



# **DOMESTIC TRANSMISSION CAPACITY SERVICE**

***An ACCC Discussion Paper* reviewing the declaration for the domestic  
transmission capacity service**

**November 2009**

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# **1 Introduction**

## **1.1 Background**

In March 2009 the Australian Competition and Consumer Commission (the Commission) released the *Domestic Transmission Capacity Service, An ACCC Final Report on reviewing the declaration of the domestic transmission capacity service* (2009 DTCS Final Report) outlining its decision to vary and extend the declaration of the domestic transmission capacity service (DTCS).

Under section 152AL of the *Trade Practices Act 1974* (the Act) and subsection 33(3) of the *Acts Interpretation Act* (AIA), the Commission has the power to review and if necessary vary an existing declaration.

The Commission has decided to conduct a public inquiry to review the existing DTCS declaration. The review is to be conducted pursuant to section 152AL of the Act, subsection 33(3) of the AIA and Part 25 of the *Telecommunications Act 1997* (Telecommunications Act).

## **1.2 Purpose**

The purpose of this Discussion Paper is to clarify the scope of the DTCS service description and seek submissions about whether it is in the long-term interests of end-users (LTIE) for the DTCS service description to cover all commonly used interface protocols on transmission networks in Australia such as the PDH (Plesiochronous Digital Hierarchy), SDH (Synchronous Digital Hierarchy) and Ethernet interface protocols. The Commission seeks comment from industry participants, other stakeholders (including end-users) and the public more generally.

## **2 Timetable and Inquiry Process**

### **2.1 Timetable for the Inquiry**

Under the Telecommunications Act, the Commission must provide a reasonable period, of not less than 28 days for any member of the public to make a written submission about the matter to which the public inquiry relates. The Commission requests written submissions no later than 5.00 pm on 31 December 2009.

After consideration of the submissions from interested parties, the Commission intends to publish a final report setting out the Commission's findings. Given the narrow focus of the present inquiry and its recent review of the DTCS declaration, the Commission does not intend to issue a draft report before publishing the final report.

Further information about the Commission's approach to declaration inquiries is outlined in its publication *Telecommunications services – Declaration provisions – a guide to the declaration Provisions of Part XIC of the Trade Practices Act*, July 1999.

### **2.2 Making submissions**

The Commission encourages industry participants, other stakeholders and the public more generally to make submissions to the Commission to assist it in determining whether the existing service description for the DTCS should be varied.

To foster an informed and consultative process, all submissions will be considered as public submissions and will be posted on the Commission's website. If interested parties wish to submit commercial-in-confidence material as part of their submission to the Commission, parties should submit both a public and commercial-in-confidence version of their submission. The public version of the submission should clearly identify the commercial-in-confidence material by replacing the confidential material with an appropriate symbol or 'c-i-c'.

Please forward submissions by **email** to the following contact officer:

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## 3 Legislative background

### 3.1 The access regime

Part XIC of the Act establishes a regime for regulated access to carriage services and services which facilitate the supply of carriage services. Access obligations in relation to a particular service are established following the declaration of that service by the Commission. Once a service is declared, there is an obligation on any access provider supplying, or proposing to supply, those services to any person (including to themselves) to supply a declared service if requested to do so by a service provider. The access regime thus enables access seekers to supply carriage or content services to their customers without the (potentially anti-competitive) restriction of key services by access providers.

The terms and conditions of supply can be agreed through commercial negotiations. If the access provider or access seeker cannot agree on the terms and conditions of supply, either party can seek arbitration of the dispute by the Commission. Where a relevant access undertaking (accepted by the Commission) exists, an arbitration determination made by the Commission on access by the access seeker to the declared service must not be inconsistent with that undertaking. The Commission notes that legislation has recently been introduced into the Australian Federal Parliament (the *Telecommunications Legislation Amendment (Competition and Consumer Safeguards) Bill 2009*) with a number of reform proposals in relation to the access regime.

