



TELSTRA CORPORATION LIMITED

Domestic Transmission Capacity Service Review

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Overview

The Australian Competition and Consumer Commission (**Commission**) has sought industry comment on the possible re-declaration of the domestic transmission capacity service (**DTCS**), which is due to expire in March 2009. In undertaking its review, Telstra believes the Commission must consider a number of critical factors that will underpin the development of industry for the next few years.

First, in the interests of promoting competition, and ultimately the long-term interests of end users (**LTIE**), it is critical that the Commission continues along the deregulatory path recently taken in relation to Telstra's exemption applications for the service. However, this regulatory rollback needs to happen **in line with the emergence of competition**, rather than in the delayed and piecemeal fashion that has occurred to date.

Second, the DTCS is a complex service with many dimensions. As entrants have laid new networks and as technology has developed, the pattern of competition has altered across these dimensions. In a world where overlapping fibre rings are installed, alternative technologies are deployed, and high-end users can either self-supply or provide sufficient revenue to justify one-shot fibre investment through the sheer size of their account, it is no longer enough to simply count the number of competitors on routes or in areas based upon the location of competitors. Instead, the Commission needs to regularly review technological and competitive developments within the industry, and assess competition in relation to each of the dimensions of the service, to ensure that regulation only occurs where it is necessary.

Telstra believes that given these factors, the Commission should:

- make any declaration of the DTCS for a relatively short term only. A five-year declaration period is too long for the Commission to assess key market and technological developments that occur within the industry. In this instance, a re-declaration period of 16 months would bring the DTCS into line with the proposed timing of the rollover of the re-declaration of the other fixed network services; and
- carve out from the scope of the re-declaration:
 - aspects of the DTCS that are already the subject of exemptions granted by the Commission, as well as those that are revealed under the record-keeping rules or other sources to be already subject to significant infrastructure competition;
 - high speed tails at a designated rate of 8 Mbps¹ and higher orders as this market is already intensively competitive and there is no justification for maintaining regulation of these services, especially where competing fibre is readily observable. As a start, these high speed tails should be excluded in geographic areas where the 'Telstra plus two' threshold is met; and

¹ For convenience, any reference in this submission to a rate of "8 Mbps" should be taken as meaning the designated rate of 8.192mbps as set out in the definition of the declared service.

- transmission tails at a designated rate of 2 Mbps,² where those tails are located within 1km of a Telstra exchange. ULLS is a ready substitute for these services, removing the need for any regulation of these services.

It is imperative that regulation of the DTCS keeps pace with market developments and that regulatory rollback occurs with the emergence of competition and developments in technology, not years after the event. This will ensure that infrastructure build is encouraged at a time when it is critically needed.

To achieve this, Telstra believes the Commission should consider adopting a process for the regulation of the DTCS that maximises the potential for regulation to be reviewed on a regular basis, rather than relying upon members of the industry to initiate lengthy and costly exemption processes to prompt regulatory rollback. For this reason, Telstra suggests that the Commission should also:

- initiate a class exemption process annually by reviewing the data received under the *Audit of Telecommunications Infrastructure Assets – Record Keeping Rules 2007* (**Infrastructure RKR**s) and other data possessed by the Commission regarding the level of competition within the industry. This can be done using a threshold test, operating as a screening device to identify services that should fall outside the ambit of regulation because of the level of facilities-based competition they face; and
- at the same time, develop approaches that go beyond the application of simple thresholds, in order to account for competition faced by providers using other technologies (such as microwave); and enabling regulatory relief ‘ahead of the curve’, by factoring in potential as well as actual competition, given the positive competitive benefits that deregulation has on the LTIE by improving incentives for competitive investment.

These actions would best promote the LTIE by encouraging efficient investment in facilities that supply the DTCS, and thereby promoting the most vigorous and enduring form of competition in the markets in which those services are offered. They would also ensure that the deregulatory process is more responsive to competitive conditions than presently occurs, where significant lags have been imposed through a combination of long-term declarations, extended exemption processes, and further delays built in to account for perceived transitional issues.

Telstra’s submission is structured as follows:

- (a) Part A explains the various dimensions of the DTCS, and why the approach of simply counting the number of competitors on routes is insufficient to enable the Commission to properly regulate the service in accordance with LTIE principles;
- (b) Part B examines why it is critical the Commission’s deregulatory approach to date be continued and accelerated, and why an anticipatory approach - that takes into account the impact of deregulatory actions - is superior;
- (c) Part C explores the deregulatory options facing the Commission;
- (d) Part D addresses issues of timing, explains why long declaration periods are contrary to the LTIE and suggests how the class exemption should be used to ensure that redundant and costly regulation is not perpetuated;

² For convenience, any reference in this submission to a rate of “2 Mbps” should be taken as meaning the designated rate of 2.048mbps as set out in the definition of the declared service.

- (e) Part E examines other issues in re-declaration, including service scope and the implications of alternative technologies; and
- (f) Part F considers pricing issues.

Schedule 1 elaborates Telstra's responses to specific questions posed by the Commission's discussion paper; and Attachments 1 to 4 provide details regarding competitive options.

A Transmission is a multi-dimensional service

Unlike other regulated services (such as call types, line rental, etc), the DTCS is a multi-dimensional service. It incorporates different types of transmission within the one service. Regulating it - and de-regulating it - requires consideration of a broad range of factors affecting those many dimensions.

Historically, the Commission has applied a simple, geographical analysis based on the location of alternative infrastructure, and has not distinguished between various transmission services based on other factors. This has led to a relatively 'blunt' and static analysis of the competitive factors at work, and has resulted in a failure to recognise more dynamic and nuanced aspects of competition based on other distinctions.

As the market becomes increasingly populated by competitors, technologies and service options, it is important to ensure the diverse and dynamic dimensions of the service are properly assessed, so the level of competition for each type of service can be understood and appreciated. This is especially so because a blunt and static approach to declaration will tend to ignore the granularity of competitive constraints and lead to 'over-declaration', with all of its attendant costs and dampening of investment incentives.

The dimensions of a competitive analysis of the DTCS include:

- (a) **High vs Low speed capacity links:** Where there is demand for capacity services at higher orders in the customer access network, it is more financially viable (as detailed below) for operators to invest in capacity themselves, and for third parties to enter the market in order to service that demand, or to bond several 2 Mbps services together. For DTCS services at a lower 2 Mbps rate, the ULLS is a viable substitute for the service, at least within certain distance limitations;
- (b) **Alternative transmission technologies:** Alternative transmission technologies - such as DSL, free space optics and wireless - cannot be viewed in isolation from the existing family of the DTCS. These technologies and services have very real potential to add to the competitive landscape and competitively constrain the DTCS;
- (c) **Tails vs IEN vs local exchange links:** The current DTCS service definition incorporates several types of transmission services, including Inter Exchange Network (**IEN**) transmission, transmission tails and local exchange links. When the Commission is considering the need for regulation of the service, it is important that each type of service is examined independently and the competitive constraints for that type are fully considered. The Commission cannot simply adopt a "one size fits all" approach; and
- (d) **End use:** Some of the declared transmission services are consumed by end users directly (for example, tails are used by large business customers to connect their

regional offices) while others are resold or repackaged as part of a downstream telecommunications service. The end or final use of the service is an important factor to consider, since end user interests are what is protected by the LTIE test.³ At least two important factors emerge when end use is considered:

- (i) First, transmission of higher speeds (ie 8 Mbps and above) is usually provided to large corporate and government customers. These customers need to be assessed holistically as the purchasing power of the whole account, with the volume and scope of services acquired, as well as the leverage provided by the initial investment and the possibility of self-supply, means telecommunications suppliers often build a direct link to them in order to win and retain these large accounts;
- (ii) Second, competitive retail markets will discipline upstream markets. Retailers will seek to lower their cost base and will not be prepared to pay more than a competitive price, especially in circumstances of strong demand growth for the DTCS, and the possibility of facilities bypass, either through the rollout of fibre or alternate technologies.

Any re-declaration of the DTCS must take these various factors into account. Failure to do this will largely ignore the significant market developments that have already occurred, and which are likely to occur, in relation to the different types of transmission services. The Commission must also assess the level of actual and potential competition in relation to each dimension of the DTCS. For instance, the ULLS is a substitute for some services such as transmission tails (up to 2 Mbps) within 1 km of the exchange, whereas microwave is a substitute for others.

To best promote the LTIE, it is important for the Commission to ensure regulation does not occur in relation to aspects of the DTCS which are already competitive.

