



TELSTRA CORPORATION LIMITED

Application for Exemption in respect to the Domestic
Transmission Capacity Service

Response to Information Request dated 4 January 2008

PUBLIC VERSION

March 2008

Introduction

This response sets out Telstra's answers to each of the questions in the Commission's request for information, under section 152AU of the Trade Practices Act 1974 (Cth) ("TPA"), dated 4 January 2008 in relation to Telstra's application for exemption from the standard access obligations applicable to Telstra in respect of the domestic transmission capacity service ("DTCS") dated 24 August 2007 ("**Exemption Application**").

This response should be read in conjunction with Telstra's submission in support of the Exemption Application and Telstra's response to the Commission's Discussion Paper of October 2007. Terms used in this response have the meanings defined in the Telstra Submission.

Telstra is of the view that the answers below constitute a substantive response to all of the questions asked by the Commission in the Information Request. However, in some cases, Telstra has been unable to provide the specific information requested by the Commission because:

- Telstra does not possess the information and is unable to acquire that information; or
- a great deal of work is required to acquire the information, in circumstances where it may not address the issues the Commission appears to be concerned about.

These issues are outlined in more detail in the answers to each question below. We would be pleased to meet with Commission staff to discuss the information provided, as well as any more general matters staff may wish to discuss concerning Telstra's Exemption Application.

Response to Commission Questions

1. The identity of the competing providers based on Telstra’s proposed application of the ‘5 per cent rule’ as well as the ACCC’s threshold of including a potential competitor within 1 km of the regional post office.

The identity of the competing providers referred to in the Market Clarity Report is held by Market Clarity. Telstra has asked Market Clarity whether that information can be disclosed for the purposes of Telstra’s Exemption Application. However, Market Clarity has declined to allow this for commercial and legal reasons in respect of all competitor counts undertaken by Market Clarity based on:

- (a) the “5% rule”;
- (b) Optus’ “5 km rule”; and
- (c) the ACCC’s “1 km rule”.

(Please see Attachments 2.1 and 2.2 to the cover letter for the Market Clarity reports containing the competitor counts mentioned in sub-paragraphs (b) and (c) above.)

Telstra understands that the information has typically been provided to Market Clarity on the basis that the identity of the specific provider, and information in respect of their particular network infrastructure, remain confidential. Market Clarity is also concerned that provision of this information to potential customers, namely the participants in the Commission’s consultation on the Exemption Application, would reduce the value of Market Clarity’s database. As a consequence, Market Clarity is unwilling to provide Telstra with this disaggregated information, which identifies particular providers on particular routes.

However, Market Clarity has provided the requested information for the Brisbane to Bundaberg and Melbourne to Warragul routes as, in these cases, the information is derived from public sources:

Table 1

Route	Operators
Bris - Bundaberg	<ul style="list-style-type: none">▪ Optus▪ Ergon Energy▪ Queensland Rail Telecommunications▪ Telstra
Mel - Warragul	<ul style="list-style-type: none">▪ Optus▪ VicTrack▪ Telstra

(Please see Appendix 1 for further details on these two routes, including POP locations.)

As the above list indicates, the competing fibre-based providers include utilities in other industries and rail track operators, as well as carriers in the telecommunications industry.

Shara Evans, CEO of Market Clarity, has offered to accompany Telstra to meet with the Commission to further explain the methodology behind Market Clarity's report, if that would assist. In addition, Annexure 5 of the Telstra Submission (August 2007) contains the website locations for public information provided by optical fibre owners about the locations of their optical fibre networks.

Our request for exemption is conditional upon the number of competitors increasing to three (Telstra plus two) for two of the 18 capital to regional routes. Market Clarity's recalculation found that on the Sydney to Penrith and Sydney to Bega routes there are now only two competitors on those routes.

For these competing providers, please also indicate:

(a) whether they own infrastructure or lease capacity from third parties and, where possible, the length of the lease contract.

The competitor count in the Market Clarity report is based solely on optical fibre

infrastructure. Market Clarity has confirmed that each of the competitors on each specified route own and operate their own optical fibre network on that route.

As a matter of principle, Telstra considers the leased capacity should also be taken into account by the ACCC (see Telstra's submission of August 2007 at pages 3 and 5). However, as the terms of operators' leases capacity are not publicly available, Telstra has not sought to add the number of operators with leased capacity to the competitor count in the Market Clarity report for the purposes of this application. Telstra has therefore understated the level of competition that it experiences from others who may lease transmission capacity from third parties (or from Telstra).