### 3.2 Background to the DTCS declaration

The supply of various types of transmission capacity was deemed to be a declared service in June 1997.<sup>1</sup> The declaration was subsequently varied in 1998, 2001 and 2004. In 2004 the Commission put in place a new service description which, in addition to inter-capital transmission,<sup>2</sup> excluded 14 nominated capital-regional routes from the declaration.<sup>3</sup> In March 2009 the Commission varied the 2004 DTCS declaration to include the Commission's final decision on Telstra's transmission exemption applications: *Telstra's domestic transmission capacity service exemption applications – Final decision*, November 2008 (Final Exemption Decision).<sup>4</sup> The Final Exemption Decision exempted capital-regional transmission on 9 capital regional routes, 16 capital city areas and inter-exchange transmission for 72 metropolitan areas. The 2009 DTCS declaration excludes

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<sup>1</sup> ACCC, *Deeming of Telecommunications Services: a statement pursuant to section 39 of the Telecommunications (Transitional Provisions and Consequential Amendments) Act 1997*, June 1997.

<sup>2</sup> Transmission between transmission points of interconnection which are located in exempt capital cities.

<sup>3</sup> ACCC, *Transmission Capacity Service - Review of the declaration for the domestic transmission capacity service – Final Report*, April 2004, (2004 DTCS Final Report), pp. 48-49.

<sup>4</sup> For full details of the Commission's Final Exemption Decision visit the Commission's website at [www.accc.gov.au](http://www.accc.gov.au)

the routes and ESAs due to be exempted (in accordance with the Final Decision) from 25 November 2009 (when the Commission's exemption orders are due to take effect). The current declaration took effect on 1 April 2009 and is due to expire on 31 March 2014.

The current DTCS service description is set out in full at Appendix 1.

### **3.3 Declaration review**

The Commission is holding a public inquiry on whether to vary the DTCS declaration service description pursuant to subsection 152AL(3) of the Act and subsection 33(3) of the AIA. The purpose of holding a public inquiry is to assist the Commission to determine whether it is satisfied that varying the existing DTCS declaration service description would promote the long-term interests of end-users (LTIE) of carriage services and services provided by means of carriage services. In this regard, the Commission must:

- hold a public inquiry in accordance with Part 25 of the Telecommunications Act
- prepare and publish a report setting out the Commission's findings as a result of that public inquiry, and
- be satisfied that varying the service declaration will promote the LTIE of carriage services or of services provided by means of carriage services.

### **3.4 The Commission's approach to the LTIE test**

In determining whether varying the existing service declaration will promote the LTIE, regard must be had to the three primary objectives identified by section 152AB:

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

The three objectives and the legislative background in general are discussed further in Appendix 2.

## 4 Transmission Services

### 4.1 Generic service description

The DTCS is a generic service that can be used for the carriage of voice, data or other communications using wideband or broadband carriage (the minimum data rate in the current declaration is 2 Mbps). Carriers/carriage service providers (CSPs) can use transmission capacity to set up their own networks for aggregated voice or data channels, or for integrated data traffic (such as voice, video and data).

There are a number of types of transmission capacity services, including:

- inter-capital transmission
- ‘other’ transmission (e.g. capital-regional routes)
- inter-exchange local transmission, and
- tail-end transmission.

**Inter-capital transmission** refers to transmission between transmission points located in Adelaide, Brisbane, Canberra, Melbourne, Perth or Sydney. For example, transmission from a transmission point in Sydney to a transmission point in Melbourne.

**Tail-end transmission** refers to transmission between a point at a customer location and some point on the access seeker’s network (that is, a point of interconnection). For example, in the case of a customer whose premises are located near an access provider’s local exchange where there is a transmission point of interconnection, the transmission of traffic from that customer’s premises to the access provider’s local exchange, and hence to the transmission point of interconnection, would constitute tail-end transmission.

**Inter-exchange local transmission** refers to transmission between points of interconnection located at or virtually co-located with an access provider’s local exchange, both of which are within a single call charge area. In functional terms, these transmission links, together with switching and network management functions, constitute the inter-exchange network, which carries traffic within a call charge area, but where the transmission points are not linked to the same local exchange.

**‘Other’ transmission** refers to transmission between points located in different call charge areas, except for inter-capital transmission between the exempt capital cities: Melbourne, Sydney, Canberra, Brisbane, Adelaide and Perth. For example, it includes transmission between Adelaide-Darwin, Perth-Darwin and Melbourne-Hobart, as well as transmission along capital-regional routes (e.g. Sydney-Tamworth) and regional-regional (e.g. Geelong- Ballarat).

## **4.2 Declared transmission service**

The declared transmission capacity service includes ‘other’ transmission, inter-exchange local transmission and tail-end transmission but excludes inter-capital transmission between the cities of Adelaide, Brisbane, Canberra, Melbourne, Perth and Sydney.