B De-regulation and efficient investment go hand-in-hand

B.1 Over time, the Commission has progressively de-regulated domestic transmission

As noted in the Discussion Paper, the Commission has progressively de-regulated the supply of the DTCS. Initially this occurred by monitoring the structure and conduct of the market. More recently, it has occurred as a result of exemption applications by Telstra.⁴ The information provided by Telstra in support of its exemption applications has demonstrated there is substantial and intensifying facilities-based and services-based competition for the provision of the DTCS in significant areas, showing that in many areas regulation's work is done and its ambit should be reduced.

But the Commission's task in assessing the level of competition that has already developed within the industry for transmission services, and that which is likely to develop in the near future, is by no means complete. The past four years has seen the Commission de-regulate only when prompted by Telstra's exemption applications. Yet these have been very limited in their approach: for example, the Commission adopted the "Telstra plus two other optical fibre competitors" rule previously established by the Commission (which Telstra considers is too conservative); the Commission's decisions were limited in terms of geographic scope; and

³ Intermediate users and wholesale markets do not of themselves constitute a competition policy objective of Part XIC, except insofar as they promote the LTIE.

⁴ ACCC, Telstra's domestic transmission capacity service exemption applications, Final Decision, November 2008 (**Final Decision**).

the Commission did not consider alternative technologies which may be used to supply transmission services. It is therefore necessary for the Commission in this review to look more broadly to consider other market developments which have also led to competitive transmission supply, including the use of microwave technology; the substitutability of ULLS for transmission tails (up to 2 Mbps) within distance limits; the competitive supply of high-speed transmission tails; and other factors.

B.2 Firms are progressively investing in competitive infrastructure to meet rising demand

Demand for transmission is rising. As broadband access speeds grow, and the number and range of bandwidth-hungry devices, services and applications increases, the demand for the DTCS continues to rise strongly. For example, the demand for Web 2.0 applications has grown exponentially over the last few years. YouTube now serves over 1 billion views daily,⁵ and comprises nearly 10% of all web traffic.⁶ Today, this one service accounts for more traffic than the entire internet did in the year 2000.⁷

This is consistent with growth in the downstream markets identified by the Commission, including (in particular) data and IP-related markets.⁸ As next-generation access is deployed, this will be even more pronounced as it would likely stimulate entry, expansion and end-user demand.

Other market participants appear to agree with the view that demand is inexorably growing: SingTel Optus has stated that “Sufficient capacity is a crucial requirement....capacity demands on major capital-regional routes are high, and with increasing take-up of broadband, increasingly rapid”.⁹

Demand for transmission bandwidth is expected to grow considerably in the future, driven by the introduction of new services including internet data streaming and TV applications over fixed and mobile services:

“The advent of higher definition video content together with user behavioural changes such as increasing personalisation of programme material ...will drive huge increases in network bandwidth. When combined with distributed storage and distributed content systems such as peer to peer file sharing, sustained, busy period, user bandwidths could go beyond 10 Mb/s with peak rates requiring several hundred Mb/s to individual users.

These levels of bandwidth demand could drive two or three orders of magnitude worth in network bandwidth over the next ten years.”¹⁰

Irrespective of whether it is CBD, loops, alternative technologies, fibre routes or self supply, there is a dynamic range of different ways that competitors investing in infrastructure are meeting demand.

Over the past few years, many entrants have laid fibre to offer transmission services. There are now at least 17 fibre network owners who utilise their assets to offer a DTCS equivalent

5 See http://www.wsj.com/public/article_print/SB121557163349038289.html.

6 See <http://www.ellacoya.com/news/pdf/2007/NXTcommEllacoyaMediaAlert.pdf>.

7 See <http://www.nytimes.com/2008/03/13/technology/13net.html>.

8 See Discussion Paper, page 32, citing the Commission's Final Exemption Decision.

9 Optus Submission to ACCC on Telstra's Exemption Application for the Domestic Transmission Capacity Service, November 2007, page 18.

10 CIP Technologies and David Payne, Institute of Advanced Telecommunications, Swansea University 2008, page 2.

service (both full service and niche providers) that compete with Telstra: Optus, NextGen, Nexium, Qld Rail, Transgrid, VicTrack, Digital River, SPI Ausnet, Pipe Networks, Primus, PowerTel, Country Energy, UEComm, AAPT, Ipera, Amcom, Ergon and Silk Telecom. There are also currently at least 28 long haul microwave owners, 65 fixed wireless base station owners, and 26 fixed wireless broadband access networks. Satellite is also used by a number of carriers to deliver data transport services; and copper is also used to deliver transmission services of up to 2 Mbps, and speeds in multiples of 2 Mbps through the use of copper bonding.

In some cases, this infrastructure build has been quite dramatic. For example, in 2006, Optus laid fibre to offer transmission services for a specific event, namely the Australian Open. In its press release Optus detailed that it laid 5 km of fibre in less than 70 days “to get Tennis Australia communications up and running and ensure mission critical media services would operate without outages”. Optus stated that it also was able to increase and decrease capacity as it “lights-up the fibre to cater for the increased service demand and on conclusion (of the Open) Optus ‘turns-off’ services specific to the tournament”.¹¹

In addition, Telstra notes that Primus Australia is building additional capacity on existing routes. In September 2007, Primus announced that it was “boosting its fibre optic transmission capacity by ten fold in response to customer demand for broadband capacity”. Primus stated that its DSLAM exchanges would be connected with transmission using Wave Division Multiplexing (WDM) with each site readily upgradeable to speeds as high as 10 Gigabits per second dedicated per site.¹²

Telstra has also provided evidence to the Commission showing that wholesale customers use alternative services such as ULLS instead of acquiring transmission tails. This factor, combined with the abundance of microwave in metropolitan areas and the use of microwave by mobile carriers for backhauling traffic to and from their mobile base stations, shows that competitive constraints on the supply of the DTCS are significant and arise from sources that are diverse and ever-increasing.

Moreover, existing capacity does not preclude a new entrant from building additional capacity.¹³ Excess capacity, to the extent that it exists, is not a barrier to entry as evidenced by the large and increasing number of competitors prepared to invest in transmission on the exemption routes. This was the conclusion reached recently by the Commission in “Telstra’s domestic transmission capacity service, exemption applications, Final Application” (**Final Decision**) that incumbent firms are not using excess capacity to deter new entrants from establishing rival networks.¹⁴

Further support of the viability of alternative infrastructure build has been provided by Telstra in the form of an expert report by Mike Smart, as part of Telstra’s submission to the Commission on the DTCS in December 2007. In his report, Mr Smart concluded the payback periods to recoup the cost of building new fibre tails is between 3-5 years in most CBDs for a single 34/45 service, and about 1-3 years for a single 155 Mbps service. This was based on the

11 Optus, Game, Set and Match, Case Study: Tennis Australia. See http://optus.com.au/dafiles/OCA/Business/Solutions/CaseStudies/StaticFiles/Documents/TennisAustraliaCaseStudy_1207a.pdf.

12 See <http://www.primus.com.au/PrimusWeb/AboutUs/News/Primus+Australia+Boosts+Fibre+Optic+Network+Capacity+Ten+Fold.htm>.

13 As detailed in Telstra’s submission to the ACCC on Domestic Transmission Capacity Service exemption application, dated August 2007.

14 Final Decision, page 74.

conservative assumption that no economies of scope arise where a market entrant already has CBD IEN fibre which a tail service can spur off.¹⁵

It must also be recognised that much demand is met through self-supply, with carriers representing extensive retail demand installing many kilometres of high-capacity fibre or using microwave to serve their transmission needs. Any re-declaration decision must therefore be considered in the context of the ease of self-supply, and the significant proportion of demand that is served that way (rather than via the provision of a declared service).

These observations show the market for transmission services is already competitive in many areas, and the level and type of competition is only going to increase in the future. Regulation needs to keep pace with these developments, since de-regulation is an influential factor in determining the degree of investment, as we now discuss.

B.3 De-regulation both *reflects* and *stimulates* efficient investment

Economic theory points to a close relationship between regulation and investment incentives. As Professor Martin Cave has stated, “*while regulation properly responds to structure it also shapes it – in the sense that regulating an asset as a bottleneck will probably keep it one, even if it could be replicated.*”¹⁶

Practical experience bears this out, both in Australia and overseas. Eisenach and Singer examined the investment patterns in parts of the US where regulatory forbearance was under consideration, and found both incumbents and new entrants invested more once regulation was lifted.

