



## **Deeming of Telecommunications Services**

**A statement pursuant to section 39 of the Telecommunications  
(Transitional Provisions and Consequential Amendments) Act 1997**

**30 June 1997**

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## Summary

Section 39 of the *Telecommunications (Transitional Provisions and Consequential Amendments) Act 1997* (the Transitional Act) provides for the Australian Competition and Consumer Commission to prepare a statement, in consultation with AUSTEL, specifying certain services to be deemed as declared services. The services which are eligible to be deemed under s.39 include certain services covered by registered access agreements between the three existing carriers and certain broadcasting carriage services.

This statement is the Commission's written statement under Section 39, and fulfils the Commission's obligation under s.39(1) and s.39(5) of the Transitional Act.

On or after 1 July 1997, carriers and service providers will be able to be provided with the deemed services and specified ancillary services, on request, from any carrier or carriage service provider supplying the services. The terms and conditions of access may be determined by commercial negotiation, an undertaking submitted by the access provider and which has been accepted by the Commission, or, in the event that the parties are unable to agree, by arbitration by the Commission.

The Commission in preparing this statement, published a draft and invited submissions in accordance with s.39(8). The Commission released a draft statement on 4 June 1997. Parties were provided with fourteen days to respond. Within that time the Commission met with many interested parties and received 22 written submissions. The Commission gave due consideration to all representations and submissions in relation to this matter in preparing the statement.

Table A specifies the services deemed as declared services under s.39. The approach employed by the Commission in determining which eligible services to deem, on the basis of the legislative criteria relating to the promotion of the long-term interests of end-users, is outlined in the statement. Attachments A and B contain more detailed service descriptions of the services specified in this statement. The Commission has adopted service descriptions developed by the TAF for those deemed services where they have been available and are considered appropriate. The service descriptions in the attachments outline the elements and features of the service and provide guidance to access providers and access seekers in negotiating the terms and conditions under which the service will be provided.

The Commission raised in its draft deeming statement its interest in ensuring that additional eligible services, for which early access is considered important, are considered for declaration either by the TAF or the Commission under s.152AL of the *Trade Practices Act*. On the basis of comments received, the Commission intends to announce a public inquiry into the declaration of additional services soon after the commencement of the new regime.

**Table A: Services specified pursuant to s.39 of the Transitional Act**

<b>Service</b>	
(i)	<p><b>Domestic PSTN originating access</b> An access service for the carriage of telephone (ie PSTN and PSTN equivalent such as voice from ISDN) calls (ie voice, data over the voice band) to a POI from end-customers assigned numbers from the geographic number ranges of the Australian Numbering Plan and directly connected to the Access Provider's network.</p>
(ii)	<p><b>Domestic PSTN terminating access</b> An access service for the carriage of telephone (ie. PSTN and PSTN equivalent such as voice from ISDN) calls (ie. voice, data over the voice band) from a POI to end-customer assigned numbers from the geographic number ranges of the Australian Numbering Plan and directly connected to the Access Provider's network.</p>
(iii)	<p><b>Domestic GSM originating access</b> An access service for the carriage of telephone calls (ie. voice, data over the voice frequency band) to a POI from end-customers assigned numbers from the GSM number ranges of the Australian Numbering Plan and directly connected to the Access Provider's GSM network.</p>
(iv)	<p><b>Domestic GSM terminating access</b> An access service for the carriage of telephone calls (ie. voice, data over the voice band) from a POI to B-parties assigned numbers from the GSM number ranges of the Australian Numbering Plan and directly connected to the Access Provider's network.</p>
(v)	<p><b>Domestic AMPS originating access</b> An access service for the carriage of telephone calls (ie. voice, data over the voice frequency band) to a POI from end-customers assigned numbers from the AMPS number ranges of the Australian Numbering Plan and directly connected to the Access Provider's AMPS network.</p>
(vi)	<p><b>Domestic AMPS terminating access</b> An access service for the carriage of telephone calls (ie. voice, data over the voice band) from a POI to B-parties assigned numbers from the AMPS number ranges of the Australian Numbering Plan and directly connected to the Access Provider's network.</p>
(vii)	<p><b>Transmission</b> A service for the provision of media independent transmission capacity at 2.048 Mbit/s between Transmission Points, except for capacity on routes between Brisbane, Sydney, Canberra, Melbourne, Adelaide and Perth.</p>
(viii)	<p><b>Digital data access service</b> An access service for the domestic carriage of data between a digital data Interconnect Terminal Point located at the access seeker's exchange or network facility and a NTU or unimux or modem located at the customer's premises where the customer is directly connected to the access provider's network.</p>
(ix)	<p><b>Conditioned local loop service</b> A service for the supply of media independent unswitched transmission capacity of voice band width, being a leased conditioned two-wire (twisted copper pair) analogue based service.</p>
(x)	<p><b>AMPS to GSM Diversion Service</b> A service whereby all calls made to a nominated AMPS Network number are diverted to a designated POI of the GSM carrier/carriage service provider nominated by the former AMPS subscriber.</p>
(xi)	<p><b>Broadcasting access service</b> An analogue service necessary for the purposes of enabling the supply of a broadcasting service by means of line links that deliver signals to end-users, and of a kind that was used for those purposes on 13 September 1996. This is an access service which provides a basic carriage and distribution access function together with other functions as requested.</p>

## 1. Introduction

Part XIC of the *Trade Practices Act (1974)* (TPA) establishes a telecommunications specific regime for regulated access to certain carriage services<sup>1</sup> and services which facilitate the supply of carriage services to enable carriers and service providers to use those services in the provision of carriage, content and other services<sup>2</sup> to their customers. The new regime is intended to promote the long-term interests of end-users (customers) by encouraging competition in the supply of a diverse range of services, ensuring that there is interconnectivity between all telecommunications users and efficient use of, and investment in, infrastructure by which carriage services are supplied. The rationale of the new regime is discussed in Chapter 2 of this paper.

Access obligations in relation to a particular service are established by the declaration of that service by the Commission. Transitional arrangements provide for an initial list of declared services. In particular, section 39 of the *Telecommunications (Transitional Provisions and Consequential Amendments) Act* (the Transitional Act) requires the Commission to prepare a statement, in consultation with AUSTEL, deeming certain services as declared services with effect from 1 July 1997.

The deeming process is intended to achieve a smooth introduction of the new telecommunications access regime by essentially retaining existing access rights for carriers, extending those rights to existing service providers and new entrants and providing access to the carriage of broadcasting services over cable networks. On an ongoing basis, declarations may take place on the recommendation of the Telecommunications Access Forum (TAF) or after a public inquiry by the Commission.

Carriage services and services that facilitate the supply of carriage services will be eligible for declaration under the regime. All eligible services covered in registered access agreements between the three existing carriers<sup>3</sup> will be deemed as declared services unless the Commission is satisfied that deeming a particular service would not be in the long-term interests of end-users. The AUSTEL report, *Telecommunications Access Requirements*<sup>4</sup>, provides an initial list of services covered by registered agreements. The question of whether a particular thing promotes the long-term interests of end-users (LTIE) is to be determined with regard to the criteria set out in s.152AB of the *Trade Practices Act 1974* (TPA). The criteria are examined in detail in Chapter 3.

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<sup>1</sup> In effect this means a telecommunications carriage service.

<sup>2</sup> This would include services supplied by means of telecommunications networks such as banking and retail shopping.

<sup>3</sup> More precisely, s.39 will apply to all eligible services covered by an access agreement registered under s.144 of the Telecommunications Act 1991 as at the beginning of 13 September 1996. The Commission may also specify in the statement any eligible service covered by an access agreement registered in the period 13 September 1996 to 30 June 1997.

<sup>4</sup> AUSTEL, *Telecommunications Access Requirements*, December 1996.

Chapter 4 considers the application of the criteria in s.152AB to determine which of the services covered by registered access agreements between the three existing carriers should be deemed as declared services. Chapter 5 examines the deeming of AMPS resale which needs to be given particular attention under s.39(4) of the Transitional Act, given the Government's phase-out plans. Chapter 6 considers the declaration of broadcasting carriage services, which are currently governed by the Ministerial determination relating to the licensing of carrier associates.

Chapter 7 notes the Commission's intention to hold a public inquiry into the declaration of services for which early access is considered important by access seekers. The Commission is particularly interested in unbundled services for which there are doubts about whether or not they are covered by s.39 and which are not recommended by the TAF for declaration.

Attachment A contains service descriptions for the services covered by registered access agreements specified in the Commission's statement pursuant to s.39 of the Transitional Act. Attachment B contains a service description for the broadcasting access service which is also specified in the s.39 statement.

## 2. Rationale of the telecommunications access regime

The primary rationale underlying the telecommunications access regime is that the interests of end-users of telecommunications services can be promoted through the introduction of effective competition into potentially competitive markets which require the services of certain 'bottleneck' infrastructure. In particular, certain network elements may exhibit natural monopoly characteristics such that a single network element can produce all relevant market output at a lower cost than two or more elements<sup>5</sup>. Typically, this will reflect economies of scale and scope in production.

In the absence of an access regime, the owners of such natural monopoly network elements may be in a position to inhibit or distort competition in markets which require the use of the bottleneck services. For instance, the owner of a local CAN may be able to obstruct competition in the market for long-distance telephone services through denying or restricting access to the local network. The incentive to try to limit competition in the related market may be present where the owner of the bottleneck facility has a commercial arm in the related market.