The declared transmission capacity service is set out in full in Appendix 1.

## 5 Proposed variation to the service description for the DTCS

The DTCS declaration is intended to be technologically neutral. The current DTCS service description (set out in full at Appendix 1) is limited to transmission at a ‘designated rate’. The designated rate in the service description of the DTCS declaration is defined as:

*a transmission rate of 2.048 Megabits per second, 4.096 Megabits per second, 6.144 Megabits per second, 8.192 Megabits per second, 34 to 35 Megabits per second, 140/155 Megabits per second (or higher orders).<sup>5</sup>*

The data rates included in the above definition of a ‘designated rate’ of the DTCS service description relate to interface protocols known as PDH (Plesiochronous Digital Hierarchy) and SDH (Synchronous Digital Hierarchy).

Commonly used PDH data rates include:

- 2.048 Megabits per second (Mb/s) – also referred to as E1
- 34.368 Mb/s – also referred to as E3,
- 139.264 Mb/s – also referred to as E4, and
- 44.736 Mb/s – used for digital TV signals.

Commonly used SDH data rates include:

- 155.520 Mb/s – also referred to as STM 1,
- 622.080 Mb/s – also referred to as STM 4,
- 2488.320 Mb/s – also referred to as STM 16, and
- 9953.280 Mb/s – also referred to as STM 64.

Other commonly used data rates in the Australian telecommunications network include those using Ethernet interface protocols, which include:

- 10 Mb/s – also referred to as Ethernet
- 100 Mb/s – also referred to as Fast Ethernet
- 1000 Mb/s – also referred to as Gigabit Ethernet
- 10000 Mb/s – also referred to as 10 Gigabit Ethernet

The Commission is conducting the current public inquiry in order to clarify whether the current service description incorporates all transmission interface protocols commonly used over the Australian network. The Commission’s view is that the position should be clarified and, to avoid doubt, the definition of a ‘designated rate’ in the DTCS service description should be amended. The Commission is proposing to amend the definition of a ‘designated rate’ to ensure that Ethernet interface protocols are included in the service description of the DTCS and to only specify a minimum data rate. The Commission proposes to vary the DTCS declaration by including the following definitions:

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<sup>5</sup> ACCC, 2009 DTCS Final Report, p.41.

*a designated rate is a transmission rate of 2.048 Megabits per second or higher using Ethernet, PDH or SDH interface protocols.*

*Ethernet, PDH or SDH interface protocols are Ethernet, Pleisiochronous Digital Hierarchy (PDH) or Synchronous Digital Hierarchy (SDH) interface protocols as established and amended from time to time by the International Telecommunications Union, Telecommunication Standardization Sector (ITU-T) or the Institute of Electrical and Electronic Engineers (IEEE).*

(the 'proposed variation').

## 6 Main matters submissions should address

In reviewing the existing DTCS declaration, the Commission must decide whether to vary the service declaration having regard to the object of promoting the LTIE of carriage services or services supplied by means of carriage services in the manner outlined in section 152AB of the Act. See Appendix 2 for further detail on the Commission's approach to section 152AB of the Act.

Set out below are specific issues that the Commission considers may be pertinent to a review of the existing service description of the DTCS declaration. Submissions should address these issues and, where possible, the legislative criteria.

### 6.1 Service description

The current DTCS service description (detailed above and in Appendix 1) refers to transmission over network interfaces at a 'designated rate'.

The designated rate is defined as:

“a transmission rate of 2.048 Megabits per second, 4.096 Megabits per second, 6.144 Megabits per second, 8.192 Megabits per second, 34 to 35 Megabits per second, 140/155 Megabits per second (or higher orders)”.<sup>6</sup>

The Commission is seeking to ascertain stakeholders' views on whether the current definition of the 'designated rate' incorporates data rates of Ethernet interface protocols or whether the proposed variation is necessary.

#### ***Questions to assist those preparing submissions:***

- *Are Ethernet interface protocols included in the current DTCS service description?*
- *Should Ethernet interface protocols be implied in the current DTCS service description?*
- *Should the DTCS service description be varied to specifically refer to PDH, SDH and Ethernet interface protocols?*
- *Is it appropriate to refer to the interface protocols developed by the International Telecommunications Union, Telecommunication Standardization Sector (ITU-T) and the Institute of Electrical and Electronic Engineers (IEEE)?*
- *Is the proposed variation in an acceptable form?*

<sup>6</sup> ACCC, 2009 DTCS Final Report, p.41.