*“We...find substantial evidence that incumbents withheld investment until a series of FCC decisions granted forbearance from unbundled access requirements for fiber-to-the-home (FTTH), fiber-to-the-curb (FTTC), and other “Greenfield” fiber lines. Following regulatory forbearance, we observe a sharp increase in incumbent broadband deployment...”*¹⁷

*“We find evidence that an entrant will significantly increase investment around the decision to forbear from regulating an existing access technology. We also find evidence that an incumbent will significantly increase investment around the decision to forbear from regulating a new service.”*¹⁸

A similar impact was felt in Hong Kong when the regulator, OFTA, scaled back regulation of the ULLS (known in HK as Type II interconnection). Deregulation was granted where there were two networks in place – not because two was necessarily considered the optimal number, but because lifting regulation was considered the best means of encouraging the development of more networks:¹⁹

15 This assumption is conservative because most CBD tail providers would also have their own CBD IEN, and therefore be able to connect customers over relatively shorter tails by building a spur from their existing fibre IEN, rather than a central point. Similarly, tail services located at one building can be used to run a spur to neighbouring buildings, which again reduced the cost of installation.

16 Professor Martin Cave, Public submission on the roll-out and operation of a National Broadband Network for Australia, June 2008, page 6.

17 Eisenach J and Singer H, *Irrational expectations: can a regulator credibly commit to removing an unbundling obligation?*, December 2007, page 18.

18 *ibid*, page 31

19 OFTA, Legislative Council Brief, Review of Type II Interconnection Policy, File Ref: CTB/T 56/2/1(04) , pages 6 and 10 respectively.

“Withdrawing mandatory Type II interconnection from these buildings would send a clear signal to the carriers, encouraging them to roll out their networks to buildings if they are not to be left out ... “

“The option of maintaining the status quo would be untenable as it would encourage some carriers to continue to rely on Type II interconnection to reach customers, thereby discouraging further investment in advanced telecommunications networks.”

OFTA also set a sunset date for total withdrawal of ULLS as a regulated access service (except for households where duplication was not feasible). Market outcomes suggest that access network investment was stimulated by these actions.²⁰ In July 2008, OFTA stated *“that over 81% of Hong Kong households enjoy a genuine choice of at least two fixed network operators, demonstrating that facility-based competition has developed in the fixed market successfully”*.²¹ Additionally, 58% of households are provided with at least 3 customer access networks. When the decision was made to withdraw regulation on the service in July 2004, only about 53% of households were provided with two customer access networks. OFTA submits that the significant increase in the number of households testifies the success of their policy on facilities based competition and the “continual effort made by fixed network operators in investing in the infrastructure”.²²

Closer to home, the Australian 3G experience demonstrates how full infrastructure competition can thrive in the absence of wholesale access regulation. Telstra’s extensive Next G™ network deployment has spurred competing mobile network operators to announce build-out to high percentages of the population, with the result that more than 95% of Australians will be served by three competing 3G networks – an outcome considered unthinkable only a few years ago.

B.4 Factoring in ‘regulatory feedback’

Where access regulation is intended to *lead* to facilities-based competition, the timing of de-regulation in promoting ongoing investment is both complex and critical. Put simply, an over-emphasis on access-based competition potentially jeopardises the pathway to facilities-based competition, because an over-zealous access regime can impede facilities based competition from ever emerging.

One approach – which has been adopted to date in the Commission’s assessment of the DTCS – takes de-regulatory action only when actual competition emerges at a level considered acceptable, such as the “Telstra plus two” approach. While this approach at least removes regulation where services are already competitive, it also ignores the existence of “regulatory feedback”, implicitly assuming that de-regulatory actions do not play an active part in altering market investment outcomes. Instead, it regulates by the rear-view mirror, refusing to believe that competition will exist until it actually arrives (see also Part C.1 regarding actual and potential competition).²³ Yet the Commission did briefly consider the existence of potential competition in its Final Decision when it stated:

“where there is empirical evidence of providers other than Telstra building alternative transmission networks, the ACCC considers that the existence of actual or potential

²⁰ ‘Percentage of Households with Choice of Self-built Customer Access Networks Continues to Rise’, OFTA press release, 29 September 2005.

²¹ OFTA, Press Release, Genuine Choice of Fixed Network Operators Demonstrates Success of the Type II Interconnection Policy, July 2008.

²² *ibid.*

²³ This does not mean that simple thresholds cannot be used as a screening device, to test whether necessary (but not sufficient) conditions for regulation have been met, as is explained further in Part D below.

*competitors in the relevant geographic and product market means that it is likely that a particular transmission market is no longer a bottleneck and that removal of regulation in that market may be in the long-term interest of end-users”.*²⁴

A more sophisticated approach comprehends the impact of de-regulation in stimulating the investment that will itself enhance competition and reduce market power. This is an *anticipatory* approach that recognises that de-regulation can attract the investment that is required to achieve the desired competitive outcomes. It also avoids the perverse outcome that regulation is perpetuated as necessary only because it has not already been removed.

The latter approach is particularly attractive where the potential risks of market failure are reducing – for example, because of rapid growth in demand and the development of competing infrastructures and technologies that constrain existing providers, both of which are present in the DTCS. Regulation imposes its own costs – and as these grow relative to the risks that arise from lack of regulation, then de-regulation should be more aggressively pursued because the prize is both large and achievable: “first-best” competition based on competing facilities. Telstra believes that the DTCS falls squarely within this category.

The Dutch regulator, OPTA, has recognised that regulatory settings should favour facilities-based (infrastructure) competition over access-based (services) competition:²⁵

“In terms of the objective of fostering competition another important distinction is that between infrastructure competition (i.e competition between infrastructures) and service competition (i.e. competition within an infrastructure). The ultimate goal of the regulatory framework is to bring about a situation of enduring competition. This is effective competition that is not – or is no longer – dependent on sector-specific regulation for its existence and effectiveness. The commission takes the view that a situation of enduring competition can be best achieved by giving priority in the choice of obligations, wherever possible, to measures that foster infrastructure competition.”

In the context of the DTCS, Telstra therefore submits the Commission must not only measure existing competition, but anticipate and factor in the pro-competitive forward-looking impact of the de-regulatory actions available to it. This approach is consistent with the European Union approach, which adopts the starting point for ex ante consideration of markets as:

*...based on an overall forward-looking assessment of the structure and the functioning of the market under consideration.*²⁶

C De-regulation must be timely and well-considered

C.1 Potential, as well as actual, competition must be taken into account

The evidence of competing DTCS investments, based on the matters set out in Part B above, suggests there is a significant degree of potential competition, as well as actual competition. Moreover, as both theory and practice has shown, potential competition is more likely to be realised in circumstances where investment incentives are enhanced by the absence of regulation.

²⁴ Final Decision, page 2.

²⁵ OPTA, Draft policy rules: Tariff regulation for unbundled fibre access, November 2008, para 16.

²⁶ EC, Commission Staff Working Document – Explanatory Note (accompanying document to Recommendation 2007/879/EC), page 6.

To date, the Commission so far has based its analysis only on 'actual competition'. That is, it has only looked at installed facilities at a particular point in time- actual fibre in the ground - as providing a competitive constraint, even though it makes passing reference to potential competition.

It is well accepted that competition analysis should include potential competition. As the Commission says in its declaration guidelines:²⁷

...incumbent firms may be constrained by the threat of potential competition to behave in a manner consistent with competitive market outcomes.

As demand intensifies, the Commission must turn its focus to potential competition and likely emerging competition, and ensure regulatory rollback occurs promptly, in line with market developments. As we explain in more detail in Part D below, Telstra believes that in this instance a combination of a short re-declaration period, and the use of up-to-date Infrastructure RKR data could achieve this.

C.2 Detailed and up-to-date data is available to the Commission – it should use it

Under the Infrastructure RKR, carriers are required to:²⁸

- (a) specify for each CAN whether any access media is deployed and if so the geographic extent of each access medium deployed;²⁹
- (b) specify for each core network the geographic extent of any optical fibre core network, microwave radio core network and other core network; and
- (c) produce a report to the Commission with the above information on 1 March of each year.

As a result, the Commission is now gathering information that enables it to annually collate and analyse material regarding the extent of deployment of alternative facilities, including for the provision of the DTCS via optical fibre cables and microwave radio links.

Such information should enable the Commission to review and reconsider the extent of regulation required at least as frequently as the material is collected (i.e. annually), and to roll back regulation where competition exists. The proposed mechanics of this are discussed in Part D. Telstra believes that prior to any re-declaration of the DTCS, the Commission should use the Infrastructure RKR data carve out from the declared services those areas and routes which are already competitive.

