

**Optus Submission to
Australian Competition and Consumer Commission
in response to the
Draft Report on the DTCS Service Description**

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1. Introduction

- 1.1 In July 2010, the Australian Competition and Consumer Commission (the Commission) released its draft report to vary the service description of the Domestic Transmission Capacity Service (DTCS).
- 1.2 The stated intention of the proposed variation is to ensure the declaration is technology-neutral with respect to technologies currently deployed or in use, and in particular;
 - To clarify the inclusion of commonly used technologies for transmission services, through identification of PDH, SDH and Ethernet as the relevant interface protocols within the new 'network interfaces' definition; and
 - To ensure some form of guaranteed bandwidth – through designation of a minimum data rate of 2.048 Mbps.
- 1.3 Optus supports the Commission's stated intention to ensure the declaration is technology-neutral. Further, Optus supports the identification of Ethernet as a relevant interface protocol and the designation of a minimum data rate.
- 1.4 In addition to the above matters, the Commission has also introduced a new concept into the service description: to fall within the service description a service must be 'uncontended'.
- 1.5 Optus has concerns with the Commission's proposed definition of an 'uncontended' service. In this submission Optus will argue that the current definition risks defeating the Commission's technological-neutrality objective. Optus will propose an alternative definition for the term 'uncontended', which should avoid misinterpretation.
- 1.6 Optus will submit that, with the minor modification noted above, the Commission's proposed variation will promote competition and encourage the efficient use of and investment in infrastructure.

2. Form of the proposed variation to the DTCS service description

- 2.1 Optus welcomes the Commission's Draft Report on the proposed variation to the DTCS service description. In this section, Optus will discuss the several changes to the DTCS service description and provide commentary on the potential ambiguity that still surrounds the consideration of Ethernet over fibre within the scope of the proposed variation.

Revised opening description of the DTCS

- 2.1 First, the opening description of the DTCS has been revised to read:

*The domestic transmission capacity service is a service for the carriage of certain communications from one transmission point to another transmission point via **symmetric** network interfaces on a permanent **uncontended** basis by means of guided and/or unguided electromagnetic energy, except communications between:*

- (a) *one customer transmission point **directly to** another customer transmission point*
- (b) *one access seeker network location **directly to** another access seeker network location*

Inter-capital routes

- (c) *a transmission point in an exempt capital city and a transmission point in another exempt capital city. Exempt capital cities include: Adelaide, Brisbane, Canberra, Melbourne, Perth or Sydney*

- 2.2 Optus notes that the key differences in this opening paragraph include the insertion of the words 'symmetric', 'uncontended' and 'directly to'; of which, only the term 'uncontended' has been defined in the new definitions.
- 2.3 Optus considers that for the avoidance of doubt, the Commission should consider reinsertion of the definition for 'symmetric' that was previously discussed during the course of the DTCS service description inquiry; where it was considered that **symmetric is the same data rate in both directions**.
- 2.4 The term 'symmetric' is significant because it clarifies whether or not transmission services provided using Ethernet interface protocols are captured within the scope of the DTCS declaration. For example,
- Ethernet over PDH (EoPDH) and Ethernet over SDH (EoSDH) are captured within the proposed service description due to the nature of the underlying transmission medium (Layer 1 – PDH, SDH) being a circuit-switched and symmetric service.
 - Ethernet over Copper (EoC) is not captured because it is an asymmetric service, and this is similarly the case with most Ethernet over xDSL services.

- Ethernet over IP/MPLS is not captured because it is an asymmetric service, in that data packets are not transferred along designated routes.
- Ethernet over Fibre (native Ethernet) can be captured because it is a symmetric service, however as discussed below it is still not clear that the service description captures Ethernet over Fibre because the Ethernet over Fibre service can be offered as either a contended or uncontended service.

2.5 A further discussion on the use and proposed definition of ‘uncontended’ is set out later in this submission.

Proposed definition of ‘network interfaces’

2.6 Second, a new definition of ‘network interfaces’ has been introduced to replace the existing definition of ‘designated rate’, where:

network interfaces include Ethernet, Plesiochronous Digital Hierarchy (PDH) and Synchronous Digital Hierarchy (SDH) interface protocols used to provide a transmission rate of 2.048 Megabits per second or above which an access provider provides to itself or others

2.7 Optus considers this definition captures the Commission’s objectives, that is:

- To clarify the inclusion of commonly used technologies for transmission services, through identification of PDH, SDH and Ethernet as the relevant interface protocols; and
- To ensure some form of guaranteed bandwidth – through designation of a minimum data rate of 2.048 Mbps or higher.