## 6.2 Promotion of Competition

### *Relevant markets*

Defining markets relevant for transmission services will allow the Commission to meaningfully analyse the effectiveness of competition, and the likely effect of varying the existing DTCS declaration. The markets identified may be for declared transmission, non-declared transmission, or any relevant downstream markets.

The Act directs the Commission's attention to the markets in which competition may be promoted. In most cases, this is likely to be the markets for downstream services rather than the market in which the eligible service is supplied. The process of market definition also involves determining the market boundaries of transmission or any downstream markets, which can be described in product, geographic and functional terms.<sup>7</sup>

In the 2009 DTCS Final Report, the Commission identified the relevant downstream markets for the DTCS as the range of retail services (that can be supplied using transmission services) which are delivered over optical fibre including national long distance, international call, data and IP-related markets. The Commission also found that mobile services including voice and data were relevant downstream markets.

The Commission seeks submissions on whether the proposed variation to the service description of the DTCS declaration is likely to have an impact on the definition of markets for transmission services.

### ***Question to assist those preparing submissions:***

*What effect, if any, would the proposed variation of the DTCS service description have on the market definition for transmission services?*

### *Geographic markets*

In establishing the geographic dimensions of the market, the Commission will have regard to factors including any limitations on the ability of access to alternative sources of supply in alternative regions; the costs of switching to alternative sources of supply; and the relative price levels and price movements of different geographic sources of supply.<sup>8</sup> The Commission was of the view in the 2009 DTCS Final Report that broad geographical categories for transmission services were useful in identifying particular transmission markets. The Commission concluded that the geographic markets

<sup>7</sup> ACCC, *Merger Guidelines*, November 2008, p. 15.

<sup>8</sup> ACCC, *Merger Guidelines*, November 2008, p. 16-17.

encompassed inter-capital transmission, capital-regional routes, inter-regional routes and local exchange and tail-end transmission in regional, metropolitan and CBD areas.

The Commission is currently seeking views on whether the geographic dimension of the transmission services markets is likely to be affected by the proposed variation to the DTCS service description.

***Question to assist those preparing submissions:***

*What effect, if any, would the proposed variation have on the geographic dimensions of the relevant markets?*

*Technologies used to provide transmission services*

In the 2009 DTCS Final Report and Final Exemption Decision, the Commission concluded that optical fibre remained the dominant technology for the provision of all transmission services despite the alternate technologies which are sometimes utilised for a similar function.

The Commission is currently seeking views on whether the proposed variation to the DTCS service description to include Ethernet interface protocols will have an impact on the use of optical fibre for the provision of transmission services.

***Question to assist those preparing submission:***

*What effect, if any, would the proposed variation have on the technology used to provide transmission services?*

*Market Structure*

Market structure is an important determinant of a competitive market. When examining the market structure of transmission markets the Commission is interested in assessing whether the current number of participants in transmission services is likely to change via new market entry or existing players exiting the market.

The Commission was of the view in the 2009 DTCS Final Report that existing capital-regional or inter-capital fibre networks which were less than 1 km from a town's regional post office could provide a constraint on incumbent behaviour and pricing. The Commission nevertheless found that there was limited contestability in metropolitan and

CBD tail-end transmission markets and relevant markets for many inter-exchange transmission services. The Commission considered high sunk costs in the transmission market represented a significant barrier to entry making it economically inefficient to duplicate existing network infrastructure. The Commission also found that optical fibre was likely to remain the dominant technology across all transmission services, and that high barriers to entry in many DTCS markets were likely to remain.

In the present inquiry the Commission is interested in assessing whether the market structure for the DTCS is likely to be affected by the proposed variation to the DTCS service description.

***Questions to assist those preparing submissions:***

- *What effect, if any, would the proposed variation have on the current market structure for transmission services?*
- *What effect, if any, would the proposed variation have on competition in downstream markets or barriers to entry in transmission markets?*

### **6.3 Any-to-any connectivity**

In determining whether the DTCS declaration should be varied the Commission must make an assessment as to whether a variation to the service declaration would be likely to achieve any-to-any connectivity in relation to carriage services that involve communication between end-users. In the 2009 DTCS declaration review the Commission found that the variation to the declaration as set out in the 2009 DTCS Final Report would not have an impact on the achievement of any-to-any connectivity between end-users.