The access regime establishes rights for service providers to negotiate access to bottleneck services on reasonable terms and conditions. This is designed to create greater competition in the markets which rely on the bottleneck services, and thereby promote more efficient production and lower prices for consumers. This is essentially the same rationale as that which underlies the national access regime embodied in Part IIIA of the TPA:

*...the Government's philosophy in preparing the telecommunications access regime has been to follow an approach based on Part IIIA of the Trade Practices Act as far as practicable, but nevertheless to introduce some additional refinements to ensure that the arrangements will work effectively for the telecommunications industry<sup>6</sup>.*

An important additional rationale for the telecommunications regime under Part XIC of the TPA, and a significant deviation from the Part IIIA regime, is the need for many carriage services to have any-to-any connectivity, that is, the ability of end-users of a service to communicate with each other, regardless of the network to which they are connected.

Another important difference between the regimes is the pre-existence of detailed access and interconnection arrangements that have applied under Part 8 of the *Telecommunications Act 1991* and the relevant licence conditions established under that Act. The Second Reading Speech makes it clear that the policy intent is that recognition should be given to expectations of continuity regarding the broad rights

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<sup>5</sup> Conceptually, bottleneck characteristics could also be present where there are two (or more) network infrastructures but it would be uneconomic to develop another one.

<sup>6</sup> Second Reading Speech of the Trade Practice Amendment (Telecommunications) Bill 1996.

contained in these existing arrangements. It is intended that this will facilitate a smooth transition to the new regime.

While taking into account the differences between the Part XIC and Part IIIA regimes, it will nonetheless be desirable to avoid unnecessary inconsistencies. In doing so, the industry can be given greater certainty as to how the legislation will be interpreted and applied, particularly through the development of case law applicable to both regimes.

### 3. Framework for deeming of services

The following framework has been developed with reference to the TPA as amended by the *Trade Practices Amendment (Telecommunications) Act 1997*, the Transitional Act, and the *Telecommunications Act 1997* (TA).

Diagram 1 presents a logical process for consideration of those issues associated with the deeming of telecommunications services. This diagram should be considered in conjunction with the relevant Acts.

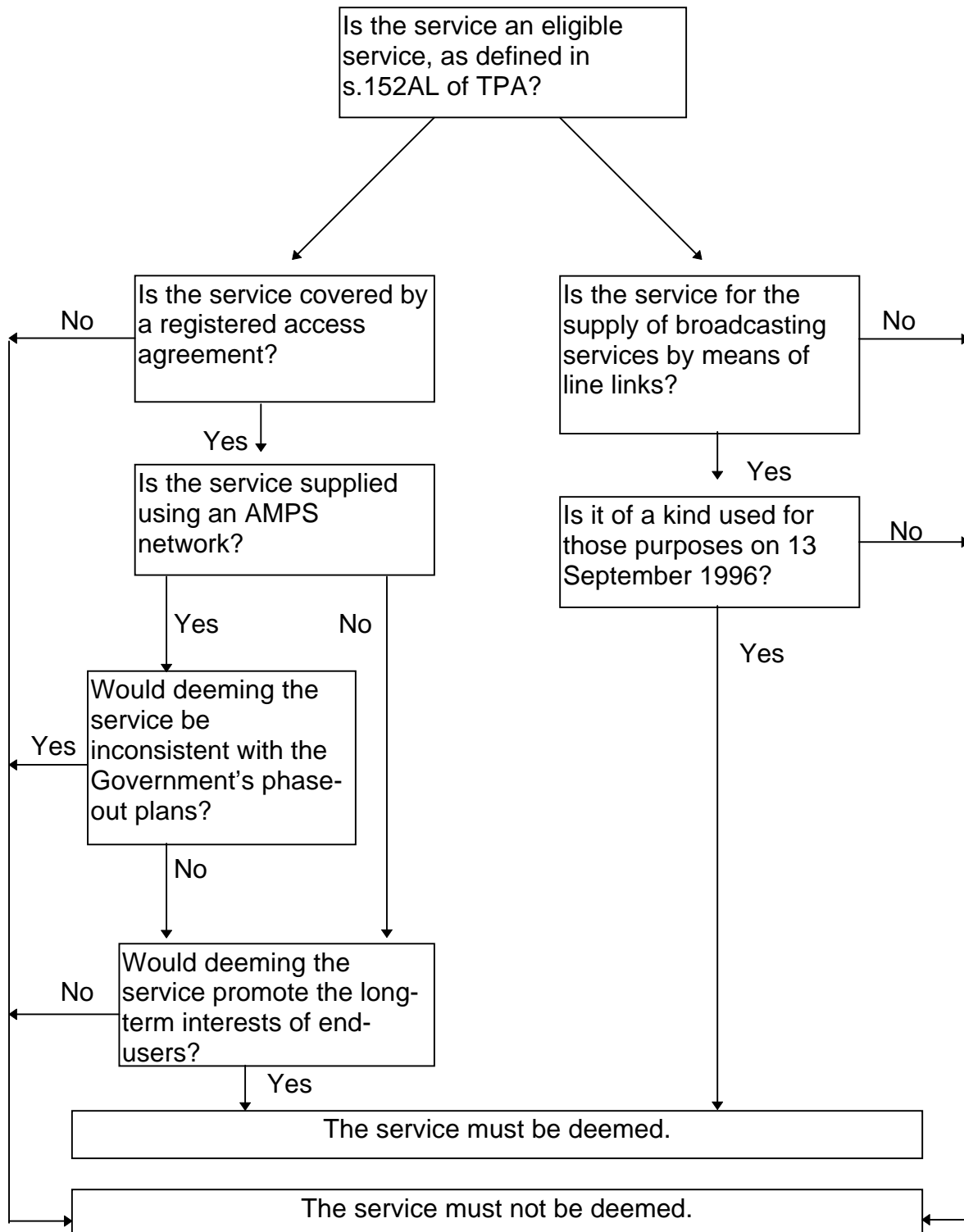
In summary, s.39 of the Transitional Act provides for two main groups of services which may be deemed as declared services from 1 July 1997:

- certain services covered by access agreements registered under s.144 of the *Telecommunications Act 1991*; and
- certain services that are necessary for the purposes of enabling the supply of broadcasting services over line links.

Within the first group of services, there is an additional issue for services supplied using an AMPS network. Specifically, s.39(4) of the Transitional Act provides that such a service must not be specified in the statement if the Commission is satisfied that deeming the service would be inconsistent with the Government's phase-out plans for analogue AMPS services.

Each of the steps in the framework is considered in detail in the remainder of this Chapter and in Chapters 4,5 and 6.

**Diagram 1:  
The Deeming Process under s.39 of the Transitional Act**



### 3.1 Eligible services

The types of services that are eligible for declaration under the telecommunications access regime are:

- carriage services<sup>7</sup> supplied between two or more points, at least one of which is in Australia; or
- services that facilitate the supply of such carriage services;

where the service is supplied, or is capable of being supplied, by a carrier or a carriage service provider.

Consistent with Part IIIA, the telecommunications access regime provides for the declaration of a service provided by means of an infrastructure facility rather than declaration of the infrastructure itself. This recognises that a facility may be used to provide multiple services, only some of which it might be in the interests of end-users to declare.

The declaration of services that facilitate the supply of carriage services is intended to allow for access obligations to be attached to blocks of functionality, or other inputs, which, while not carriage services themselves, may be used to produce a carriage service<sup>8</sup>. In this regard, it will facilitate the efficient unbundling of services.

Standard access obligations attach to services which have been declared (either through s.39 of the Transitional Act or s.152AL of the TPA) and are being provided by a carrier or a carriage service provider, whether to itself or a third party. These services are known as active declared services.

Certain ancillary services are required to be supplied as part of the standard access obligations applying to carriers and carriage service providers who provide declared services<sup>9</sup>. These ancillary services include the provision of billing information, fault detection, handling and rectification, and any service necessary to enable the supply of carriage or content services using conditional access customer equipment (such as set top boxes used in the supply of pay television). Individual and class exemptions are possible from these obligations.

In addition, standard carrier licence conditions require that carriers must, under certain conditions, provide other carriers with physical access to facilities and mobile telecommunications transmission towers and access to information relating to the operation of telecommunications networks.<sup>10</sup>

The use of intellectual property cannot be a declared service which facilitates the supply of a carriage service except to the extent that its use in the service is an

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<sup>7</sup> Carriage services are defined in the TA to mean services for carrying communications by means of guided and/or unguided electromagnetic energy. A carriage service would include transmission and switching services.

<sup>8</sup> Trade Practices (Telecommunications) Amendment Act, Explanatory Memorandum.

<sup>9</sup> See S.152AR of TPA.

<sup>10</sup> See Schedule 1, Standard carrier licence conditions, TA.

integral but subsidiary part of the declared service. This prevents declarations resulting in the provision of direct access to intellectual property, although access may be provided to services produced, carried or delivered with the aid of intellectual property.

### **3.2 Service descriptions**

The deemed services are technically specified at Attachment A.

The Commission has decided to use the service descriptions developed by the TAF where they have been available and where the Commission considers them appropriate. The TAF service descriptions provide an agreed view of potential access providers and access seekers of the level of detail considered suitable to describe the fundamental aspects of the service. The service descriptions provide a base from which terms and conditions can be developed in access undertakings or agreed between access providers and access seekers in bilateral negotiations.

### **3.3 The long-term interests of end-users**

Section 152AB of the Trade Practices Act provides that the objective of the new telecommunications access regime is to promote the long-term interests of end-users of the following services (the listed services):

- carriage services; and
- services supplied by means of carriage services.

In determining whether a particular thing promotes the LTIE the Commission is required to have regard only to the extent to which the thing is likely to result in the achievement of the following criteria:

- the objective of promoting competition in markets for listed services;
- the objective of achieving any-to-any connectivity in relation to carriage services that involve communication between end-users; and
- the objective of encouraging the economically efficient use of, and economically efficient investment in, the infrastructure by which carriage services are supplied.