(b) the addresses used by Market Clarity for the Point-of-Presence calculations.

If the "addresses used by Market Clarity" refers to the post office addresses, this information is available in the Market Clarity report of 22 August 2007. The post office locations are available at <http://www.nowwhere.com.au>.

If the Commission is requesting the address of the Point of Presence of each operator, then for the same reasons as those explained above, this information is considered confidential to Market Clarity and is not available to Telstra for these purposes. However, please see Appendix 1 for details on the locations of the Points of Presence for the Brisbane to Bundaberg and Melbourne to Warragul routes, which are publicly available.

2. The actual distance of each transmission cable segment on a route (as opposed to the road distance of the route) calculated according to the witness statement lodged with the application at paragraphs 18-21.

Appendix 2 sets out an estimate of actual fibre cable distance (calculated in the manner described at paragraphs 18-21 of the relevant witness statement) for each transmission route with a comparison to the road distance. The data on actual fibre cable distance indicates that the road distance used in the "5% rule" is shorter on almost all routes, and only marginally longer in two routes (Wangaratta and Gosford).

3 Telstra's estimate of:

(a) the total demand on each of these routes;

Telstra does not have information on the total industry demand for wholesale transmission capacity on each of these routes. However, Telstra has information on the number of wholesale transmission services that have been provided to our wholesale customers. Please see the data on the number of transmission services provisioned by Telstra in 2004 and 2007, which we have provided in response to question 5 below.

The data has been aggregated on a route by route basis in order to protect the confidentiality of wholesale customer information. Alternative sources of data that contain data in other historic time periods are not available to Telstra to use for this purpose because they contain disaggregated customer data.

(b) Telstra's own currently utilised and maximum traffic capacity based on existing technology;

Utilised capacity for 7 routes that are estimated to have the highest traffic demand

Telstra's systems do not normally create records of the data requested by the Commission for the 20 Capital to Regional routes. Accordingly the task of assessing all the factors relevant to calculating capacity and calculating that capacity is not straight forward and is very time consuming. However, in order to assist the Commission, Telstra has undertaken the assessment of the utilised capacity (in respect of both retail and wholesale products) for the cable rings relevant to the following seven routes:

Table 2:

[c-i-c]

Table 2 indicates that capacity utilisation rate (based on installed capacity) varies between [c-i-c]% and [c-i-c]%.

The seven routes were selected on the basis that, from the list of exemption routes, they are amongst the top 8 routes experiencing the highest demand of end-to-end traffic in the call collection area. The volume of traffic travelling between the

capital city and the regional town is extremely difficult to separate from the traffic that is merely passing through the regional town exchange to another site on the ring. Therefore, Telstra selected the highest demand routes on the basis of the number of services delivered over copper, which is likely to be a good indicator of the highest demand routes for services delivered over copper and fibre. The following table shows the number of services at the relevant regional centres:

Table 3:

[c-i-c]

The statement of [c-i-c] describes how Telstra obtained the data on the number of services at each regional centre.

The statement of [c-i-c] explains how Telstra has calculated the amounts of utilized capacity for each of the seven routes. These capacity amounts are measured in terms of E1 equivalentents (where an E1 is a 2 Mbps service). The Appendix to Mike Smart's supplementary report of 27 March 2008 explains how the utilized capacity (in terms of E1 equivalentents) at each of the seven major routes are well within the capacity of a minimum sized cable (with [c-i-c] pairs of optical fibre) that a competitor to Telstra is likely to have within its own network.

The data in Table 2 above is thought to be a conservative (over) estimate of utilised capacity in that some of the capacity utilised may be in respect of traffic between nodes (along the ring) and traffic passing through the regional centre to a town, other than the capital city and regional centre.

Maximum capacity based on existing technology for the seven routes

In response to this question, Telstra refers to the statement of [c-i-c] which sets out detailed information on the types of fibre and equipment that Telstra generally deploys. This statement explains that Telstra typically deploys cables with [c-i-c] fibre pairs in regional areas. Each fibre pair can be used to deploy up to [c-i-c] without DWDM equipment, and between [c-i-c] to [c-i-c] channels ([c-i-c] per channel) with DWDM equipment. Accordingly, the maximum capacity at a route is at least:

- (i) [c-i-c] without DWDM equipment; or

- (ii) [c-i-c] to [c-i-c] with DWDM equipment.