The Commission seeks in the current inquiry views on whether the proposed variation to the DTCS service description to include reference to interface protocols and a minimum data rate is likely to affect the achievement of any-to-any connectivity between end-users.

***Questions to assist those preparing submissions:***

*What effect, if any, would the proposed variation have on any-to-any connectivity in relation to carriage services that involve communication between end-users?*

## 6.4 Impact on efficient use of, and investment in, infrastructure

In assessing whether a variation to the DTCS service description will promote the LTIE the Commission must consider whether it is likely to encourage the economically efficient use of, and economically efficient investment in:

- infrastructure by which listed services are supplied, and
- any other infrastructure by which listed services are, or are likely to become, capable of being supplied.

As noted in Appendix 2, the Commission considers that efficiency has three major components – allocative, productive and dynamic. In general, each of these forms of efficiency is enhanced when prices of given services reflect the underlying costs of providing these services.

In its 2009 DTCS Report, the Commission was of the view that the varied 2009 DTCS declaration promoted both the efficient use of and efficient investment in infrastructure.

The Commission currently seeks submissions on whether the proposed variation to the DTCS service description to include reference to interface protocols and a minimum data rate will adversely impact the efficient use of, and investment in, infrastructure.

***Questions to assist those preparing submission:***

*To what extent, if any, would the proposed variation discourage or encourage efficient use, and efficient investment in, infrastructure?*

## **Appendix 1. Service description for the DTCS**

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

- (a) one customer transmission point and another customer transmission point
- (b) a transmission point in an exempt capital city and a transmission point in another exempt capital city
- (c) one access seeker network location and another access seeker network location

### ***Capital-regional routes***

- (d) a transmission point in Sydney and a transmission point in any of the following regional centres: Albury, Lismore, Newcastle, Grafton, Wollongong, Taree, Dubbo and, with effect from 25 November 2009, Campbelltown, Gosford, Coffs Harbour and Goulburn
- (e) a transmission point in Melbourne and a transmission point in any of the following regional centres: Ballarat, Bendigo, Geelong and Shepparton
- (f) a transmission point in Brisbane and a transmission point in any of the following regional centres: Toowoomba, Gold Coast and, with effect from 25 November 2009, Townsville, Rockhampton, Bundaberg and Maryborough
- (g) a transmission point in Adelaide and a transmission point in Murray Bridge and, with effect from 25 November 2009, Port Augusta

### ***Inter-exchange transmission (metropolitan areas)***

- (h) with effect from 25 November 2009, inter-exchange transmission for the following metropolitan ESAs:
  - (1) in Sydney between transmission points located at an Exchange in any of the following ESAs: Ashfield, Balgowlah, Bankstown, Blacktown, Burwood, Campsie, Carramar, Castle Hill, Chatswood, Coogee, Cremorne, East, Eastwood, Edgecliff, Epping, Glebe, Granville, Harbord, Homebush, Hornsby, Hurstville, Kensington, Kingsgrove, Kogarah, Lakemba, Lane Cove, Lidcombe, Liverpool, Mascot, Mosman, Newtown, North Parramatta, North Ryde, North Sydney, Parramatta, Pendle Hill, Pennant Hills, Petersham, Randwick, Redfern, Revesby, Rockdale Rydalmere, Ryde, Seven Hills, Silverwater, St Leonards, Undercliffe, Waverley.

- (2) in Brisbane between transmission points located at an Exchange in any of the following ESAs: Paddington, South Brisbane, Toowong, Valley, Woolloongabba.
- (3) in Melbourne between transmission points located at an Exchange in any of the following ESAs: Ascot, Brunswick, Caulfield, Coburg, Elsternwick, Footscray, Heidelberg, Malvern, Moreland, North Melbourne, Port Melbourne, Preston, Richmond, South Melbourne, St Kilda, Toorak
- (4) in Perth between transmission points located at an Exchange in the ESAs South Perth and Subiaco