These criteria are not ends in themselves but are the means by which the primary objective of the promotion of the LTIE is to be interpreted. They are relevant only in regard to the extent to which they promote the primary objective.

The criteria are interrelated. In many cases, a particular thing may promote the long-term interests of end-users through the achievement of two or all of these criteria simultaneously. In other cases, the achievement of one of these criteria may involve some trade-off in terms of its effect on the interests of end-users with one or more of the other criteria, and the Commission will need to weigh up the different effects to determine whether or not the overall effect is to promote the LTIE. In this regard, the Commission will interpret long-term to mean a balancing of the flow of costs and benefits over time to end-users in relation to the criteria. Thus, it may be

in the long-term interests of end-users to receive a benefit for even a short period of time if its effect is not outweighed by any longer term costs.

Section 39 reverses the test for declaration under s.152AL(3) of TPA by placing the onus on the Commission to satisfy itself that a particular service should *not* be deemed as a declared service. Thus a service under s.39(1) will be deemed unless there are grounds to believe that doing so would not be in the LTIE.

### 3.3.A Promoting competition

The first criterion requires the Commission to make an assessment of whether or not a particular thing would be likely to promote competition in the markets for listed services. The concept of competition is of fundamental importance to the TPA and has been discussed many times in connection with the operation of Part IV of the TPA.

In general terms, competition is the process of rivalry between firms, where each market participant is constrained in its price and output decisions by the activity of other market participants. The Trade Practices Tribunal 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>11</sup>*

Competition can provide benefits to end-users including lower prices, better quality and a better range of services over time. Competition is inhibited where the structure of the market gives rise to market power<sup>12</sup>. Market power is the ability of a firm or firms profitably to divert prices, quality or the supply of products from their competitive levels for a significant period of time to the detriment of consumers.

In the first instance, 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 attempts to change 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 the new Part XIB of the TPA. Nonetheless, as noted in its information paper on the competition notice guidelines, the prudent

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<sup>11</sup> Re Queensland Co-operative Milling Association Ltd and Defiance Holdings Ltd (1976), Australian Trade Practices Reporter 40-012, at 17,245.

<sup>12</sup> It may also be the case that market power may be strengthened as a consequence of anti-competitive conduct which changes the structure of the market.

use of both conduct and access provisions may be necessary to address anti-competitive behaviour.

To apply the concept of promoting competition in markets for listed services, the Commission will need to identify the relevant market(s) and assess the likely effect on competition in that market or those markets.

Section 4E of the TPA provides that the term market includes a market for the goods or services under consideration and any other goods or services that are substitutable for, or otherwise competitive with, those goods or services. The Commission's approach to market definition is discussed in the Merger Guidelines<sup>13</sup> published by the Commission and is canvassed in its information paper<sup>14</sup>, attendant to its draft competition notice guidelines under Part XIB of the TPA.

The second step is to assess the likely effect of particular access arrangements on competition in the market. Section 152AB(4) requires that regard should be had to the extent to which the arrangements will remove obstacles to end-users gaining access to carriage services. The explanatory memorandum 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". The term 'obstacles' would seem to be a reference to barriers to new entrants in the markets for services arising from the need to use the services of network infrastructure to be able to compete. In this regard, an access regime can remove obstacles by facilitating entry and thereby providing end-users with a choice of suppliers from which to obtain services. For example, access to the CAN at a point closer to the customer may allow access seekers to provide a different level of functionality to customers from what is provided for by the access providers' network.

Where existing market conditions already provide for the competitive supply of services, the access regime should not impose regulated access<sup>15</sup>. This recognises the costs of providing access associated with administration and compliance as well as potential disincentives to investment. Access regulation will only be desirable where it leads to benefits in terms of lower prices, better services or improved service quality for end-users which outweigh any costs of regulation. Thus the likely effects on competition will need to be compared with any potential disincentive to investment arising from the costs of providing access to determine whether or not access would promote the LTIE.

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<sup>13</sup> Merger Guidelines, revised July 1996.

<sup>14</sup> Anti-competitive conduct in telecommunications markets: An Information paper, 19 May 1997.

<sup>15</sup> Trade Practices (Telecommunications) Amendment Act, Explanatory Memorandum.

### 3.3.B Any-to-any connectivity

The objective of 'any-to-any' connectivity is necessary to ensure that each end-user of a service that involves communication between end-users is able to communicate, by means of that service, with each other end-user who is supplied with the same service or a similar service, even where they are connected to different telecommunications networks<sup>16</sup>. The reference to similar services in the legislation is intended to enable this objective to apply to services with similar, 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<sup>17</sup>. When considering other types of services (such as carriage services which are inputs to an end-to-end service or distribution services such as the carriage of pay television), it is intended that this criterion will be given less weight compared to the other two criteria.

Any-to-any connectivity is likely to reinforce the objective of promoting competition. For providers of a network to compete effectively they will generally require interconnection with other networks to provide services to end-users. In effect, if smaller networks could only offer services to their own customers they would find it difficult to attract new users, regardless of their long-term efficiency.

The relationship between any-to-any connectivity and efficient investment is more problematic. A requirement to condition a network to provide for any-to-any connectivity may involve costs in terms of investment to enable the connection of calls to and from other networks as well as potential risks to network integrity. Where the nature of the network is such that there would be limited calls between the network and other networks, the cost of any-to-any connectivity may exceed the benefits and a requirement for it to be provided may lead to inefficient investment.

Even where the achievement of any-to-any connectivity is desirable, there may be a number of ways in which it can be achieved and not all possible interconnection services or points would need to be declared.

### 3.3.C. Efficient use of, and investment in, infrastructure

The third criteria under 152AB is that of encouraging the economically efficient use of, and economically efficient investment in, the infrastructure by which carriage services are supplied.

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.

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<sup>16</sup> See s.152AB(8) of TPA.

<sup>17</sup> Trade Practices (Telecommunications) Amendment Act, Explanatory Memorandum.

- 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.
- 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 captures such matters as innovation to develop new services for consumers and new techniques to produce existing services.

The concept of economically efficient use of infrastructure can be examined in terms of these components. The productively efficient use of infrastructure requires that the manner in which that infrastructure is used to produce services is the least cost way of doing so. Generally, facilities-based competition between firms promotes productive efficiency as firms try to lower their cost of production to be able to compete effectively, with consequent benefits to consumers in the form of lower prices. The Commission will need to ensure that the access regime does not discourage investment in networks or network elements where it is efficient. However, where it is inefficient to require investment in a number of networks or network elements, the access regime may play an important role in ensuring that existing infrastructure is used efficiently. For instance, even where a higher utilisation of a network may be more efficient, a network owner may deny access for anti-competitive reasons, in the absence of an access regime.

Allocative and dynamic efficiency can be promoted where there are no artificial barriers to network elements being used to produce a full range of competitive services. For example, the unbundling of network functionality into individual 'building blocks' may have a major impact on the ability of new entrants to provide improved quality for existing services or innovative new services. These efficiency considerations support the view that access seekers should be given the freedom to use only that part of the network which they require. Under such an arrangement, each network component would be available separately and priced separately, where it is technically and commercially feasible to do so. A corollary of this is that it would be efficient for the access seeker to construct their own network elements which are not subject to the same bottleneck characteristics.

Section 152AB(6)(a) requires that the Commission to have regard to a number of specific matters in applying this criterion and these matters are discussed below.

*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<sup>18</sup>.

In many cases, the technical feasibility or infeasibility of supplying and charging for particular services given the current state of technology may be clear, particularly where there is a history of providing access. The question will be more difficult

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<sup>18</sup> See s.152AB(6)(a) of TPA.

where there is no such 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 onus will be on the potential access provider to demonstrate that supply is not technically feasible.

The costs of supplying the services and the effect on the operation and performance of the network are important considerations. A requirement for interconnection of networks may carry a cost to the incumbent carrier to configure its network and software to accommodate new entrants in a manner that may not be optimal if the carrier were to consider its own interests alone. This suggests that there may be a need in particular cases to balance the promotion of allocative and dynamic efficiency with the promotion of productive efficiency in the use of the existing network.

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

A supplier's legitimate commercial interests encompass its obligations to the owners of the firm, including the need to recover the cost of providing services and to earn a commercial return on the investment in infrastructure. The need for appropriate incentives for the access provider to maintain, improve and invest in the efficient provision of the service will also be considered by the Commission.

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.

Where there are capacity constraints, there is a question as to whether the incumbent should be required to expand capacity if feasible. Efficient investment would be promoted where the access regime does not introduce distortions to the decision of whether to build new infrastructure or extend the existing infrastructure. The owner of the network would need to be adequately compensated for the cost of any extension.

Section 152AB(6)(b) also requires regard to be had 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 produce one of the products.

Potential effects from access on economies of scope are likely to be greater than on economies of scale. A limit in the capacity available to the owner may constrain the number of services that the owner is able to provide using the infrastructure and thus prevent the realisation of economies of scope associated with the production of multiple services. In contrast, economies of scale may simply result from the use of the capacity of the network and be able to be realised regardless of whether that

capacity is being used by the owner or by other carriers and service providers. Nonetheless, the Commission will assess the effects of the supplier's ability to exploit both economies of scale and scope on a case-by-case basis.

There is also a need to consider the effects of any expected disincentive to investment with any anticipated increases in competition to determine the overall effect on the long-term interests of end-users.

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

Firms should have the incentive to efficiently invest in infrastructure. Various aspects of efficient investment 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 also reduces the barriers to entry for other (competing) businesses.

The Commission will be careful to ensure that services are not deemed 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.

#### *3.4 Commission's approach*

The Commission considers that the circumstances in which providing for regulated access would promote the LTIE, with regard to the s.152AB criteria, will generally be where the service is:

- (a) a bottleneck service; and/or
- (b) a service necessary for the achievement of any-to-any connectivity.