The maximum capacity at each of the capital-regional routes in Telstra's network is between [c-i-c] to [c-i-c]. This corresponds to between [c-i-c] E1 equivalents and [c-i-c] E1 equivalents (see Table 4 below), which is substantially in excess of the utilised capacities indicated for the seven regional routes in Table 2.

Table 4

[c-i-c]

The calculations of maximum capacity in Table 4 are subject to two qualifications:

- (i) In practice, an operator would not install equipment capacity at these levels (i.e., the maximum cable capacity) since they are substantially in excess of the capacities likely required in the foreseeable future and there is a non-trivial cost to installing excess equipment capacity.
- (ii) In addition, while Telstra's current practice is to install optical cable with [c-i-c] fibre pairs, the actual number of fibre pairs in an existing cable may be as low as [c-i-c] fibre pairs. The minimum number of fibre pairs per cable has increased over time, reflecting a decrease in optical fibre cost.

(c) the costs (disaggregated into trenching and equipment costs) of building a spur line for a 5 km, 20 km, 40 km, 60 km, and 80 km distance

Telstra's estimate of the cost of building spurs is based on Telstra's engineering rules, which are not necessarily the same rules adopted by competitors. The costs comprise SDH equipment costs (at the B end of each route) and optical fibre costs (which vary with distance).

The cost of SDH equipment varies according to the type of equipment required at the site and the costs of the supplier making the equipment. Using one set of assumptions about the items of equipment required at a competitor's site in a regional town, a range of costs could be between [c-i-c]. The higher cost estimate is reported in the Gibson Quai transmission cost model. The cost includes, amongst other items a multiplexer, port cards, licenses and testing plus a mark-up on capital for overheads, design uncertainties, and installation costs of [c-i-c]%. The equipment costs do not vary with the distance of the route.

The cost estimate excludes the cost of accommodation, power and air-conditioning

that would be borne by a competitor to establish a presence at a Telstra site, as well as the cost of customer access equipment such as DSLAMs. These costs have been excluded because the competitor may be directly connecting to an end user site, rather than a Telstra exchange.

The 'optical fibre cost' is the cost of deploying optical fibre over various distances to a site. It is comprised of cable, ploughing and ducting costs as well as the costs of deploying the fibre itself. Ploughing costs per kilometre vary enormously, depending on several factors including the terrain and access to the land. A relatively recent range of costs for ploughing in regional locations is between [c-i-c] per kilometre. For this purpose we use an average cost of ploughing which is approximately [c-i-c] per kilometre. This cost estimate is derived from an internal cost study conducted in 2007 looking at 35 case studies of deployment of optical fibre cable by ploughing in regional Australia by Telstra between financial years 2001/02 and 2007/08. It includes the cost of the optical fibre cable as well as the cost of the ploughing itself. Telstra assumes that a competitor would already have transmission infrastructure in an area and would merely be tapping into the existing infrastructure by extending the transmission system to pick-up a site.

The following scatter diagram shows the range of costs per km from the 35 case studies used to derive the average cost estimate of [c-i-c] per kilometre.

Graph 1

[c-i-c]

There are two options for ducting: building new ducts or leasing Telstra ducts. It is common practice for access seekers to lease Telstra ducts in regional towns. The costs for leasing and building ducts are taken from the statement of Craig Lordan of Evans and Peck study entitled "Estimated Optical Fibre Installation Costs Within CBD Areas", submitted by Telstra in December 2007 in support of its application for exemption from the standard access obligations applicable to Telstra in respect of the DTCS dated 21 December 2007. A copy of that report is attached as Appendix 3 to this response.

On the basis of Mr Lordan's statement, the average cost of [c-i-c] per kilometre for building new ducts can be derived. Similarly, the average cost of [c-i-c] per annum for installing duct cable and leasing Telstra ducts can be derived.

The average costs for new ducts overstate the costs of new ducts in regional areas

by an order of magnitude because the costs associated with building ducts in CBD areas (which are the subject of the Mr Lordan's statement) would typically be of a higher magnitude than those costs associated with building ducts in regional areas due to the high cost of re-instatement in CBDs compared to regional towns.

This estimation of the costs of building a transmission spur is developed from average unit costs and therefore is necessarily indicative. The actual costs of building a spur at a particular location will also be driven by route specific factors such as the terrain and ease of access to the sites, which are not considered in this analysis.