***Inter-exchange transmission (CBD areas)***

- (i) with effect from 25 November 2009, inter-exchange transmission for the following CBD ESAs:
  - (1) in Sydney between transmission points located at an Exchange in any of the following ESAs: City South, Dalley, Haymarket, Kent and Pitt.
  - (2) in Brisbane between transmission points located at an Exchange in any of the following ESAs: Charlotte, Edison and Spring Hill.
  - (3) in Adelaide between transmission points located at an Exchange in any of the following ESAs: Flinders and Waymouth.
  - (4) in Melbourne between transmission points located at an Exchange in any of the following ESAs: Batman, Exhibition and Lonsdale.
  - (5) in Perth between transmission points located at an Exchange in the ESAs Bulwer, Pier and Wellington.
  - (6) in Sydney between transmission points located at an Exchange in
    - i. any of the following ESAs: City South, Dalley, Haymarket, Kent and Pitt; and
    - ii. any of the Sydney Metro Exemption ESAs
  - (7) in Brisbane between transmission points located at an Exchange in
    - iii. any of the following ESAs: Charlotte, Edison and Spring Hill; and
    - iv. any of the Brisbane Metro Exemption ESAs
  - (8) in Melbourne between transmission points located at an Exchange in
    - v. any of the following ESAs: Batman, Exhibition and Lonsdale; and

- vi. any of the Melbourne Metro Exemption ESAs.
- (9) in Perth between transmission points located at an Exchange in
  - vii. any of the following ESAs: Bulwer, Pier and Wellington; and
  - viii. any of the Perth Metro Exemption ESAs.

## Definitions

Where words or phrases used in this Annexure are defined in the *Trade Practices Act 1974* or the *Telecommunications Act 1997*, they have the meaning as given in the relevant Act.

In this appendix:

an **access seeker network location** is a point in a network operated by a service provider that is not a point of interconnection or a customer transmission point

an **exempt capital city** means Adelaide, Brisbane, Canberra, Melbourne, Perth or Sydney

a **customer transmission point** is a point located at customer equipment at a service provider's customer's premises in Australia (for the avoidance of doubt, a customer in this context may be another service provider)

a **designated rate** is a transmission rate of 2.048 Megabits per second, 4.096 Megabits per second, 6.144 Megabits per second, 8.192 Megabits per second, 34 to 35 Megabits per second, 140/155 Megabits per second (or higher orders)

**exchange** means a telecommunications exchange and includes the land, buildings and facilities (within the meaning of section 7 of the *Telecommunications Act 1997* (Cth)) that comprise or form part of the exchange.

**exchange service area** or **ESA** has the meaning given to that phrase by the Australian Communications Industry Forum Limited definition in ACIF C559:2006, Part 1.

a **point of interconnection** is a physical point of interconnection in Australia between a network operated by a carrier or a carriage service provider and another network operated by a service provider

a **transmission point** is any of the following:

- a) a point of interconnection
- b) a customer transmission point
- c) an access seeker network location.

## Appendix 2. Long-term interests of end-users

Section 152AB of the Act states that, in determining whether declaration promotes the LTIE, regard must be had to the extent to which declaration is likely to result in the achievement of the following objectives only:

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

These objectives are interrelated. In many cases, the LTIE may be promoted through the achievement of two or all three of these matters simultaneously. In other cases, the achievement of one of these matters may involve some trade-off in terms of another of the matters, and the Commission will need to weigh up the different effects to determine whether remaking, extending, revoking or varying the existing declaration, or allowing it to expire promotes the LTIE. In this regard, the Commission will interpret 'long-term' to mean a balancing of the flow of costs and benefits to end-users over time in relation to the criteria. Thus, it may be in the LTIE to receive a benefit for even a short period of time if its effect is not outweighed by any longer term cost.

The following discussion provides an overview of what the Commission must consider in assessing each of these objectives.

### Promotion of competition

Subsections 152AB(4) and (5) of the Act provide that, in interpreting this objective, regard must be had to, but is not limited to, the extent to which the arrangements will remove obstacles to end-users gaining access to listed services. The explanatory memorandum to Part XIC of the Act states that:

...it is intended that particular regard be had to the extent to which the...[declaration]... would enable end-users to gain access to an increased range or choice of services.<sup>9</sup>

The concept of competition is of fundamental importance to the Act and has been discussed many times in connection with the operation of Parts IIIA, IV, XIB and XIC of the Act.

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<sup>9</sup> Trade Practices Amendment (Telecommunications) Act 1997 (Cth) explanatory memorandum.