#### *Bottleneck services*

The determination of whether a service is a bottleneck service requires that the production technology of the service exhibit natural monopoly characteristics and that the service is essential to being able to compete in a particular market. Formally, a natural monopoly technology involves a production technology such that, at all levels of output relevant to the market demand, one network element can produce that output at a lower cost than more than one element. It is also possible for efficiency to be maximised in an industry where there are two (or more) facilities, but where it is uneconomic to develop another one<sup>19</sup>. In markets characterised by such a production technology it would be economically inefficient for any new competitor to develop another network element to provide the service.

A second element of a bottleneck service is that use of the service is essential to being able to compete effectively in a particular market. If the service is not essential for effective competition, the fact that someone cannot economically or technically replicate the production facility would be irrelevant to the criterion of

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<sup>19</sup> In this case, there may also be an argument for access regulation although the level of existing competition would need to be considered.

promoting competition in the markets for listed services. In determining whether this element holds, the Commission will consider, among other things, whether there are:

- close substitutes for the service as an input to the production of a particular final market service at a comparable cost; and
- close substitutes for that final market service which can be produced without the bottleneck service.

The Commission considers that the declaration of bottleneck services would generally promote the LTIE. Access to such services would promote competition in the market for the final market services which rely on the bottleneck services as inputs. In addition, appropriately priced access to the service produced with natural monopoly technology would be likely to lead to efficient investment through discouraging inefficient duplication.

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

Most services required for any-to-any connectivity under case (b) would also be bottleneck services and thus covered by case (a) or alternatively would be competitively provided such that there is no need for regulated access to be imposed. However, case (a) alone may not capture some services critical for any-to-any connectivity. This could include services for which access may only have a marginal impact on competition or which may be capable of eventually supporting competitive provision but which will be provided only by Telstra for the immediate period following 1 July.

Notwithstanding what services are declared, the pricing principles that apply will need to have regard to the interests of access providers and seekers and satisfy the reasonableness criteria in s.152AH of the TPA, including the objective of promoting the LTIE.

#### 4. Deeming of services covered by existing access agreements

Section 39(1) and (2) requires that eligible services covered by access agreements registered under s.144 of the Telecommunications Act 1991 must be specified in the statement, unless the Commission is satisfied that specifying a particular service would not be in the LTIE. This means that those eligible services contained in access agreements between Telstra, Optus and Vodafone shall be deemed to be declared services unless the Commission decides that doing so would not be in the LTIE.

The services specifically covered by the access agreements are presented in Table 1. Several services identified in the AUSTEL report *Telecommunications Access Requirements* have been included in generic service descriptions and are not shown separately. These services are: domestic PSTN terminating access for calls from ISDN calling numbers; domestic PSTN terminating access for local calls; inbound collect international call traffic; AMPS international access; AMPS special services termination; and GSM-Mobilesat interconnection.

**TABLE 1:  
Services contained in registered Access Agreement**

Agreement/ Schedule	Service	Commission's determination
Telstra / Optus	1	Domestic PSTN originating and terminating access
		International PSTN Primary and terminating access
		Domestic PSTN originating access from Telstra's Iterra telephone service
	1	Transmission capacity
	2	AMPS terminating access
	3	PSTN transit access
	4	Mobilesat originating and terminating access
		AMPS resale
		Digital data Access Service
		GSM originating and terminating access
		Conditioned local loop service
		Digital Multiplex Services
	13	Preselection
15	AMPS originating access	
Telstra/Vodafone	1A	AMPS to GSM Diversion service
	2	International Signalling for GSM roaming

## 4.1 Applying the criteria

This section considers the services covered by the registered access agreements against the long-term interests of end-users criteria. Deemed services are shown first. The brief description of the service in this section is for ease of exposition only; the service is technically specified at Attachment A. AMPS resale is considered in Chapter 5.

### ***Services which are deemed***

#### *PSTN originating and terminating access*

Domestic PSTN Originating Access is an access service for the carriage of telephone calls from calling parties directly connected to the access provider's network to a Point of Interconnection (POI) with the access seeker's network. Domestic PSTN Terminating Access is a service for the carriage of telephone calls from a POI with the access seeker's network to called parties directly connected to the access provider's network.

PSTN originating access is currently used by Optus to enable a call from the premises of one of its long distance customers to be carried across the Telstra network to a POI with the Optus network for long distance transmission. Optus' current POIs are generally at the trunk level switch. PSTN terminating access is the complement of originating access and is used by Optus for the termination of a call from the Optus network to a customer directly connected to Telstra's network. Thus, Optus is able to ensure full connectivity over the PSTN for all its services and customers.

PSTN originating and terminating access includes:

- the carriage of calls made within an Inter-Carrier Charging Area (ICCA), which includes a local call area and areas adjacent to the local call area; and
- the carriage of calls across ICCAs, such as the termination of a call from an Optus exchange in one ICCA across a trunk line to another ICCA and carriage of the call to the called party's premises.

Depending on the area across which the call is carried, PSTN originating and terminating access may require the use of:

- the customer access network (CAN);
- the interexchange network (IEN) which includes local and trunk switching and interexchange transmission; and
- trunk transmission .

### *Use of the CAN*

The main arguments for the declaration of PSTN originating and terminating access are that they require the use of a bottleneck facility, the CAN, such that access to it can promote competition and that the network's services are necessary for any-to-any connectivity. These are considered below.

The determination of whether the CAN can be characterised as a bottleneck facility requires that the CAN exhibit natural monopoly technology and is essential to being able to compete in a particular market.

The CAN has traditionally been characterised as exhibiting natural monopoly technology, with significant economies of scale and scope enabling one network to supply the market demand at a cost below that of multiple networks. However, a number of developments are changing the economics of the CAN. New technologies with different cost structures and revenue potential are being introduced. For instance, cable networks are capable of providing not only cable television but telephony and other services.

Changes in technology and demand are likely to imply that more than one CAN could be economically developed in certain areas. However, the number of networks that could be economically developed in these areas is likely to remain limited. In this situation, the owners of the existing networks may have the ability and incentive to seek to limit the use of the networks in the absence of an access regime.

A second element of a bottleneck facility is that use of the services of the facility is essential to being able to compete effectively in a particular market. Mobile or wireless technologies have the potential to provide some competitive pressure on the provision of customer access on fixed lines. However, there is currently a low degree of substitutability between these different technologies due to significant differences in functionality and cost.

Accordingly, the CAN appears to exhibit strong bottleneck characteristics, such that the declaration of PSTN originating and terminating access, which includes the services of the CAN, is likely to provide significant benefits to end-users through the promotion of competition in related markets for carriage services. As well, the efficient use of existing local networks would discourage any inefficient development of additional infrastructure.

### *Use of IEN*

Interexchange transmission may also be considered a bottleneck in certain circumstances. Where an access seeker is unable to obtain access to the CAN unbundled from the IEN, then the access seeker would be forced to rely on the services of the access provider's IEN to be able to compete in the provision of final market services which rely on the services of the CAN.

Even where access to the CAN is unbundled from the IEN, there may still be circumstances, albeit more restricted, in which regulated access to the IEN is desirable. The Commission would need to consider the efficiency of investment in alternative IENs in particular areas. This would depend, among other things, on the volume of call traffic in the area and the type of services (eg voice or data services) which may be offered in that area.

#### *Use of trunk transmission*

For calls made to or from an ICCA where the access seeker may not have a choice of transmission network, an originating or terminating access service may also require the use of the access provider's trunk transmission. Such trunk transmission may in these circumstances also be a bottleneck, including where separate trunk lines are not able to be efficiently provided. Trunk transmission is also specified as a separate service within the Telstra/Optus access agreement (see below).

The declaration of PSTN originating and terminating access is also likely to promote any-to-any connectivity. There will generally be only one point of access to an end-user (and/or a telephone number) on the PSTN. Accordingly, there will be a need for PSTN originating and terminating access to enable the conveyance of traffic between the end-user and the networks, facilities or applications of other carriers or service providers in order to satisfy the any-to-any connectivity principle. In the absence of an access obligation, a carrier may have an incentive to restrict access to such services to inhibit the ability of other carriers to compete.

The Commission's determines that PSTN originating and terminating access should be deemed as a declared service for bottleneck and any-to-any connectivity reasons.

#### *GSM originating and terminating access services*

GSM originating access means an access service for the carriage of telephone calls from a calling party connected to the access provider's GSM network to a POI with the network of the access seeker for the purposes of providing access to special service numbers such as 1800. GSM terminating access means an access service for the carriage of telephone calls from a POI on the access seeker's network to a called party connected to the access provider's GSM network. GSM terminating access is broader than GSM originating access and would be the main requirement for achieving any-to-any connectivity.

The Commission considers that both GSM originating and terminating access services should be deemed for the purposes of achieving any-to-any connectivity such that an end-user of a GSM network is able to communicate with the end-users of any other network.

### *AMPS originating and terminating access*

AMPS originating access means an access service for the carriage of telephone calls from a calling party connected to the access provider's AMPS network to a POI with the network of the access seeker for the purposes of providing access to special service numbers such as 1800. Domestic AMPS terminating access is an access service for the carriage of telephone calls (i.e. voice, data over the voice band) from a POI on the access seeker's network to an analogue AMPS subscriber in Australia. The Commission has been advised that Telstra currently supplies both services to Optus under the Telstra/Optus Access Agreement.

The Commission considers that AMPS originating and terminating access should be deemed as declared services for any-to-any connectivity reasons. In the absence of declaration, access to the AMPS network may be restricted such that end-users of other networks might not be able to communicate with end-users of the AMPS network.