Use and proposed definition of ‘uncontended’

2.8 Third, a new definition of ‘uncontended’ has been introduced, where:

uncontended means dedicated and not shared

2.9 Optus considers that there are significant problems with this definition.

2.10 First, it is potentially technically incorrect because a service may be considered ‘shared’ yet still be uncontended. In particular, packet or frame-based services – a category which includes Ethernet over Fibre (native Ethernet) services – may be considered to be either:

- ‘uncontended’ if the sum of the total bandwidth assigned to users is no greater than the total bandwidth available on the infrastructure (ie the infrastructure is not ‘over-booked’ so each user’s allocated bandwidth is guaranteed); or
- ‘contended’ if the sum of the total bandwidth assigned to users is greater than the total bandwidth available on the infrastructure (ie each user’s allocated bandwidth is not guaranteed).

- 2.11 However, packet or frame-based services may also be considered to be ‘shared’ because several users may concurrently use the same piece of physical infrastructure. This may be the case even if all users’ bandwidth is guaranteed as defined above. In such circumstances, the native Ethernet services may be considered to be both ‘shared’ and ‘uncontended’.
- 2.12 Second, the above definition of ‘uncontended’ potentially excludes Ethernet over Fibre (native Ethernet) services (on the basis that they may be considered ‘shared’). It is certainly open to an access provider to mount a legal argument that Ethernet over Fibre (native Ethernet) services are not covered by the declaration.
- 2.13 For example, in its earlier submission on this matter, Telstra stated that *“The words ‘uncontended’ would ensure that the service declaration only applied to the wholesale carrier grade services supplied in Telstra’s network (namely Ethernet over SDH) and not to the business grade services (namely Ethernet over fibre). Specifically: (a) The words ‘uncontended’ refer to a contention ratio of 1:1, hence no contention. In this manner, the transmission link would comprise of dedicated capacity at a constant bandwidth supplied to a single exclusive customer.”*³
- 2.14 Optus disagrees with Telstra’s assumption that the word ‘uncontended’ applies only to Ethernet over SDH services and excludes business grade services (namely Ethernet over fibre). As noted above, if ‘uncontended’ is interpreted to mean that the infrastructure is not ‘overbooked’, such that all users receive a guaranteed bandwidth, then packet-based services including Ethernet over Fibre can be considered to be ‘uncontended’. Nevertheless, the current definition of ‘uncontended’ could support an argument to exclude Ethernet over Fibre.
- 2.15 Optus assumes that this result was not the Commission’s intention. If the argument that Ethernet over Fibre (native Ethernet) services are not covered by the service description is successful, this would defeat the Commission’s objective of ensuring the declaration is technology-neutral. This outcome would be particularly concerning (and contrary to the competition and investment criteria set out in the Trade Practices Act), given that transmission technology is increasingly moving towards Ethernet over Fibre (native Ethernet) services. This result could impede an access seeker’s ability to gain access to DTCS services which use the Ethernet interface protocols, hence limiting the intended impacts on innovation and competition.

An alternative definition of ‘uncontended’

- 2.16 If the Commission’s objective in introducing the term ‘uncontended’ is to ensure that the transmission service provided pertains to a specified bandwidth that can be guaranteed along the length of the transmission service, regardless of the DTCS technology used to transport the information, then it may be necessary to strengthen the definition of ‘uncontended’ within the service description.

³ Telstra Corporation Ltd, *Response to the ACCC discussion paper reviewing the declaration for the domestic transmission capacity service*, Public version, January 2010, p.32

2.17 Optus proposes that ‘uncontended’ be redefined as follows:

***uncontended** means that the sum of the total bandwidth assigned to users on a given transmission link is no more than the total bandwidth available, ie. the bandwidth assigned to each user is guaranteed.*

2.18 Optus submits that this alternative definition for the term ‘uncontended’ would avoid misinterpretation and would not result in the exclusion of Ethernet over Fibre services from the service description. This would serve the Commission’s technological-neutrality objective and promote competition and encourage the efficient use of and investment in infrastructure, as transmission technology moves towards Ethernet over Fibre (native Ethernet) services.