In addition to the Infrastructure RKR data, Telstra has also provided to the Commission the data collated by Market Clarity for the Band 2 Exchange Service Areas (**ESAs**) in Victoria and Queensland showing the number of optical fibre owners in Telstra's exchanges. Please refer to Attachment 1 and Attachment 2.

This data should also be used to inform the re-declaration decision. For example, the Market Clarity data shows that there are **[c-ic]**, yet they remain regulated. This is unsatisfactory. It is imperative that the Commission uses the information it has already gathered from the

²⁷ ACCC, Telecommunications services – Declaration provisions: a guide to the declaration provisions of Part XIC of the Trade Practices Act, July 1999.

²⁸ ACCC, the *Audit of Telecommunications Infrastructure Assets – Record Keeping Rules 2007*, 19 December 2007.

²⁹ The Record Keeping Rules specify that access media is copper, Fibre (point to multi-point), Fibre (point to point), Fibre to the Node, HFC, Radio (fixed), Radio (mobile) and other.

Infrastructure RKR, including that which is already before it, to ensure any re-declaration of the DTCS does not include areas which are already competitive.

To facilitate appropriate consideration of market developments, and the rollback of regulation so as to best incent future investment in the industry and in the DTCS, Telstra believes the Commission should only contemplate re-declaration of the DTCS on a short-term basis, in this case for 16 months, and to carve out from the scope of the declared services with immediate effect, those areas which are clearly already competitive.

D Telstra's recommendation regarding re-declaration

D.1 Re-declaration should be only for 16 months, but with competitive areas excluded from declaration on the basis of threshold test

In light of the information provided above, Telstra submits the prudent approach would be for the Commission to re-declare the DTCS for 16 months only (to 31 July 2010), following the expiry of the existing declaration. The re-declaration should:

- (a) carve out the routes or ESAs which are the subject of exemptions granted since the last declaration. Telstra suggests this should occur with no transition period;
- (b) carve out the routes or ESAs that the Infrastructure RKR data (including that which will be provided to the Commission in March 2009) or other sources shows meet the Commission's "Telstra plus two" threshold since these areas are already competitive and therefore should not be regulated;³⁰ and
- (c) further reduce the scope of the declaration by removing regulation in respect of high-speed transmission tails, and low-speed transmission tails provided within 1km of a Telstra exchange.

The "Telstra plus two" threshold explained

The "Telstra plus two" threshold test should, in our submission, operate as a screening device to indicate whether or not the relevant service type should fall within the ambit of regulation at all. Telstra believes the absence of facilities-based DTCS competition is a necessary (but not sufficient) condition for the imposition of declared service regulation. Where a service type can be provided by three facilities-based competitors (whether fibre, microwave or some other equivalent substitute technology), the Commission need look no further – that service type ought not be a candidate for regulation *at all*. Where there are less than three competitors, it may be appropriate for the Commission to further analyse whether regulation would be in the LTIE.

It is important to distinguish the use of a threshold test or screening device from the use of a "rule of thumb" test that operates as simplified decision criteria. The "Telstra plus two" test should not be a substitute for proper analysis, but it can and should be used as a reliable indicator that a service type should fall entirely outside the scope of regulation.

This is especially so given DTCS markets have generated strong infrastructure competition and are widely served by it. This form of competition is widely acknowledged to be the strongest form of competition. Transmission by nature serves networks at points where traffic is aggregated, making it relatively easier to replicate facilities (i.e. surmountable

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The "Telstra plus two" test as articulated by the Commission in the 2004 Declaration. ACCC, Transmission Capacity Service, Review of the declaration for the domestic transmission capacity service, Final Report, April 2004, page 27.

barriers to entry). Once entry has occurred – by not one but two competing providers under the Commission’s established “Telstra plus two” approach – full-blown facilities-based competition is underway between firms who have invested sunk costs. This will yield competition at a level of intensity enabling the Commission to safely rule out the need to regulate.

In other words, the absence of facilities-based competition at “Telstra plus two” levels is a *necessary but not sufficient condition* for regulating. It is not, by itself, a substitute for competition analysis, but can be used to reliably screen out redundant regulation.

Benefits of proposed approach to re-declaration

Using the “Telstra plus two” threshold as a screening device, the re-declaration approach proposed by Telstra has important benefits which render it optimal.

First, the Commission has recently proposed – in relation to a number of other fixed network services that have similarly been the subject of recent exemption proceedings – a short extension of time for declarations to July 2010, to enable legislative, regulatory and industry developments (such as the NBN) to be observed and to align them with timing of the fixed network services review. The DTCS will equally be affected by these developments. There is little to distinguish the rationale that the Commission has adopted for other fixed network services from the present situation. It makes sense, therefore, for the Commission to align the current re-declaration of all fixed network services to the one point in time, so that they can be considered together, and a consistent approach adopted.

Second, by adopting the carve-outs proposed by Telstra, it avoids duplication of the analysis already undertaken by the Commission in its consideration of Telstra’s exemption applications for the DTCS. There should be no need for Telstra to file further exemption applications covering the same issues that have already been examined by the Commission to cover those areas and routes that have not already been the subject of an exemption application, but which are competitive. This would be a less than optimal use of the Commission’s and the industry’s resources. A re-declaration that carves out from its scope the aspects of the transmission service which have already been screened out under the previous exemption applications, and which are evidenced further by the additional Infrastructure RKR and other data available to the Commission, would enable the exemption outcomes to be folded into a narrowed declaration.

Third, the market should be given the opportunity to respond to the likely stimuli for investment and competition which will take place within the next 12 or so months without the risk of existing and potential regulation overshadowing commercial decisions. It would be imprudent in these circumstances to impose anything but a short period of continued regulation. In particular, it is important not to risk dampening investment incentives through long declaration periods.

The current 5 year period between reviews of declarations is simply too long to allow these factors to be addressed. Telstra submits it will not be possible for the Commission to be satisfied the LTIE is served by a declaration of such length. This is particularly the case as the trajectory of deregulation of the DTCS suggests that further de-regulation will likely be justified within that period, based on the same LTIE test.

Fourth, by allowing for a shorter re-declaration period, the Commission would then have the opportunity to develop analysis beyond the “Telstra plus two” threshold to allow for a consideration of potential, not just actual, competition; as well as competition from infrastructure other than optical fibre. Consideration of these factors would further promote the LTIE if they were adopted as a means of determining the need for regulatory rollback.

In addition, Telstra submits it is neither necessary nor desirable to build a 12-month transition timeframe into the carve-outs of the re-declared service it has suggested, for the following reasons:

- (a) the Commission has found the exemptions it has already granted are in the LTIE. It is in the LTIE that the benefits yielded by those exemptions be captured sooner rather than later, as it is unlikely to be in the LTIE for regulation to continue for 12 months where competition already exists;
- (b) it is unlikely any prejudice would be suffered by access seekers in the context of the LTIE, given the declaration of the service beyond 31 March 2009 is uncertain in any event;
- (c) given the 'actual competition' basis of the Commission's assessment in the exemption proceedings, there can be no reason to further delay implementation – especially given the time taken to gather and report the historic levels of actual competition (which in any event date back to 2007), and to complete the exemption process; and
- (d) the Commission's exemption decision did not pre-empt (and should not be allowed to de facto pre-empt) its consideration of a further declaration of the service, including on issues of timing.

Telstra believes the proposal to re-declare the DTCS for 16 months (with the carve-outs mentioned) will allow the Commission, within the limited timeframe available to it between now and the end of March 2009, to ensure at the least, regulation of the DTCS is not imposed where there is already evidence before the Commission that the service is contestable by facilities-based competitors to a degree that should place it entirely outside the ambit of regulation.