AMPS originating and terminating access services do not raise any concerns in relation to the Government's phase-out plans for the analogue AMPS services which is discussed in Chapter 5, and therefore requires no separate consideration under s.39(4).

### *Transmission*

Transmission is a service for the supply by an access provider of transmission capacity to the access seeker pursuant to a range of different requirements including transmission links to the access provider's network, transmission links within the access seeker's network and transmission links between an access seeker's point of presence and the access seeker's customer premises. The service in the Telstra/Optus Access Agreement includes capacity of 2Mbit/s, 8Mbit/s, 34Mbit/s, 140Mbit/s or higher order as agreed. A particular form in which Optus receives transmission capacity under the agreement is as short-order capacity which requires a shorter order (or installation) period than the normal time frame in the agreement for installation of transmission links. It is generally used by Optus to provide a transmission tail into a customer's premises, where capacity requirements are lower and where short installation times are required.

There are a number of types of transmission capacity, which have differing degrees of contestability. These are:

- tail-end transmission;
- inter-exchange local transmission;
- intercapital transmission; and
- other transmission.

The determination of which transmission services should be declared can be considered in terms of whether the services exhibit bottleneck characteristics and whether declaration would promote the achievement of any-to-any connectivity.

Tail-end transmission between an access seeker's point of presence and the access seeker's customer's premises exhibits similar bottleneck characteristics to that of the local network. Accordingly, the Commission considers that tail-end transmission capacity should be deemed. In specific reference to short-order capacity, the Commission considers that access seekers should be able to negotiate the provision of deemed services on the same basis as they are currently provided under the existing access agreements.

In relation to other types of transmission capacity, an important element to determining whether the cost structure of transmission on particular routes can be characterised as a natural monopoly is the volume of traffic. Low traffic routes, such as carriage services to and from small towns, are likely to be able to justify only a single facility, having regard to costs and operational requirements (such as alternative links for redundancy). Very high traffic routes, between the capitals, can probably support more than one operator, although the degree to which each of these routes is contestable needs to be examined on a case-by-case basis.

The explanatory memorandum states that it is not intended that regulated access be imposed where existing market conditions already provide for the competitive supply of services. Telstra and Optus operate their own transmission links between the major cities. While this need not imply that transmission services on these routes are competitive, the Commission considers that with the removal of the regulatory prohibitions on the provision of network infrastructure, that the provision of such services is likely to be contestable after 1 July 1997.

The Commission also understands that 8Mbit/s, 34Mbit/s and 140Mbit/s transmission capacity links are currently being supplied as part of the PDH digital transmission protocol which is being phased out. It is likely that such capacity is only supplied on those routes with large traffic volumes and where Optus did not initially have its own network. Since these routes are likely to be contestable and since the PDH protocol is being phased out, the Commission considers it would not promote the LTIE to deem capacity higher than 2Mb/s as a single service. Higher level capacity will be able to be obtained by buying multiple (Nx2Mb/s) services.

The Commission considers that transmission services should be deemed as declared services only where the service is not contestable. Regulation of prices of transmission on contestable routes may undermine the incentive for efficient investment to the detriment of the end-users. Based on this proposition, the Commission's determination is that transmission services between Sydney, Melbourne, Brisbane, Perth, Adelaide and Canberra Inter-Carrier Charging Areas should not be deemed. The Commission considers that 2Mb/s transmission services (or multiples thereof) on all other routes should be deemed.

The Commission may review the declaration and revocation of declarations of transmission capacity on particular routes in the post-duopoly environment, having regard to the LTIE.

### *Digital data access service*

The digital data access service is an access service for the domestic carriage of data between a digital data Interconnect Terminal Point located at the access seeker's exchange or network facility and a NTU or unimux or modem located at the customer's premises where the customer is directly connected to the access provider's network. The service differs to the DDS Fastway and Flexnet services in Telstra's BCS in that it is a tail-end service between a unimux at an access seeker's exchange or network facility and NTU at a customer's premises. It is not an end-to-end retail service between two end-customer premises.

The service can combine the use of a customer access line with management to ensure high quality data transmission. The service involves the provision of dedicated transmission capacity from 1200bit/s to 1984 Kbit/s. The service includes a number of options, including the provision of higher level customer management facilities and network control. The service would enable access to a basic transport service which could be used in conjunction with an access seeker's own services to enable the provision of other carriage services, such as Packet Switching and Frame Relay.

The service which requires the use of a customer access line exhibits similar bottleneck characteristics as that of the local network. Given the low degree of contestability of the service, regulated access to the service would be likely to have a significant impact on competition in the provision of data services, which are becoming increasingly important in the future provision of innovative telecommunications services. Accordingly, the Commission considers that deeming the service would promote the long-term interests of end-users.

### *Conditioned local loop service*

The conditioned local loop service is a service for the supply of unswitched transmission capacity between an access seeker's customer location in an urban area and the access seeker's frame or like equipment. The service is a conditioned two wire service which supports full duplex voice using loop/ring signalling. The service is a bundled product and includes the services of a customer access line, jumpering at the local exchange and a connection to the access seeker's frame or like equipment.

Essentially the local loop service has similar bottleneck properties as discussed in relation to the CAN under PSTN originating and terminating access. Accordingly, the Commission considers that the local loop service should be deemed as a declared service.

### *AMPS to GSM Diversion Service*

This service is a diversion service whereby all calls made to a non-active AMPS mobile number are diverted to a GSM number nominated by the former AMPS subscriber.

The Commission considers that declaration of this service is likely to promote competition in the mobiles market by improving the ability of access seekers to compete for the services of customers transferring from the AMPS networks to one of the GSM networks.

### ***Services which are not deemed***

#### *International PSTN primary and terminating access*

The services are terminating services for the carriage of international direct dialled telephone calls from an International PSTN POI to called numbers outside Australia. An international PSTN POI is a POI which is the point of demarcation between the carriers' respective international PSTN networks, or other agreed point of demarcation between the domestic PSTN network of the interconnecting carrier, and the international PSTN network of the access carrier.

The services relate to the overseas leg of an international call.

These services are considered contestable and new entrants should be able to reach commercial agreements with the existing carriers in Australia for the supply of these services or obtain agreements with international carriers for these services in the same way that the existing carriers have been able to reach agreements. Accordingly, the Commission does not consider that these services should be deemed as declared services.

#### *PSTN Transit Access*

The service is for the carriage between two domestic POIs of telephone calls rerouted from the access seeker's fixed network and carried on the access provider's fixed network in the event of disaster, emergency or major network failure.

The provision of this service is required under Part 16 of the TA. Accordingly, the Commission considers that it would be unnecessary to also regulate access under Part XIC of the TPA.

#### *Digital Multiplex Services*

The Commission understands that this service is obsolete and, accordingly, considers that it should not be deemed.

#### *Preselection*

Preselection is the service which enables calling parties to be connected with an access seeker's network without having to dial extra numbers.

The Commission considers that there is no requirement to deem this service as it is provided for under Part 17 of the *Telecommunications Act 1997*. In this regard,

AUSTEL, on behalf of the ACA, is preparing a draft determination under s.349(1) of the TA which will require carriers and carriage service providers to provide preselection of specified carriage service providers in relation to calls made using the standard telephone service.

*Domestic PSTN originating access from Telstra's Iterra telephone service*

The service is an access service for the carriage of telephone calls from end-customers connected to Telstra's Iterra telephone service to a POI with the access seeker's network.

The Commission understands that there are not large numbers of customers connected to the Iterra service and that the cost of regulation is likely to outweigh any benefits such that it would not promote the LTIE of end-users to deem the service. The Commission's decision not to deem this service is based on Telstra's view, expressed in its submission to the Commission on the draft statement, that declaration of the service is not required to ensure any-to-any connectivity.

*Mobilesat originating and terminating access*

These services are access services for the carriage of telephone calls between a POI with the access seeker's network and end-customers connected to Mobilesat.

The Commission also understands that there are not large numbers of customers connected to the Mobilesat service and, accordingly, it would not promote the LTIE to deem the service. The Commission decision not to deem this service is based on Optus's view, expressed in its submission to the Commission on the draft statement, that competition should overcome concerns about any-to-any connectivity without a need to deem the service.

*International signalling for GSM roaming*

This is a service for the carriage of non call associated CCS7 signalling messages to support international roaming by subscribers to Australian GSM networks. The service would be used where an Australian GSM network wishes to provide roaming in a particular country to its customers but relies on the use of another network in Australia to carry the signalling message supporting roaming to that country.

This service should be contestable in a similar manner to International PSTN terminating access. Accordingly, the Commission does not consider that deeming the service would promote the LTIE.

## 5. Deeming of AMPS services

Subsection 39(4) of the Transitional Act states that the ACCC must *not* declare carriage or carriage support services supplied using an analogue Advanced Mobile Phone System (AMPS) service if the Commission is satisfied that this would be inconsistent with the policies embodied in Part 19 of the TA.

Part 19 establishes regulations for the phase out of AMPS services, including that only Telstra may operate AMPS facilities before 1 January 2000 and, after that date, no AMPS network operation is permitted unless there is consent from the Minister following the securing of agreement from the digital mobile carriers. This provision is designed to meet the mobile needs of some remote rural users (estimated at less than 20,000) who are expected to live outside digital network coverage.

Optus' and Vodafone's rights to resale AMPS are grandfathered under s.40 of the Transitional Act, regardless of whether the Commission deems this service under s.39(4).

Subsection 39(4) operates in addition to the long-term interests of end-users test in s.39(2). The Explanatory Memorandum states that s.39(4):

“...is intended to enable the ACCC to have regard to whether the interests of end-users are promoted by the provision of regulated access (and thus increased competition) to services which Government policy proposes should be phased out over the next few years”.