In general terms, competition is the process of rivalry between firms, where each market participant is constrained in its price and output decisions by the activity of other market participants. The Trade Practices Tribunal (now the Australian Competition Tribunal) stated that:

In our view effective competition requires both that prices should be flexible, reflecting the forces of demand and supply, and that there should be independent rivalry in all dimensions of the price-product-service packages offered to consumers and customers. Competition is a process rather than a situation. Nevertheless, whether firms compete is very much a matter of the structure of the markets in which they operate.<sup>10</sup>

Competition can provide benefits to end-users including lower prices, better quality and a better range of services over time. Competition may be inhibited where the structure of the market gives rise to market power. Market power is the ability of a firm or firms to constrain or manipulate the supply of products from the levels and quality that would be observed in a competitive market for a significant period of time.

The establishment of a right for third parties to negotiate access to certain services on reasonable terms and conditions can operate to constrain the use of market power that could be derived from the control of these services. Accordingly, an access regime such as Part IIIA or Part XIC addresses the structure of a market, to limit or reduce the sources of market power and consequent anti-competitive conduct, rather than directly regulating conduct which may flow from its use, which is the role of Part IV and Part XIB of the Act. Nonetheless, in any given challenge to competition, both Parts XIB (or IV) and XIC may be necessary to address anti-competitive behaviour.

To assist in determining the impact on markets of remaking, extending, revoking or varying the existing declaration or allowing its expiration, the Commission will first need to identify the relevant market(s) and then to assess the likely effect on competition in each market.

Section 4E of the Act provides that the term ‘market’ includes a market for the goods or services under consideration as well as any other goods or services that are substitutable for, or otherwise competitive with, those goods or services. The Commission’s approach to market definition is discussed in its 2008 Merger Guidelines, is canvassed in its information paper, *Anti-competitive conduct in telecommunications markets*, August 1999 and is also explored in the Commission’s second *Fixed Services Review position paper*, April 2007.

The second step is to assess the likely effect of the proposal on competition in each relevant market. As noted above, subsection 152AB(4) requires that regard must be had to the extent to which a particular thing will remove obstacles to end-users gaining access to listed services.

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<sup>10</sup> *Re Queensland Co-operative Milling Association Ltd; Re Defiance Holdings Ltd*, (1976) ATPR 40-012, 17,245.

The Commission considers that denial to service providers of access to necessary upstream services on reasonable terms is a significant obstacle to end-users gaining access to services. In this regard, declaration can remove such obstacles by facilitating entry by service providers, thereby providing end-users with additional services from which to choose. For example, access to a mobile termination service may enable more service providers to provide fixed to mobile calls to end-users. This gives end-users more choice of service providers.

Where existing market conditions already provide for the competitive supply of services, the access regime should not impose regulated access. This recognises the costs of providing access, such as administration and compliance, as well as potential disincentives to investment. Regulation will only be desirable where it leads to benefits in terms of lower prices, better services or improved service quality for end-users that outweigh any costs of regulation.

In the context of considering whether remaking, extending, revoking or varying the declaration or allowing its expiration will promote competition, it is appropriate to examine the impact of the existing declaration on each relevant market, the likely effect of altered access obligations (due to the removal of the declaration) on the relevant market, and compare the likely competitive environment in that market before and after the proposed remaking, extension, revocation, variation, or expiration of the declaration. In examining the market structure, the Commission considers that competition is promoted when market structures are altered such that the exercise of market power becomes more difficult; for example, because barriers to entry have been lowered (permitting more efficient competitors to enter a market and thereby constraining the pricing behaviour of the incumbents) or because the ability of firms to raise rivals' costs is restricted.

### **Any-to-any connectivity**

Subsection 152AB(8) of the Act provides that the objective of any-to-any connectivity is achieved if, and only if, each end-user who is supplied with a carriage service that involves communication between end-users is able to communicate, by means of that service, or a similar service, with other end-users whether or not they are connected to the same network. The reference to 'similar' services in the Act enables this objective to apply to services with analogous but not identical functional characteristics, such as fixed and mobile voice telephony services or Internet services which may have differing characteristics.

The any-to-any connectivity requirement is particularly relevant when considering services that involve communications between end-users. When considering other types of services (such as carriage services that are inputs to an end-to-end service or distribution services such as the carriage of pay television), the Commission generally considers that this matter will be given less weight compared to the other two matters.