Table 5

[c-i-c]

Table 6

[c-i-c]

Table 5 shows that the estimated cost of building a spur where ducts are leased is between [c-i-c] for a 5 km spur and [c-i-c] for an 80 km spur. Table 6 shows that the estimated cost of building a spur where new ducts are built is between [c-i-c] for a 5 km spur and [c-i-c] for an 80 km spur. The estimate cost for the lease of ducts in Table 5 represents the cost for one year only and is not annualised. In addition, no WACC has been applied to the capital costs.

4. The infrastructure being used by Telstra to provide the capacity on each route.

Telstra uses optical fibre and SDH transmission technology to provide the capacity on each of the regional routes. DWDM equipment is also deployed on at least one of the rings for each of the 20 capital city to regional routes covered by the Exemption Application, except [c-i-c].

5. Growth of traffic over the last 3 years and projected traffic over the next two years for each route

Telstra does not maintain historic records of demand by route as a matter of course. However Telstra has been able to locate 2004 and 2007 data on the number of transmission services provisioned on each route. This information is set out

below and is derived from Telstra's [c-i-c] system which is a service order system and database that records the provisioning and service details of transmission SIOs:

Table 7

[c-i-c]

Telstra does not routinely forecast traffic demand on a route-by-route basis. Whilst Telstra monitors trends in utilization of capacity on a monthly basis for the main transmission rings, this information is not considered perfectly reliable nor is it recorded in a format that is useful for considering capital to regional routes as it is based on the entire ring.

6. A current price list of all (declared and non-declared) Telstra wholesale transmission services.

Telstra is unsure why non-declared wholesale transmission prices are relevant to the Commission's analysis. The requested price lists are attached at Appendix 4.

7. The names of all staff at Market Clarity involved in the preparation of the Market Clarity report

The Market Clarity staff involved in the preparation of the Market Clarity report were:

- (a) Richard Chirgwin - conducted geospatial distance calculations against known infrastructure locations;
- (b) Shara Evans and Paul Brooks - checked the distance analysis by comparing it against carrier fibre maps and other information held by Market Clarity.

The Market Clarity August 2007 report entitled "Telecommunications Fibre Backhaul Infrastructure Summary for Selected Routes" was prepared using information held within Market Clarity's Telecoms Infrastructure Database ("IDB") which tracks information from 113 telecommunications carriers. The IDB is maintained by Market Clarity independently of the Market Clarity report, which was prepared at Telstra's request. It is an ongoing research project of Market

Clarity, and updated by Market Clarity staff on a daily basis. Over the course of the last two years, all Market Clarity staff have been involved in maintaining the IDB.

Telstra Corporation Limited

March 2008

APPENDIX 1

Market Clarity - PoP details for Bundaberg and Warragul

[c-i-c]

APPENDIX 2

Comparison of road distance and fibre distance

Capital City	Regional Town	Road Distance (Km)	Fibre Distance (Km)
ADELAIDE	PORT AUGUSTA	306	[c-i-c]
BRISBANE	BUNDABERG	363	[c-i-c]
BRISBANE	CAIRNS	1681	[c-i-c]
BRISBANE	GLADSTONE	514	[c-i-c]
BRISBANE	MACKAY	951	[c-i-c]
BRISBANE	MARYBOROUGH	264	[c-i-c]
BRISBANE	ROCKHAMPTON	615	[c-i-c]
BRISBANE	TOWNSVILLE	1335	[c-i-c]
MELBOURNE	WANGARATTA	250	[c-i-c]
MELBOURNE	WARRAGUL	105	[c-i-c]
SYDNEY	ARMIDALE	499	[c-i-c]
SYDNEY	BEGA	425	[c-i-c]
SYDNEY	CAMPBELLTOWN	58	[c-i-c]
SYDNEY	COFFS HARBOUR	535	[c-i-c]
SYDNEY	GOSFORD	76	[c-i-c]
SYDNEY	GOULBURN	196	[c-i-c]
SYDNEY	PENRITH	59	[c-i-c]
SYDNEY	TAMWORTH	389	[c-i-c]
SYDNEY	WAGGA WAGGA	458	[c-i-c]
SYDNEY	WAUCHOPE	386	[c-i-c]

APPENDIX 3

Statement of Craig Lordan of Evans and Peck entitled “Estimated Optical
Fibre Installation Costs Within CBD Areas” (2007)

APPENDIX 4

Telstra Declared and Non-declared Transmission Prices

[c-i-c]