D.2 The Commission should also annually use the class exemption mechanism

In each year the DTCS and other services are regulated, the Commission should – at minimum - use the Infrastructure RKR data it receives to screen out regulation where facilities competition is shown to exist (based on the "Telstra plus two" threshold described). It is incumbent upon the Commission, having required industry to provide Infrastructure RKR data on an annual basis, to ensure regulation keeps pace with market developments, and that the most use is made of information provided to it by the industry each year:

- (a) Currently, the information received under the Infrastructure RKR is an underutilised resource of the Commission. There is no need for this. In fact, the Commission itself has signalled its intention to use the Infrastructure RKR data for the purpose of assessing the geographic and other characteristics of competition: In the ACCC Regulation Impact Statement, Telstra Customer and Access Network Record Keeping and Reporting Rules the Commission stated that the collection of the RKR data would *"allow the ACCC to commence its analysis at the correct 'building block' level in order to consider the aggregation of those geographic areas which exhibit similar competitive characteristics. This will assist the ACCC not only to more accurately geographically delineate markets to reflect genuine differences in competitive dynamics and intensity, but will also improve its ability to accurately assess the state of competition in relevant markets"*.³¹

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ACCC Regulation Impact Statement: Telstra customer and access network record keeping and reporting rules September 2007, page 6

- (b) In the 2004 Declaration proceedings, the Commission noted it did not have sufficient information to make decisions on some of the DTCS routes. For instance, the Commission stated: “*In particular, it is not possible to determine from the information, how many buildings are served by fibre other than Telstra or how many fibre connections there are to any one building*”.³² Now that the Commission receives the Infrastructure RKR data, it says that it “*will provide information which will facilitate an increased understanding of developments in infrastructure based competition over time*”.³³

Telstra submits that as the Commission is the only repository of this information, this approach is a logical use of the information that the Commission receives. The Commission should not wait for the parties to make exemption applications, which cannot be an effective process, as no party within the industry holds the level of information the Commission receives under the Infrastructure RKR. Furthermore, it should not be incumbent upon members of the industry to bear the onus of establishing competition exists, when the Commission has tools readily available to it to facilitate regulatory rollback.

Class exemption mechanism

Balancing the need for frequent review based on Infrastructure RKR data with the need to avoid burdening the industry with frequent consultation, Telstra submits the Commission should use the ordinary class exemption process in section 152AS of the TPA as a counter-balance to any declaration period of the DTCS exceeding one year.

Section 152AS of the TPA allows the Commission to issue class exemptions from the Standard Access Obligations. In particular, “*The Commission may, by written instrument, determine that each of the members of a specified class of carrier or of a specified class of carriage service provider are exempt from any or all of the obligations referred to in section 152 AR (Standard Access Obligations)*”.

Telstra considers where the “Telstra plus two” threshold is met for particular routes or ESAs, a class exemption would comfortably meet the statutory criteria required, as the areas or routes already enjoy significant facilities-based competition. The screening out of regulation in competitive areas will therefore promote the long term interests of end-users of carriage services by allowing the competitive marketplace to operate.

As per the current declaration, it is important that for declared routes, regulation continues to apply to all carriers except where a class exemption operates. For example, where a declaration applies to a service offered by Telstra plus one carrier, access obligations must apply to both carriers in order to avoid distortionary asymmetries.

It is notable that, as detailed above, *the Commission is the only repository* of all of the information required to assess whether a particular route is competitive enough to exempt it, through the collection of the Infrastructure RKR data. Industry participants can only attempt to replicate this data imperfectly, and at considerable expense. The Commission is therefore the least-cost bearer of the requirement for annual monitoring of its own tests for regulatory rollback, and under section 152AS, has the means to implement the results of that analysis. There is no basis for the Commission to continue the practice of regulating, and then requiring industry members to apply for exemption applications based on their incomplete knowledge of competition.

³² Final Decision, page 72.

³³ ACCC, Transmission Capacity Service, Review of the declaration for the domestic transmission capacity service, Final Report, April 2004, page 59.

While the proposal to consider a class exemption each year (based on updated Infrastructure RKR information) would likely require industry consultation, it should be a straightforward matter to re-apply the screening device of “Telstra plus two” to quickly identify service types that are no longer candidates for regulation. The Commission could then use the re-declaration process to examine broader developments of competition within the industry, and therefore use that process to establish whether additional regulatory rollback is required (eg because of other technologies, or to accommodate consideration of potential, rather than actual, competition).

This approach is not without precedent. For instance, in the Fixed Services Review, the Commission has proposed to “*progressively withdraw ex ante access regulation where it is confident that declaration is not required to promote the LTIE*”.³⁴ Telstra submits the Commission should apply a consistent approach to de-regulation and ‘progressively withdraw’ regulation on transmission routes as well.

Telstra believes this solution will best promote the long-term interests of end-users, as it will reduce the potential for regulatory overreach, and thereby stimulate investment and innovation within the industry.

E Further issues in re-declaration

Telstra submits in addition to the above exclusions from re-declaration, the Commission should also carve out from any re-declaration of the DTCS two other areas where competition is already abundant, but which have not yet been the subject of an exemption application:

- (a) high bandwidth transmission tails (ie transmission tails of 8 Mbps and above) where the “Telstra plus two” threshold is already met; and
- (b) low-speed tails of up to 2 Mbps that are supplied within 1km of a Telstra exchange.

E.1 Exclusion of high speed tails from re-declaration

The market for high bandwidth tails in Australia is intensively and inherently competitive.

These services are generally only purchased by customers with significant data requirements. This includes organisations such as universities, shopping centres, hospitals, industrial parks, multi-storey business premises and high data industrial users like mining companies. Large corporate customers possess significant countervailing power, and are well served by competing providers. Suppliers are generally prepared to install direct fibre (if it does not already exist) for any links of 2 Mbps or more. The higher the speed, the more viable a new installation will be.

Moreover, wholesale customers have the option of self-supply, and do so extensively.

Telstra submits that high speed tails of 8 Mbps – a conservative threshold in view of the above – and greater should be excluded from the declaration.

This should apply without delay in all areas where sufficient competition already exists. As a start, the “Telstra plus two” threshold test should be used to screen out the geographic areas in which tails are supplied where there is already more than one competitor to Telstra. This

³⁴ ACCC, Telstra’s transmission exemption applications, Discussion Paper, February 2008, page 6.

exists in many areas, as is evident from data showing the large number of ESAs with multiple, fibre-fed DSLAMs,³⁵ from which “one-shot” fibre links could easily be installed.

While the “Telstra plus two” threshold should only be a screening device, it is useful to identify the minimum carve-outs required while the Commission assesses the more complex dimensions of the DTCS in advance of any subsequent declaration.

Telstra suggests the Infrastructure RKR data collected by the Commission would assist it in verifying the extent of any duplication of the tail end fibre services in visual map formation. In visual information, the duplication would be represented by dead-end branches.

All fibre tails that are observable in the Infrastructure RKR data will be currently delivering (or capable of delivering) high bandwidth DTCS to end customers. Those services will be supplying the DTCS that is greater than 2 Mbps and in all likelihood greater than 8 Mbps.

E.2 Exclusion of transmission tails of up to 2 Mbps within 1km of a Telstra Exchange

Telstra believes that sufficient evidence already exists for the Commission to carve out of any re-declaration of the DTCS those transmission tails up to and including 2 Mbps, which are provided within 1km of a Telstra exchange.

In addition, a 1km limit on low-speed transmission services will address the previous concerns the Commission had about the substitutability of ULLS for tail end transmission services.

In the Commission’s Final Decision, the Commission recognised it is technically feasible for ULLS to be a substitute for tail end transmission services at 2 Mbps in some cases. Telstra believes by limiting the speed and distance of the transmission tails which would be no longer declared, it would capture those instances where the ULLS is clearly an alternative means of supply.

The concerns the Commission had in previously rejecting the ULLS as a substitute for the DTCS tail services up to 2 Mbps can easily be addressed:

- (a) The Commission was concerned that competitors’ transmission Point of Interconnects (**POIs**) may be in a different location (e.g. virtual co-location) to the Customer Access Module (**CAM**) from which the ULLS is delivered. However, this concern is unwarranted. A ULLS cannot be used without an associated jumper on the Main Distribution Frame (**MDF**) and an Interconnection Cable between the carrier’s Telstra Equipment Building Access (**TEBA**) Rack and the MDF. The Interconnection Cable connects to the POI frame located in the carrier’s TEBA rack. Where a carrier houses its DSLAM external to the exchange (ie. in a street cabinet or another building), there is a similar interconnection cable to the MDF and a POI located with the carrier’s DSLAM equipment. The POI located in the carrier’s TEBA rack is equivalent to the same POI (or Service Delivery Point) where a transmission tail service is provided from/to a carrier’s TEBA rack.

Attachment 4 provides a diagrammatical representation of the above.

- (b) The Commission was also concerned about exchange capping and the presence of large pair gain systems. Again, this concern is unwarranted given the nature of the exclusion Telstra is now seeking, for two reasons:

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ACCC, Telstra’s local carriage service and wholesale line rental exemption applications, Final Decision and Class Exemption, August 2008, ,page 10.