This indicates that the ACCC is required to take account of both the benefits of promoting competition for AMPS services - through allowing regulated access - and the need to ensure that the phase-out process is not disrupted by allowing such access.

There are arguments that the deeming of AMPS services may facilitate the entry of providers of new digital mobile networks. First, deeming may allow entrants to build an AMPS customer base which could be migrated to their digital offerings once the new network has been developed. However, the period for new networks to be established, particularly with regard to the SMA's spectrum auction timetable, suggests that such a strategy may result in customers being retained on the AMPS network longer than they otherwise would be. This may also cause problems in relation to network capacity such that AMPS users are faced with congested and reduced performance services as AMPS spectrum is withdrawn.

A second argument is that deeming AMPS resale may serve to encourage new providers of digital technology to enter the market by providing scope for such providers to offer a complete service from the use of dual mode handsets where AMPS usage would be available for use in areas where digital infrastructure would not be rolled out, mainly rural areas. This could be achieved more directly through the establishment of reciprocal roaming rights between the AMPS network and new digital networks.

While access to AMPS services by operators of new digital technology may be desirable, deeming AMPS resale may also serve to encourage opportunistic resale by pure resellers. While reselling would increase competition in the provision of AMPS services, increased AMPS usage arising from such a source could also lead to significant network capacity and quality of service problems.

The Australian Communications Authority (being formed from the merger of AUSTEL and the SMA) is responsible for managing the phase-out. The SMA has informed the Commission that deeming of AMPS resale may create difficulties for the practical implementation of phasing out the analogue AMPS service. In particular, the SMA considers that deeming of AMPS resale would probably lead to a lessening in the progressive decline of analogue AMPS traffic levels, towards the eventual phase-out on 1 January 2000. Further, the SMA considers that deeming would also tend to negate the public information campaign concerning the phase-out being undertaken by AUSTEL and the current AMPS service carriers.

In view of the concerns in relation to the phase-out plans, the Commission considers that AMPS resale should not be deemed.

There is some concern that potential new providers of digital technology may be deterred from entering the market through an inability to gain access to AMPS airtime in order to offer dual mode handsets. The Commission, however, does not consider that deeming AMPS resale is necessarily the most appropriate way of achieving such access. The Commission may consider holding a public inquiry into the declaration of an AMPS roaming service after the commencement of the new regime, should this be required.

## **6. Deeming of broadcasting carriage service**

Section 39(5) of the Transitional Act provides that the ACCC must specify in its deeming statement eligible services necessary for the supply of broadcasting services by means of line (as distinct from air) links and that was of a kind used for supplying broadcasting services on 13 September 1996.

The Commission is not required to take account of the LTIE criteria when deciding whether to deem services under s.39(5) (although the criteria would be relevant should a carrier seek an exemption from the standard access obligations which apply to active declared services). Consequently, the key issue is how broadcasting carriage and related support services should be specified in the deeming statement.

The Commission understands that such a carriage service would include carriage services for the transmission of pay TV over the Telstra and Optus cable networks, as well as Pay TV carriage services for AUSTAR's network in Darwin and Northgate's network in Ballarat.

The TAF has proposed a technical specification of this service which has been revised from a previous version included in the Commission's draft Statement of 2 June. The TAF's revisions reflect the concerns of the TAF to specify the service so that it is only applicable to broadcast services provided by cable networks (as opposed to other type of networks, such as satellite networks) consistent with s.39(5).

### ***Bundled nature of service***

The Commission has also received comments from a potential access seeker to this service who is concerned at the bundled nature of this product. Under the TAF's definition, an access seeker would be required to acquire not just the distribution or carriage function but also the network management access function, the conditional access function and servicing function. It can be expected that where technically feasible, such functions may be able to be carried out by the access seeker directly. As an example, an access seeker may choose to supply their own subscriber authorisation services. As technologies and markets develop, it can be anticipated that this will be a feature of the provision of such services and will provide access seekers with greater access to, and control over, their customers.

On the present state of technology, particularly the current use of analogue-based delivery systems, the Commission understands that it may be prohibitively expensive for the access seeker to provide these functions itself. It should be noted that the service description in Attachment B is only applicable to current analogue cable technology.

In this context, it is relevant that the standard access obligations in section 152AR(8) of Part XIC of the TPA, which apply upon deeming or declaration of a service, allow an access seeker, if they choose, to request the supply of conditional access

services (including the use of conditional access customer equipment) where these services are already being used by the access provider. Consistent with this optional nature of obtaining such a service, the description of the broadcasting carriage service should ensure that access seekers would only be obliged to acquire those service elements which they require. For example, it is doubtful that a free to air broadcaster would necessarily require the use of conditional access systems or equipment in providing their service on cable networks.

The description of the service in Attachment B has been accordingly amended from that proposed by the TAF, to ensure that it only applies to the current analogue environment, and that access seekers are not obliged to acquire service elements which they do not require as part of the provision of the service.

## **7. Operation of the regime**

Access obligations created by the deeming of a service as a declared service will not arise before 1 July 1997. On or after this date, carriers and service providers will be able to be provided with the deemed services and specified ancillary services, on request, from any carrier or carriage service provider supplying the services.

The terms and conditions of access to declared services may be determined by commercial negotiation, an undertaking submitted by the access provider and which has been accepted by the Commission, or, in the event that the parties are unable to agree, by arbitration by the Commission.

After the commencement of the new regime, additional services may be declared on the recommendation of the TAF or after the Commission has held a public inquiry. Subject to the recommendations of the TAF, the Commission intends to hold a public inquiry in relation to services which have been raised in submissions as being important for early access. This will provide a forum for industry and other interested parties to raise their views in relation to the declaration of the services.

While declaration will create standard access obligations in relation to a declared service, the Commission is able to exempt individual carriers or service providers or members of a specified class of carrier or service provider from these obligations if it is satisfied that such an exemption would promote the long-term interests of end-users. The Commission is currently developing its approach to consideration of exemptions under s.152AS and s.152AT of TPA.

The Commission can vary or revoke a declaration, including in relation to services which have been deemed declared services. The Commission is required to hold a public inquiry into proposed variations and revocations, except where the variation is of a minor nature.

## 8. Conclusion

The Commission's determination in relation to which services should be deemed as declared services is presented in Table 2.

**TABLE 2:  
The Commission's determination regarding the deeming of services**

Service	Commission's determination
(i) Domestic PSTN originating access	Deem.
(ii) Domestic PSTN terminating access	Deem.
(iii) Domestic GSM originating access	Deem.
(iv) Domestic GSM terminating access	Deem.
(v) Domestic AMPS originating access	Deem.
(vi) Domestic AMPS terminating access	Deem.
(vii) Transmission	Deem transmission capacity of 2 Mbit/s or multiples thereof, except for capacity on routes between Brisbane, Sydney, Canberra, Melbourne, Adelaide and Perth.
(viii) Digital data access service	Deem.
(ix) Conditioned local loop service	Deem.
(x) AMPS to GSM Diversion Service	Deem.
(xi) Broadcasting access service	Deem.
(xii) International PSTN Primary and terminating access	Not deem.
(xiii) PSTN transit access	Not deem.
(xiv) Digital Multiplex Services	Not deem.
(xv) Preselection	Not deem.
(xvi) Iterra domestic originating access	Not deem.
(xvii) Mobilesat originating and terminating access	Not deem.
(xviii) International signalling for GSM roaming	Not deem.
(xix) AMPS resale	Not deem.

The services which are deemed as declared services would form an initial base of services to which the access regime would apply. On an ongoing basis, additional services may be declared on the recommendation of the Telecommunications Access Forum or after the Commission has held a public inquiry.

## **Service specification of deemed services**

Following are technical specifications for the services specified in the Commission's statement pursuant to s.39 of the Transitional Act. The service descriptions developed by the TAF have been used where available.

### **1. Domestic PSTN Originating Access Service**

The following service description is provided for Domestic PSTN originating access and applies to the provision of Domestic PSTN Originating access service by any Access Provider (AP) to any Access Seeker (AS).

The Service as described comprises a number of different elements as follows:

- a) Access via Preselection, AS number ranges such as those numbers listed in POASD7 or 14xy Override code as required to achieve the objective of any-to-any connectivity
- b) Call Barring
- c) POI Location
- d) Forwarding a call beyond the POI of table OASD2 to OASD3 where applicable (see 1.4.1 below)
- e) Signalling
- f) CLI provision
- g) Provision of Switchports
- h) Network Conditioning
- l) Fault Handling -
- j) Inter C/CSP Billing

Restrictions on availability and others factors relating to the provision of Access are further described below.

In accordance with the Trade Practices Act Part XIC, these elements:

- may not be available from all APs
- may have restrictions in their availability

**Domestic PSTN Originating Access** is an Access Service for the carriage of telephone (ie PSTN and PSTN equivalent such as voice from ISDN ) calls

(ie. voice, data over the voice band) to a POI from end-customers assigned numbers from the geographic number ranges of the Australian Numbering Plan and directly connected to the AP's network.

### 1.1. Availability

The availability of the services may vary depending on the geographic and technical capability of the AP's network at the time at which a request for the service is made or the service is delivered.

The AP will make available to ASs documents describing the availability of this service on its network. See 1.3 & 1.4

### 1.2. Channel Capacity

The service will establish a connection for the purposes of voice communication with the standard bandwidth of 3.1kHz.

### 1.3. Services

1.3.1 The service is provided on a call that is made with:  
preselection, or  
a AS specific code including Special Services codes and number ranges (with some exceptions) as per table POASD7, or  
a long distance, international or shared operator codes dialled with an over-ride/access code in accordance with the Australian Numbering Plan.

