cave, Applying the ladder of investment, December 2007 | A4 |
| Ofcom, Pay TV second consultation: Access to premium content, September 2008 | A5 |

[5] Where a source in an annex (shaded green) has been referred to in the body of Telstra's October submission, a copy is not reproduced within the sub-folder on the CDs. Please refer to the folder titled 'Telstra Main Submission' to find a copy of the source document.

**Annex B: Eisenach Report October 2008**

| Document | Footnote[6] |
|---|---|
| Australian Competition and Consumer Commission, *Telstra's exemption application in respect of the Optus HFC network: Draft Decision*, September 2008 | B1, B4, B13, B17, B 22 |
| J Eisenach, *Comparative analysis of communications markets as it relates to the economic viability of Optus' HFC network and Telstra's proposed HFC exemption*, Australian Competition and Consumer Commission, Expert report on behalf of Telstra Corporation Ltd, 23 June 2008 | B2, B12 |
| Telstra Corporation Ltd, *Application for exemption from Standard Access Obligations in respect of SingTel Optus HFC network*, 17 December 2007 | B3 |
| SingTel Optus, *Response to ACCC Discussion Paper*, March 2008 | B6 |
| SingTel Optus, *Response to ACCC Discussion Paper*, March 2008, Confidential Version | B8, B9 |
| J Wlodarczak, *Equity Research: US Q1'08 Video/Data/Phone Trends*, Wachovia Capital Markets LLC, 15 May 2008 | B14 |
| SingTel Optus*, Management Discussion and analysis of financial condition, results of operations and cash flows for the fourth quarter and financial year ended 31 March 2008* | B15, B16, B25 |
| OECD, Broadband subscribers per 100 inhabitants (Dec. 2007) | B24 |

[6] Where a source in an annex (shaded green) has been referred to in the body of Telstra's October submission, a copy is not reproduced within the sub-folder on the CDs. Please refer to the folder titled 'Telstra Main Submission' to find a copy of the source document.

**Annex C: Human Capital Report**

| Document | Page reference[7] |
|---|---|
| Ofcom, *The Communications Market*, 14 August 2008 | C3 |
| Virgin Media, *Virgin Media launches and announces unique new TV channel and expansion plans*, Press Release, 8 February 2007 | C4 |
| UK ISP websites, AoL | C6 |
| UK ISP websites, Be unlimited package | C6 |
| UK ISP websites, Be value package | C6 |
| UK ISP websites, BT | C6 |
| UK ISP websites, Demon | C6 |
| UK ISP websites, Madasafish | C6 |
| UK ISP websites, O2 | C6 |
| UK ISP websites, Orange | C6 |
| UK ISP websites, Plusnet | C6 |
| UK ISP websites, Post Office | C6 |
| UK ISP websites, Sky | C6 |
| UK ISP websites, TalkTalk | C6 |
| UK ISP websites, Tiscali | C6 |
| UK ISP websites, VirginMedia ADSL | C6 |

[7] Where a source in an annex (shaded green) has been referred to in the body of Telstra's October submission, a copy is not reproduced within the sub-folder on the CDs. Please refer to the folder titled 'Telstra Main Submission' to find a copy of the source document.

| **Document** | **Page reference**[7] |
|---|---|
| UK ISP websites, VirginMedia HFC | C6, C7 |
| Broadband Expert Website, *Broadband Speed Test 2 mbps* | C6 |
| Broadband Expert Website, *Broadband Speed Test, 8 Mbps* | C6 |
| Broadband Expert Website, *Broadband Speed Test, 16+ Mbps* | C6 |
| Virgin Media, *Virgin Media Boosts Britain's Broadband Speeds Free upgrades for 4Mb customers and a new 50Mb service*, Press Release, 28 January 2008 | C8 |
| ASA, *Adjudications against Virgin Media Ltd* , 2 July 2008 | C9 |
| Andrew Parker, *BT gambles on speedy fibre download times*, Financial Times, 15 July 2008 | C10 |
| C Saran, *What will be the impact of BT's fibre optic network?*, Computer Weekly, 18 July 2008 | C11 |
| S Aughton, *BT rejects fibre-to-the-home*, PC Pro, 17 November 2006 | C11 |
| R Wray, *Virgin Media aims for 40 times faster broadband*, The Guardian, August 8 2008 | C12 |
| M Sweeny, *Olympics: Virgin Media wants Usain Bolt to appear in broadband ads*, The Guardian, 21 August 2008 | C14 |
| Virgin Media, *Annual Report 2007* | C15, C17 |
| Virgin Media, *Investor Relations Presentation Second Quarter 2008*, 7 August 2008 | C15, C17 |
| Virgin Media, *Response Of Virgin Media To Ofcom's Consultation Document of 18 December 2007*, 7 March 2008 | C16 |
| Ofcom, *Delivering super-fast broadband in the UK: setting the right policy framework, Consultation,* 23 September 2008 | C18 |