- (i) first, iiNet has recently demonstrated that it is possible to overcome the issue of full exchanges by building street units that interconnect with the exchange to access tail services, relatively cheaply.³⁶ Exchange capping does not prevent carriers from accessing Telstra's exchange for the delivery of ULLS; and
 - (ii) second, the overwhelming majority of Telstra's pair gain systems fall outside the 1 km boundary within which the proposed carve-out from the exchange would apply.
- (c) The Commission's issue regarding the superiority of Service Level Agreements for the DTCS compared to ULLS has already been addressed. That is, it is open to access seekers to pay more for higher quality SLAs on the ULLS if they wish to do this.

The Commission also expressed concern that demand for the DTCS was increasing. But this has no bearing on the extent of substitution from 2 Mbps DTCS tail end service to ULLS. The demand for the DTCS is increasing generally because end user bandwidth requirements are increasing at a rapid rate. We note demand for ULLS is increasing and this is partly due to the substitution from the DTCS to meet increases in bandwidth requirements.

Accordingly, Telstra suggests the Commission should:

- (a) make any declaration of the DTCS for a relatively short term: 16 months would bring the DTCS into line with the timing of the fixed network services review along with the other service declarations that the Commission has proposed be "rolled over" until July 2010; and
- (b) carve out from the scope of the declaration:
 - (i) those DTCS aspects that have been the subject of exemptions granted by the Commission, as well as those that are shown under the Infrastructure RKR or other sources to be sufficiently competitive (under the "Telstra plus two" threshold) that future regulation should be screened out;
 - (ii) high speed tails at bandwidths over 8 Mbps as the market for these services is already intensively competitive, and there is no justification for maintaining regulation of these services, particularly in cases where the threshold test would screen out regulation; and
 - (iii) transmission tails of up to 2 Mbps bandwidth, where those tails are located within 1km of a Telstra exchange. ULLS is a ready substitute for these services, thereby removing the need for any regulation of these services.

F Pricing Principles

The Commission has also asked the industry's views on the appropriate pricing principles that should be adopted for the DTCS.

The transmission service is considerably different from many of the other declared services, where there has been a history of pricing determinations, and the product characteristics of the declared service do not change significantly each time it is purchased. As noted earlier, the DTCS is a multi-dimensional service:

³⁶ CommsDay 18th December "iiNet activates first street cabinet".

- (a) there are different types of transmission service included within the declared service definition: transmission tails (which are provided from a Telstra exchange or other aggregation point to an end-user premise); IEN transmission, which provides generally higher capacity transmission services from one exchange to another; and capital to regional transmission, where transmission is purchased to deliver traffic across a nominated route;
- (b) the technology over which transmission services can be delivered, the length of the loops and the equipment used to deliver the service, can vary depending on the circumstances. In some cases, microwave technology can be the best solution. In others, optical fibre is the technology of choice. For services such as tail transmission, the ULLS can provide an alternative means of access seekers providing transmission to their end-user customer premises;
- (c) for services such as capital to regional transmission, the service is delivered over rings, which together provide transmission from and to the destinations required. Yet the traffic carried over each ring may vary. The use of a complex ring structure further adds to the difficulty in attempting to determine the appropriate approach to regulated pricing; and
- (d) the demand for transmission over any particular route, or over any individual ring, is considerably uncertain.

In addition, current industry developments will have a significant and direct impact on transmission services in the near future, because:

- (a) the expected heightened growth in broadband will mean that the markets in which the DTCS is offered will be highly stimulated;
- (b) as a result, market entry and expansion for the DTCS is likely to be stimulated;
- (c) the construction of any NBN is likely to influence the number and location of the DTCS aggregation and interconnection points for purchases of services over the NBN; and
- (d) irrespective of the NBN, as governments continue to encourage investment in regional areas, the potential for the construction and supply of transmission services at government subsidised rates remain. For instance, the Tasmanian Government is providing Aurora with funding to light up Bass Link.³⁷

These factors, and the multi-faceted nature of the transmission service itself, do not give rise to a simple pricing approach that can cover all dimensions of the declared service, while accounting for the significant changes that are likely to occur in the nature of investment in the service in the near future, without distorting future investment. Applying strict pricing principles will add considerable risk: risk that the incorrect regulatory approach will stifle the investment that is likely to be needed in the near future, and potentially harm current providers of the service, who may suffer significant changes in demand for current services.

Moreover, the lack of disputes that have occurred in the DTCS since it was declared 11 years ago, and the fact that the Commission has never been required to determine a price, is a clear signal that no price intervention is required.

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See Basslink, <http://www.basslink.com.au/home>. Tasmanian Government Press Release: <http://www.tecc.com.au/downloadattachment.php?aid=7701e45071348ca0c76ffcc2dcca1e6f&articleId=45>.

The Commission should therefore adopt a minimalist role on price, and ensure the outcome delivers a result that mirrors the competitive outcome. Because of the factors mentioned above, the Commission must proceed with caution before wedding itself to any particular approach, given the complexity of the service itself, and the current state of infrastructure developments within the industry.

Given the inherent uncertainties, it is not clear which, if any, particular pricing principle will best achieve the statutory objectives to which the Commission must have regard. For example, the DTCS does not lend itself to a simple pricing approach that (a) can be applied to all facets of the declared services and (b) addresses the significant changes that are likely to occur in the nature of investment in the service in the near future.

Consequently, Telstra considers that the Commission should retain all options in relation to the pricing of the service, and not necessarily restrict itself to one approach, which might turn out to be harmful to future investment incentives as industry and technology developments unfold.

Schedule 1 Questions in the ACCC Discussion Paper reviewing the declaration for the domestic transmission capacity service

6.1 Market Definition

The Commission's view in the Final Exemption Decision is that the relevant downstream market is the range of retail services (that can be provided using transmission services) delivered over optical fibre. This includes the national long distance, international call, data and IP-related markets. Are these the relevant downstream markets for which transmission constitutes an input?

As outlined by the Commission,³⁸ it is not necessary for regulatory purposes that the market be defined exactly. Any definition of a relevant market that is arrived at is likely to vary according to the purpose for which the assessment is being undertaken.

Telstra considers the Commission's characterisation of the relevant downstream markets is too narrow because it is limited to those retail services delivered over optical fibre. The delivery of transmission services is not limited to delivery over optical fibre, but also includes ULLS, microwave radio and satellite delivery mechanisms. This is discussed in Telstra's response to the Questions under heading 6.3 below. In addition, significant self-supply is occurring (as discussed in Part B.2) which should also be taken into account in considering market definition issues.

What is the extent to which downstream services are concentrated on certain transmission routes

The volume of information being transported varies across and between different transmission routes, and across different sections of each transmission route. In addition, different downstream services have different transport requirements.

The concentration of traffic on a particular route varies due to several factors, including the origin and destination of the traffic, and the need for redundancy.

6.2 Geographic Market

What are the relevant markets affected by the declaration review?

It is not necessary to specify exactly the nature of the relevant geographic markets for the purposes of a re-declaration, and it is difficult to do so given the DTCS is a complex service with many dimensions. These dimensions need to be assessed separately to understand the extent of competition that exists for the service and the relevant markets that are affected by the continued regulation, or de-regulation, of the service.

As is apparent from the Commission's previous analysis of the DTCS, the geographic locations of the DTCS can vary according to the origin and destination of the services. They can include services that are:

³⁸ Final Decision.

- within each city’s CBD and metropolitan areas;
- Intercapital (between capital cities);
- regional (between a capital city and a regional town centres); and
- other regional services, e.g., between regional towns.

Second, the network segments are distinguishable by whether they are in the inter-exchange network (IEN transmission) or the access network (tail transmission).

Third, as noted earlier in this submission, Telstra believes the bandwidth speed at which transmission is offered is an important consideration. Market segments for the DTCS, such as high-speed transmission tails, and the provision of low-speed tails (ie up to 2 Mbps), warrants separate consideration, as they are already competitive. For these reasons, they should not be the subject of further regulation.

While Telstra has adopted the Commission’s established test of “Telstra plus two” for the purposes of the suggested carve-outs for any re-declaration of the service, it is worth noting that Telstra disagrees with the market analysis applied by the Commission in deciding Telstra’s exemption applications (and in establishing this test) in several respects.

First, Telstra does not agree with the exemption criteria requiring competitors to have a POI at each Telstra exchange to be counted as a competitor. Competitors’ IENs may bypass some of Telstra’s exchanges through the establishment of their own external POIs. External POIs are also connected to Telstra’s exchanges very easily.

Second, Telstra disagrees that the market for a capital–regional route is limited to within 1 km of the regional town’s Regional Post Office. Telstra considers the scope of the market should be related to the overall distance of the route. 1 km is too short. Installation of IEN fibre that carries a number of the DTCS over that fibre is viable over much longer distances than 1 km, especially when adding in the benefits from the new services that are backhauled to the capital city, thereby increasing utilisation on the carriers existing fibre.