1.3.2 The AP will publish at least half yearly, tables detailing the geographic number ranges where there are restrictions on the provision of this service.

#### 1.3.3 Service Restrictions

At least annually, the AP will advise of end-customer services that may restrict the provision of this service eg. Real Time Metering in a Table POASD5.

#### 1.3.4 Barring

The AP may provide a service that will allow barring of over-ride codes at the request of the end -customer.

End-customers may request generic barring services which may restrict access to these services.

The AP should detail this barring in a table POASD6.

### 1.4. Interconnection handover arrangements

The AP and the AS are each responsible for the provision, installation, testing, making operational and monitoring of all the network on their respective sides of the POI.

#### 1.4.1. POIs

**"Point of Interconnection"** or **"POI"** means an agreed location which:

(a) is a physical point of demarcation between the networks nominated by the AS and the AP; and

(b) is associated (but not necessarily co-located with) with one or more gateway exchanges of each of the networks nominated by the AS and the AP in respect of the POIs nominated by the AP.

Calls originated by the A-party will be handed over to the AS at Points of Interconnection agreed by the AS and the AP in accordance with 1.4.1.1 and 1.4.1.2.

##### 1.4.1.1 POI locations

The AP will provide a table (Table POASD1) listing of POIs where this service may be provided. This listing will be updated at least annually. The AS may request a point of interconnect with the AP's network at a location other than one specified by the AP. The AP must, to the extent technically and operationally feasible, permit the location of a point of interconnect at that location.

##### 1.4.1.2 POI designation for codes

The AP will provide a table (Table POASD2) listing of the geographic number ranges associated with each POI. When Originating Access is being provided access from these codes will be provided at the corresponding POI. The POIs in table OASD2 will be the POI for "near end handover" of calls from the origins listed.

The AP will provide a table (Table POASD3) listing of POIs and of associated POIs from which traffic that could have been handed over as per table POASD2 may be collected. [Different charges will be payable where traffic that could have been collected at the POI in table POASD2 is collected at a POI in table POASD3.]

The AP will indicate how these tables POASD2 and POASD3 apply to the different call types of paragraph 1.3.

The provisions of this Service Description apply to traffic collected at POIs listed in Table POASD2 or POASD3

#### 1.4.2 Signalling

1.4.2.1 Signals for this service will use CCS#7 signalling. Unless otherwise agreed, this CCS#7 signalling will be in accordance with the NIIF/ACIF Interconnection-ISUP specification.

1.4.2.2 The AP will provide a table (Table OASD4) of the locations where the AS may interconnect its CCS#7 signalling network with that of the AP for the purpose of accepting this service.

1.4.2.3 Signalling interconnection may not be provided at all POI's. The POIs of 1.4.1.1 may provide for interconnection of only voice circuits. Control of voice circuits where direct signalling interconnection is not provided, will be via "quasi-associated signalling" using Signalling Transfer Point (STP) operation, with signalling via a nominated other gateway where signalling interconnection is provided.

#### 1.4.3. CLI

The CLI of the A-party will be provided as part of the CCS#7 signalling for this service.

#### 1.4.4. Nature of switchports

At POIs the calls will be delivered to the AS at 2.048Mbit/sec Switchports. The switchports will operate at 2.048Mbit/sec in accordance with the ITU Recommendations G.703, G. 704 and G.732 (Blue Book).

#### 1.4.5. Send and receive speech levels

The send and receive levels for speech will be -13 dBr unless specified otherwise in the Australian Network Performance Plan.

1.4.7. The AP will not provide Echo Control unless this is a requirement within the AP's own network for calls between the end customer and the AP's gateway exchange.

### 1.5. Forecasting, ordering and provisioning arrangements

#### 1.5.1 Interconnection forecasting and planning requirements

##### 1.5.1.1. Forecast of port requirements

For each POI the AS should provide forecasts, at least half yearly, of switchport requirements for 6, 12, 18, 24, 30 and 36 months from the time of the forecast. Forecasts should be provided on dates to be agreed between the AP and the AS and forecast the switchport requirements from operative dates of 31 December and 30 June. Forecasts will be discussed by the AP and the AS with a view to agreement within 30 Business Days. Forecasts will be used by the AP for network planning and not for charging purposes.

#### 1.5.1.2. Forecast of network capacity requirements

For each POI and for each of the AP's charging districts the AS should provide forecasts, at least half yearly, of traffic requirements for 6, 12, 18, 24, 30 and 36 months from the time of the forecast. These forecasts should provide daily and weekly profiles for the traffic forecasted and advice of any material non-uniformities in the dispersion of the sources of originating access traffic. Forecasts should be provided on dates to be agreed between the AP and the AS and forecast the traffic requirements from operative dates of 31 December and 30 June. Forecasts will be discussed by the AP and the AS with a view to agreement within 30 Business Days.

#### 1.5.1.3. Ordering of Switchports.

The AP will accept orders for switchports up to the level of the agreed forecasts for each POI. The AS should order switchports allowing 6 months for their provision.

1.5.1.4. The AP will provide access up to the level of the agreed traffic forecasts for each POI.

1.5.1.5 The AS may request and the AP will give reasonable consideration to such provision, but is under no obligation to provide access of switchports above the level of the agreed forecasts. If such access is provided, delivery times may be longer than those specified in 1.5.1.3.

### 1.6. Interconnection Ordering Requirements

#### 1.6.1 Compliance testing

The AS will be required to demonstrate compliance with the agreed CCS#7 signalling System prior to the provision of the service.

1.6.1.1 The AP and the AS will develop an agreed test plan and the AS will provide results of tests to this plan from an appropriate test house or other such party. The AP will provide results of such tests if it is not otherwise seeking a switched access service from the AS.

1.6.1.2 The AP and the AS shall review the test results of 1.6.1.1. within 20 business days and if the AP accepts that the test results of 1.6.1.1 are satisfactory then the AP and the AS will agree a date for commissioning tests.

1.6.1.3. The test results of 1.6.1.1 will form the prime documentary basis for ongoing operations, fault analysis and fault management of signalling between the AP and the AS.

#### 1.6.2. Network Conditioning

Network Conditioning of the AP's network will be required before the provision of the service.

#### 1.7. Operational and Fault handling arrangements

The AP will provide a contact point for the Operation and Maintenance of the service. Faults may be reported to this centre which will manage the clearance of these faults.

#### 1.8 Inter C/CSP Billing frequency

The AP will invoice the AS on a monthly basis for this service.

#### 1.9. Provision of Tones and Network Announcements

Where calls attempting this service do not progress to the POI the call may be connected to tones as per AUSTEL Technical Standard TS002 or to a network RVA in the AP's network.

#### 1.10 Customer Billing

Customer billing should be in accordance with an approved telecommunications access code.

## 2. Domestic PSTN Terminating Access Service

The following service description is provided for Domestic PSTN terminating access and applies to the provision of Domestic PSTN Terminating access service by any AP to any AS (AS).

The Service as described comprises a number of different elements as follows:

- a) Access for calls forwarded for termination in the AP's fixed network
- b) POI Location
- c) Forwarding a call beyond the POI of table TPASD3 to TPASD2 where applicable (see 2.4.1 below)
- d) Signalling
- e) CLI provision
- f) Provision of Switchports
- g) Network Conditioning
- h) Fault Handling -
- i) Inter C/CSP Billing

Restrictions on availability and others factors relating to the provision of Access are further described below.

In accordance with the Trade Practices Act Part XIC these elements

- may not be available from all APs
- may have restrictions in their availability

**Domestic PSTN Terminating Access”** is an Access Service for the carriage of telephone (ie PSTN and PSTN equivalent such as voice from ISDN ) calls (ie. voice, data over the voice band) from a POI to end-customers assigned numbers from the geographic number ranges of the Australian Numbering Plan and directly connected to the AP's network.

### 2.1. Availability

The availability of the services may vary depending on the geographic and technical capability of the AP's network at the time at which a request for the service is made or the service is delivered.

The AP will make available to ASs documents describing the availability of this service on its network. See 2.3 & 2.4

## 2.2. Channel Capacity

The service will establish a connection for the purposes of voice communication with the standard bandwidth of 3.1kHz.

## 2.3. Services

2.3.1 The service is provided on a call that is handed over for termination to a customer directly connected to the AP's network with numbering in accordance with the Australian Numbering Plan.

2.3.2 (blank).

### 2.3.3 Service Restrictions

At least annually, the AP will advise of end-customer services that may restrict the provision of this service eg. Services barred from accepting Reverse Charge Calls in a Table PTASD5.

## 2.4. Interconnection Handover arrangements

The AP and the AS are each responsible for the provision, installation, testing, making operational and monitoring of all the network on their respective sides of the POI.

### 2.4.1. POIs

"Point of Interconnection " or "POI" means an agreed location which:

(a) is a physical point of demarcation between the networks nominated by the AS and the AP; and

(b) is associated (but not necessarily co-located with) with one or more gateway exchanges of each of the networks nominated by the AS and the AP.

Calls originated by the A-party will be handed over to the AS at Points of Interconnection agreed by the AS and the AP in respect of the POIs nominated by the AP in accordance with 2.4.1.1 and 2.4.1.2.

#### 2.4.1.1 POI locations

The AP will provide a table (Table PTASD1) listing of POIs where this service may be provided. This listing will be updated at least annually. The AS may request a point of interconnect with the AP's network at a location other than one specified by









The AP will make available to ASs documents describing the availability of this service on its network. See 3.3 & 3.4

### 3.2. Channel Capacity

The service will establish a connection for the purposes of voice communication with the standard bandwidth of 3.1kHz.

### 3.3. Services

3.3.1 The service is provided on a call that is made with AS specific codes including Special Services codes and number ranges (with some exceptions) as per table GOASD7, in accordance with the Australian Numbering Plan.