## **Efficient use of, and investment in, infrastructure**

Subsections 152AB(6) and (7A) of the Act provide that, in interpreting this objective, regard must be had to, but is not limited to, the following:

- whether it is, or is likely to become, technically feasible for the services to be supplied and charged for, having regard to:
  - the technology that is in use, available or likely to become available
  - whether the costs that would be involved in supplying, and charging for, the services are reasonable, or likely to become reasonable
  - the effects, or likely effects, that supplying, and charging for, the services would have on the operation or performance of telecommunications networks
- the legitimate commercial interests of the supplier or suppliers of the services, including the ability of the supplier or suppliers to exploit economies of scale and scope, and
- the incentives for investment in:
  - the infrastructure by which the services are supplied, and
  - any other infrastructure by which the services are, or are likely to become, capable of being supplied.

In considering incentives for investment in infrastructure, the Commission must have regard to the risks involved in making the investment.

Economic efficiency has three components.

- Productive efficiency refers to the efficient use of resources within each firm such that all goods and services are produced using the least cost combination of inputs.
- Allocative efficiency refers to the efficient allocation of resources across the economy such that the goods and services that are produced in the economy are the ones most valued by consumers. It also refers to the distribution of production costs amongst firms within an industry to minimise industry-wide costs.
- Dynamic efficiency refers to the efficient deployment of resources between present and future uses such that the welfare of society is maximised over time. Dynamic efficiency incorporates efficiencies flowing from innovation leading to the development of new services, or improvements in production techniques.

The Commission will need to ensure that the access regime does not discourage investment in networks or network elements where such investment is efficient. The access regime also plays an important role in ensuring that existing infrastructure is used efficiently where it is inefficient to duplicate investment in existing networks or network elements.

***The technical feasibility of supplying and charging for particular services***

This incorporates a number of elements, including the technology that is in use or available, the costs of supplying, and charging for, the services and the effects on the operation of telecommunications networks.

In many cases, the technical feasibility of supplying and charging for particular services given the current state of technology may be clear, particularly where (as in the present case) the service is already declared and there is a history of providing access. The question may be more difficult where there is no prior access, or where conditions have changed. Experience in other jurisdictions, taking account of relevant differences in technology or network configuration, will be helpful. Generally the Commission will look to an access provider to demonstrate that supply is not technically feasible.

***The legitimate commercial interests of the supplier, including the ability of the supplier to exploit economies of scale and scope***

A supplier's legitimate commercial interests encompass its obligations to the owners of the firm, including the need to recover the cost of providing services and to earn a normal commercial return on the investment in infrastructure. The Commission considers that allowing for a normal commercial return on investment will provide an appropriate incentive for the access provider to maintain, improve and invest in the efficient provision of the service.

A significant issue relates to whether or not capacity should be made available to an access seeker. Where there is spare capacity within the network, not assigned to current or planned services, allocative efficiency would be promoted by obliging the owner to release capacity for competitors.

Paragraph 152AB(6)(b) of the Act also requires the Commission to have regard to whether the access arrangement may affect the owner's ability to realise economies of scale or scope. Economies of scale arise from a production process in which the average (or per unit) cost of production decreases as the firm's output increases. Economies of scope arise from a production process in which it is less costly in total for one firm to produce two (or more) products than it is for two (or more) firms to each separately produce each of the products.

Potential effects from access on economies of scope are likely to be greater than on economies of scale. A limit in the capacity available to the owner may constrain the number of services that the owner is able to provide using the infrastructure and thus

prevent the realisation of economies of scope associated with the production of multiple services. In contrast, economies of scale may simply result from the use of the capacity of the network and be able to be realised regardless of whether that capacity is being used by the owner or by other carriers or carriage service providers. Nonetheless, the Commission will assess the effects on the supplier's ability to exploit both economies of scale and scope on a case-by-case basis.

***The impact on incentives for investment in infrastructure***

Firms should have the incentive to invest efficiently in infrastructure. Various aspects of efficiency have been discussed already. It is also important to note that while access regulation may have the potential to diminish incentives for some businesses to invest in infrastructure, it may also ensure that investment is efficient and reduce the barriers to entry for other (competing) businesses or the barriers to expansion by competing businesses.

There is also a need to consider the effects of any expected disincentive to investment from anticipated increases in competition to determine the overall effect on the LTIE. The Commission is careful to ensure that services are not declared where there is a risk that incentives to invest may be dampened, such that there is little subsequent benefit to end-users from the access arrangements.