Third, the Commission’s rule does not contemplate the competition Telstra already faces by providers of transmission services using technologies other than optical fibre, nor does it take into account the competitive constraints faced by the potential for additional competition in the marketplace. For these reasons, Telstra believes the Commission should broaden its competition threshold longer-term.

6.3 Technologies used to provide transmission services

Are competing fibre-optic owners and providers able to replicate DTCS interexchange and tail-end transmission services?

Other fibre-optic owners and providers clearly *are* able to replicate the DTCS interexchange and tail-end transmission services in CBDs, metropolitan areas and on capital - regional routes. This has been established in the material Telstra provided to the Commission in its recent exemption applications, and should be evident from the Infrastructure RKR data the Commission has collected from the industry.

In the Commission's Final Decision on Telstra's domestic transmission capacity service exemption, the Commission accepted competition existed and that there were other providers of the DTCS for inter-exchange transmission services.³⁹

Telstra believes the level of competition that exists is significantly understated by the Commission's Final Decision. For a start, the areas within which competition is occurring is much broader than those which were the subject of Telstra's exemption applications. Competitors have built, and will continue to build, alternative optical fibre paths in competition to Telstra, as evidenced by the high level of competition that exists for high bandwidth services, such as those of 8 Mbps and over.

However, as Telstra detailed in its exemption applications for tail-end transmission, the technologies used by other providers to provide competing DTCS is not limited to optical fibre. In particular, for tail end services, it can include copper, with ULLS being a substitute for the provision of lower bandwidth tail end DTCS. It is also the case that microwave radio serves as a means of providing the DTCS, including both IEN routes and as tail transmission. Thus the substitutability of the DTCS using optical fibre and microwave radio as tail transmission is evident by the extensive use of microwave transmission by mobile operators to establish connectivity to their mobile base stations. This is discussed further below.

Have the alternative technologies to fibre-optical cable become more or less viable in the provision of transmission capacity since the previous inquiry? Are they likely to increase or decrease in importance in the foreseeable future?

The full range of substitute technologies to Telstra's optical fibre cable need to be considered when the Commission assesses the extent of competition that exists, and which will exist in the future, in the provision of transmission services. The competitive pressure placed on Telstra is an aggregation of demand and price pressure from the group of substitute technologies.

Each competitive network, and each competitive piece of infrastructure, imposes additional competitive constraints on Telstra and others already in the market. Apart from competing optical fibre networks, this includes microwave radio, ULLS and satellite services that supply transmission services.

The viability of alternative technologies to optical fibre cable has significantly increased since 2004. For example, the widespread deployment by competitors of DSLAMs has increased the number of customers addressable by competitors using ULLS to deliver transmission services. The abundance of microwave also demonstrates its affordability and suitability for deployment. The availability of satellite as a means of providing the DTCS also needs to be factored into the Commission's consideration. These technologies have become more viable since 2004 due to lowering of input costs.

Microwave radio

Microwave radio is used extensively by Telstra and other carriers for transmission. Microwave radio has cost advantages over optical fibre depending on the particular circumstances of the route and location. It therefore needs to be examined by the Commission as an alternative source of supply of the DTCS.

³⁹

Final Decision, page 6.

The Commission has acknowledged that the “DTCS can be provided on several technology mediums including... digital microwave”.⁴⁰ Telstra believes transmission supplied over microwave is a substitute for the DTCS supplied over fibre in certain circumstances. The fact that access seekers regularly use microwave technology for the DTCS and the rapid roll-out of microwave links is evidence that microwave technologies are viable substitutes for optical fibre in the supply of the DTCS.

Microwave is installed by many different carriers throughout the Eastern seaboard and beyond. Telstra notes that Soul, Digital Distribution, Transgrid and Southern Cross Telecommunications have constructed multiple 140 Mbps (SDH E4) along routes including Brisbane – Cairns (Southern Cross 7 x E4), Brisbane – Rockhampton (Digital Distribution 6 x E4 plus the Southern Cross link), Sydney – Coffs Harbour (Soul 4 x E4 and Transgrid 3 x E4). See Attachment 3 for the location of radio microwave links used for transmission. In addition, microwave radio transmission is being used in metropolitan and major regional town centres as high bandwidth tails connecting mobile base stations.

For many situations, the provision of transmission services via microwave is superior to fibre in the provision of the DTCS:

- (a) from an installation perspective, microwave is faster to deploy;
- (b) from a technical perspective, microwave is a robust and proven technology which can be licensed rapidly and does not require duct access. The proliferation of mobile towers for 3G network antennas has created a new opportunity for installation of microwave radio technology;
- (c) from a cost perspective, the installation of microwave dishes is relatively cheap compared to the installation of new fibre in certain cases. For bandwidths under 155 Mbps, microwave is generally cheaper to install than fibre even for relatively long distance deployments. Microwave radio can cover about 50 km in a single hop, which is sufficiently long enough to address distance requirements in most towns and cities. In general, where the path length requires a small number of radio “hops” or where there is a drop at each of the hops, then microwave may be appropriate; and
- (d) from a technology development perspective, there is significant research and development being conducted by major vendors of microwave systems which means that short-haul high capacity links (at STM-64 or 10 Gbps) are likely to be viable in the near future.

Telstra encourages the Commission to draw upon the microwave radio data in the Infrastructure RKR data to determine the extent of microwave rollout, which in turn should verify its viability as a means of providing transmission services. This information should be included in the Commission’s assessment of the competitiveness of the various transmission services.

Satellite

Satellite is also used for the delivery of the DTCS. Technological developments since 2004 have increased the bandwidth capacity and decreased the cost of this technology making it a stronger competitor for optical fibre transmission in certain circumstances.⁴¹

⁴⁰ Final Decision, page 31.

⁴¹ See <http://www.ferret.com.au/c/Multiimedia/MPEG-4-Level-streaming-technology-for-IPTV-n687589>. See also <http://www.ascs.com.au/6e%20productsvsat.html>.

What are the substitutes for DTCS?

The substitutes for the DTCS provided over optical fibre include the ULLs, microwave radio services (for both tail and IEN) and satellite for tail transmission services.

6.4 Market structure

Should DTCS with respect to inter-exchange and tail-end transmission services be considered as enduring bottlenecks?

No. IEN and tail-end transmission services are not enduring bottlenecks.

This was confirmed by the Commission's recent decision in relation to Telstra's exemption applications, in which the Commission determined that the transmission markets for IEN services on 9 capital to regional routes and 88 ESAs have become competitive since 2004. This confirms that the DTCS cannot be assumed to be an enduring bottleneck by any means. Indeed, the level of competition for the DTCS is much broader than that reflected in the Commission's Final Decision because:

- (a) the scope of the exemptions was limited to the footprint sought by Telstra in the exemption application;
- (b) the Commission focussed on optical fibre only in assessing whether there is competition for supply of the DTCS and did not consider other technologies; and
- (c) the Commission applied the conservative threshold of Telstra plus two other optical fibre competitors, without addressing the question whether sufficient competition exists for rolling back regulation if a lesser threshold is adopted, or the competitive threat of potential competition is considered.

An analysis of the Infrastructure RKR data that has already been collected to date, and the information which will be provided in March 2009, should provide the Commission with ample evidence that inter-exchange and tail-end transmission services are not enduring bottlenecks, as more and more providers provide the DTCS- equivalent services.

6.5 Market entry

Is competition in downstream markets currently effective?

Yes. Competition in downstream markets is effective.

Since 2004, downstream services that rely on transmission as an input (including markets for fixed and mobile retail services) have steadily declined in price, as recently confirmed by the Commission:

“Overall average real prices for telecommunications services fell by 2.7 per cent in 2006–07. This is the third year in a row of reductions, after several years of fairly stable pricing.

*Average real prices for telecommunications services have fallen by 33 per cent over the last 10 years.*⁴²

With the increasing substitution between fixed and mobile services, and the significant number of providers within the industry today, it can only be concluded that the pricing and availability of transmission services is in no way inhibiting competition among providers of these downstream services.

What infrastructure do alternative wholesale providers use to supply inter-exchange or tail-end transmission services?

The infrastructure used by alternative wholesale providers to supply IEN or tail transmission services include optical fibre, microwave radio, satellite, undersea cable and also copper-based services such as the ULLS.

Are there any investments planned by alternative providers to enable the provision of inter-exchange or tail-end transmission services?

Telstra cannot comment on investment plans of alternative infrastructure providers, but notes that there is already evidence of large scale investment from alternative providers.

One such example is the announcement by Primus in September 2007 that it would upgrade its DSLAM exchanges with transmission using WDM, focussing initially on Brisbane, Sydney, Melbourne, Adelaide and Perth and then progressively rolling-out to other centres.⁴³

It is clear that alternative investment in transmission services is likely to continue, if not increase, in the near future. The increasing availability of new services and applications requiring more bandwidth and increased speeds will only serve to create greater incentives for infrastructure investors to deploy more and more competitive transmission services, as the viability of doing so will increase as demand increases. As set out earlier in this submission, de-regulation is likely to further stimulate such investment.

Would all new DTCS infrastructure have the capacity to provide competitive constraints on existing infrastructure in relation to the provision of inter-exchange or tail-end transmission services?

The deployment of new DTCS infrastructure will provide competitive constraints on existing suppliers for inter-exchange and tail-end transmission services.

Importantly, while the Commission recently made its exemption decision on the basis that two optical fibre providers other than Telstra placed a sufficient constraint on Telstra, Telstra does not believe this threshold needs to be met in order for competition to be present. Competitive outcomes may also occur where Telstra faces competition from any source in the

⁴² ACCC, Telecommunications Competitive Safeguards: Changes in the Prices Paid for Telecommunications Services in Australia 2006-2007, page 71.

⁴³ See <http://www.primus.com.au/PrimusWeb/AboutUs/News/Primus+Australia+Boosts+Fibre+Optic+Network+Capacity+Ten+Fold.htm>.

supply of the DTCS, as the suppliers will be vying to supply the demand that exists within the relevant market.

Do barriers to entry exist in transmission markets? If so, what are they? Are there barriers to expanding in any inter-capital market? If so, what are they?

Any barriers to entry that may exist are insufficient to deter significant competition in the provision of a range of transmission services in the relevant markets.

Telstra disagrees with the statements made in the Commission's Final Decision, where the Commission commented that the high sunk cost nature of investment on capital to regional routes could serve as a barrier to entry for distances greater than 1 km, for IEN services and for tail services. The Commission also raised the importance of access to Telstra's exchange buildings.⁴⁴

Telstra disagrees with these statements for two reasons:

- first, they do not reflect the current market developments (which, given the level of investment in competing infrastructure, can only be taken as establishing that any barriers to entry are low). The fact that this investment has occurred by a broad range of owners further demonstrates this; and
- second, they do not appreciate that competing transmission services are provided over infrastructure other than optical fibre, such as microwave or the ULLS, which require considerably less upfront costs.

Telstra submits the Commission's findings in the 2004 re-declaration process, that excess capacity is not a barrier to entry continue to hold true,⁴⁵ and agrees with the Commission's recent statements confirming this position in its Final Decision.⁴⁶

There are no barriers to expanding in inter-capital markets. Indeed competitors are currently installing new equipment to expand their inter-capital routes.⁴⁷

Are markets still dominated by Telstra? If so, which ones?

It is clear that with the rollout of alternative infrastructure by others within the marketplace, including the wide deployment of other technologies such as microwave, satellite, and the use of copper services for transmission tails, Telstra's presence in the transmission markets is diminishing. This should be evident also from the Infrastructure RKR data collected by the Commission, although we note that this data does not include all of the competitors who supply transmission services to the market, including electricity and rail companies. Telstra suggests the Commission issue a new RKR directed at these and other additional suppliers within the industry, in order to achieve a more fulsome view of the relevant markets.

44 Final Decision, page 75-78.

45 ACCC, Final Report – review of declaration of transmission capacity service, April 2004, page 33.

46 Final Decision, page 74.

47 See <http://www.gocebit.com.au/?q=news/basslink-light-2009> and <http://www.primus.com.au/PrimusWeb/AboutUs/News/Primus+Australia+Boosts+Fibre+Optic+Network+Capacity+Ten+Fold.htm>.

6.6 Excess capacity

Can excess capacity still be viewed as a benign factor in determining the level of competition in the market?

As referred to in Telstra's response to the Questions in Section 6.5 above, Telstra agrees with the Commission's view that excess capacity does not pose a barrier to market entry.

In its Final Decision, the Commission concluded that incumbent firms are not using excess capacity to deter new entrants from establishing rival networks.⁴⁸

Telstra also agrees with the broader proposition that excess capacity is a benign factor in determining the level of competition for the DTCS. This is because where competing operators' transmission facilities are configured with capacity well above demand, this is likely to exert downward pressure on prices for transmission services.

6.7 Price movements

Have prices continued to fall since the previous inquiry?

Yes. Prices have fallen since the previous inquiry.

Have some markets exhibited greater price falls than others? Why?

Prices will continue to fall as demand for higher speed and bandwidth services increases, and as technology continues to improve and deliver new and alternative means of providing the DTCS. It is difficult to predict at this stage where and how this will occur.

6.8 Profit Margins

Do wholesale prices for inter-capital transmission reflect underlying costs? If not, on which inter-capital routes is this the case?

The provision of inter-capital transmission is highly competitive and reflects market conditions.

Do wholesale prices for non-inter-capital transmission reflect underlying costs? If not, on which routes is this the case?

Telstra prices its transmission services according to market pressures and demands. Accordingly price falls would reflect market conditions.

6.9 Impact on efficient use of and investment in infrastructure

⁴⁸ Final Decision, page 74.

Has declaration of the DTCS discouraged investment in alternative infrastructure by access seekers?

As mentioned in Section B above, regulators and commentators have acknowledged that regulation of competitive services causes harm as it creates a disincentive for investment in the service in question. Transmission is no different.

It is for this reason the Commission must ensure that rollback of regulation occurs as competition develops. This is particularly critical in the current climate, given the potential for significant change within the industry in the types and nature of services that are likely to be provided in the near future, and the likely increase in demand this will have on the need for transmission services.

For example, the de-regulation of inter-capital routes in 2004 has precipitated large scale investment upgrades by competitors in inter-capital routes. Infrastructure upgrades have attracted the necessary investment capital because of the removal of risk from regulatory intervention in the setting of price and non-price terms and conditions truncating returns on the investment.

The announcement by Primus in September 2007 that it would upgrade its DSLAM exchanges with transmission using WDM, focussing initially on Brisbane, Sydney, Melbourne, Adelaide and Perth and then progressively rolling-out to other centres, provides an illustration of this.⁴⁹

Would revoking the declaration be likely to encourage efficient investment in alternative infrastructure by removing the scope for reliance on the declared DTCS for inter-exchange and tail-end transmission services?

Yes, revoking the declaration in areas where there is actual and potential competition will encourage efficient investment in alternative infrastructure. IEN and tail-end transmission services are competitively supplied in most of the locations where competitors are interested in selling services. It is therefore imperative that regulatory rollback occurs, to ensure investment in infrastructure is encouraged within the industry. Regulatory rollback does not remove the supply of the declared DTCS, but encourages the right build or buy decisions.

6.10 Exemptions to the DTCS

Keeping in mind that the Commission has issued a Final Exemption Decision (as outlined in Section 5), should the existing declaration be remade, extended, revoked, varied or allowed to expire?

As mentioned in Telstra's submission, given the nature of change which is likely to occur within the industry in the short-term, it is imperative that any re-declaration of the service be for only a short period of time, so that regulation can keep pace with market developments.

In addition, any re-declaration of the service must exclude those areas which are already competitive, as detailed earlier in this submission. This would occur by firstly carving out

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Primus Press Release available at:
<http://www.primus.com.au/PrimusWeb/AboutUs/News/Primus+Australia+Boosts+Fibre+Optic+Network+Capacity+Ten+Fold.htm>

those areas which are already clearly competitive, and secondly, encouraging the Commission to use the annual infrastructure RKR data it receives to conduct an annual review of the extent of the declared service, to minimise the risk of regulatory overreach.

6.11 Criteria for developing pricing principles

What are considered to be the appropriate pricing principles for the transmission capacity service?

Telstra has addressed this question in Section F above.

**Attachment 1 [c-i-c] Market Clarity, Victorian Access Fibre
Availability and Inter-Exchange Network Connectivity,
November 2008 [c-i-c]**

**Attachment 2 [c-i-c] Market Clarity, Queensland Access
Fibre Availability and Inter-Exchange Network
Connectivity, 28 August 2008 [c-i-c]**

Attachment 3 Maps of Microwave links

Attachment 4 Unconditioned Local Loop Diagram