3.3.2(blank)

#### 3.3.3 Service Restrictions

At least annually, the AP will advise of end-customer services that may restrict the provision of this service in a Table GOASD5.

#### 3.3.4 Barring

The AP may provide a service that will allow barring of service codes at the request of the end -customer.

End-customers may request generic barring services which may restrict access to these services.

The AP should detail this barring in a table GOASD6.

### 3.4. Interconnection Handover arrangements

The AP and the AS are each responsible for the provision, installation, testing, making operational and monitoring of all the network on their respective sides of the POI.

#### 3.4.1. POIs

**"Point of Interconnection"** or **"POI"** means an agreed location which:

(a) is a physical point of demarcation between the networks nominated by the AS and the AP; and

(b) is associated (but not necessarily co-located with) with one or more gateway exchanges of each of the networks nominated by the AS and the AP.

Calls originated by the A-party will be handed over to the AS at Points of Interconnection agreed by the AS and the AP in respect of POIs nominated by the AP in accordance with 3.4.1.1 and 3.4.1.2.

#### 3.4.1.1 POI locations

The AP will provide a table (Table GOASD1) listing of POIs where this service may be provided. This listing will be updated at least annually. The AS may request a point of interconnect with the AP's network at a location other than one specified by the AP. The AP must, to the extent technically and operationally feasible, permit the location of a point of interconnect at that location.

#### 3.4.1.2 Number ranges

The AP will provide a table of the GSM number ranges to which this service will give access. ( Table GOASD2)

The POIs GOASD1 will be the POIs for "near end handover" of calls.

#### 3.4.2. Signalling

3.4.2.1. Signals for this service will use CCS#7 signalling. Unless otherwise agreed, this CCS#7 signalling will be in accordance with the NIIF/ACIF Interconnection-ISUP specification.

3.4.2.2 The AP will provide a table (Table GOASD4) of the locations where the AS may interconnect its CCS#7 signalling network with that of the AP for the purpose of accepting this service.

3.4.2.3 Signalling interconnection may not be provided at all POI's. These POIs of 3.4.1.1 may provide for interconnection of voice circuits only. Control of voice circuits where direct signalling interconnection is not provided, will be via "quasi-associated signalling" using Signalling Transfer Point (STP) operation, with signalling via a nominated other gateway where signalling interconnection is provided.

#### 3.4.3. CLI

The CLI of the A-party will be provided as part of the CCS#7 signalling.

#### 3.4.4. Nature of switchports

At POIs the calls will be delivered to the AS at 2.048Mbit/sec Switchports. The switchports will operate at 2.048Mbit/sec in accordance with the ITU Recommendations G.703, G. 704 and G.732 (Blue Book).

#### 3.4.5. Send and receive speech levels

The send and receive levels for speech will be -13 dBr unless specified otherwise in the Australian Network Performance Plan.

3.4.7. The AP will provide Echo Control as per normal practice for GSM calls between the end customer and the AP's gateway exchange.

### 3.5. Interconnection Forecasting, ordering and provisioning arrangements

#### 3.5.1 Forecasting and planning requirements

##### 3.5.1.1. Forecast of port requirements

For each POI the AS should provide forecasts, at least half yearly, of switchport requirements for 6, 12, 18, 24, 30 and 36 months from the time of the forecast. Forecasts should be provided on dates to be agreed between the AP and the AS and forecast the switchport requirements from operative dates of 31 December and 30 June. Forecasts will be discussed by the AP and the AS with a view to agreement within 30 Business Days. Forecasts will be used by the AP for network planning and not for charging purposes.

##### 3.5.1.2. Forecast of network capacity requirements

For each POI and for each charging district of the AP the AS should provide forecasts, at least half yearly, of traffic requirements for 6, 12, 18, 24, 30 and 36 months from the time of the forecast. These forecasts should provide daily and weekly profiles for the traffic forecasted and advice of any material non-uniformities in the dispersion of the sources of originating access traffic. Forecasts should be provided on dates to be agreed between the AP and the AS and forecast the traffic requirements from operative dates of 31 December and 30 June. Forecasts will be discussed by the AP and the AS with a view to agreement within 30 Business Days.

##### 3.5.1.3. Ordering of Switchports.

The AP will accept orders for switchports up to the level of the agreed forecasts for each POI. The AS should order switchports allowing 6 months for their provision.

3.5.1.4. The AP will provide access up to the level of the agreed traffic forecasts for each POI.

3.5.1.5 The AS may request and the AP will give reasonable consideration to, and use reasonable endeavours to provide such provision, but is under no obligation to provide access or switchports above the level of the agreed forecasts. If such access is provided, delivery times may be longer than those specified in 3.5.1.3.

### 3.6. Interconnection Ordering Requirements

#### 3.6.1. Compliance testing

The AS will be required to demonstrate compliance with the agreed CCS#7 Signalling System prior to the provision of the service.

3.6.1.1 The AP and the AS will develop an agreed test plan and the AS will provide results of tests to this plan from an appropriate test house or other such party. The AP will provide the results of such tests if it is not otherwise seeking a switch access service from the AS.

3.6.1.2 The AP and the AS shall review the test results of 3.6.1.1. within 20 business days and if the AP accepts that the test results of 3.6.1.1 are satisfactory then the AP and the AS will agree a date for commissioning tests.

3.6.1.3. The test results of 3.6.1.1 will form the prime documentary basis for ongoing operations, fault analysis and fault management of signalling between the AP and the AS.

### 3.6.2. Network Conditioning

Network Conditioning of the AP's network will be required before the provision of the service.

### 3.7. Operational and Fault handling arrangements

The AP will provide a contact point for the Operation and Maintenance of the service. Faults may be reported to this centre which will manage the clearance of these faults.

### 3.8 Inter C/CSP Billing frequency

The AP will invoice the AS on a monthly basis.

### 3.9. Provision of Tones and Network Announcements

Where calls attempting this service do not progress to the POI the call may be connected to tones as per AUSTEL Technical Standard TS002 or to a network RVA in the AP's network.

### 3.10 Customer Billing

Customer billing should be in accordance with an approved telecommunications access code.

#### **4. Domestic GSM Terminating Access Service**

The following service description is provided for Domestic GSM terminating access and applies to the provision of Domestic GSM terminating access service by any AP to any AS.

The Service as described comprises a number of different elements as follows:

- a) Access for calls forwarded for termination in the AP's GSM network
- b) POI Location
- c) Signalling
- e) CLI provision
- f) Provision of Switchports
- g) Network Conditioning
- h) Fault Handling -
- i) Inter C/CSP Billing

Restrictions on availability and others factors relating to the provision of Access are further described below.

In accordance with the Trade Practices Act Part XIC, these elements:

- may not be available from all APs
- may have restrictions in their availability

**Domestic GSM Terminating Access Service** is an Access Service for the carriage of telephone calls (ie. voice, data over the voice band) from a POI to B-parties assigned numbers from the GSM number ranges of the Australian Numbering Plan and directly connected to the AP's network.

##### **4.1. Availability**

The availability of the services may vary depending on the geographic and technical capability of the AP's network at the time at which a request for the service is made or the service is delivered.

The AP will make available to ASs documents describing the availability of this service on its network. See 4.3 & 4.4

##### **4.2. Channel Capacity**

The service will establish a connection for the purposes of voice communication with the standard bandwidth of 3.1kHz.

#### 4.3. Services

4.3.1 The service is provided on a call that is handed over for termination to a customer directly connected to the AP's GSM network..

4.3.2 (Blank).

#### 4.3.3 Service Restrictions

At least annually, the AP will advise of end-customer services that may restrict the provision of this service eg. Services barred from accepting Reverse Charge Calls in a Table TGASD5.

#### 4.4. Interconnection Handover arrangements

The AP and the AS are each responsible for the provision, installation, testing, making operational and monitoring of all the network on their respective sides of the POI.

##### 4.4.1. POIs

**"Point of Interconnection"** or **"POI"** means an agreed location which:

(a) is a physical point of demarcation between the networks nominated by the AS and the AP; and

(b) is associated (but not necessarily co-located with) with one or more gateway exchanges of each of the networks nominated by the AS and the Access.

Calls originated by the A-party will be handed over to the Access Provider at Points of Interconnection agreed by the AS and the AP in respect of the POIs nominated by the AP in accordance with 4.4.1.1 and 4.4.1.2.

##### 4.4.1.1 POI locations

The AP will provide a table (Table TGASD1) listing of POIs where this service may be provided. This listing will be updated at least annually. The AS may request a point of interconnect with the AP's network at a location other than one specified by the AP. The AP must, to the extent technically and operationally feasible, permit the location of a point of interconnect at that location. Handover will be at the POI closest to the A Party

##### 4.4.1.2 Number ranges

The AP will provide a table of the GSM number ranges to which this service will provide access.( TGASD2).

#### 4.4.2. Signalling

4.4.2.1. Signals for this service will use CCS#7 signalling. Unless otherwise agreed, this CCS#7 signalling will be in accordance with the NIIF/CIF Interconnection-ISUP specification.

4.4.2.2 The AP will provide a table (Table TGASD4) of the locations where the AS may interconnect its CCS#7 signalling network with that of the AP for the purpose of accepting this service.

4.4.2.3 Signalling interconnection may not be provided at all POI's. These POIs of 4.4.1.1 may provide only for interconnection of voice circuits. Control of voice circuits where direct signalling interconnection is not provided, will be via "quasi-associated signalling" using Signalling Transfer Point (STP) operation, with signalling via a nominated other gateway where signalling interconnection is provided.

#### 4.4.3. CLI

Unless otherwise agreed the CLI of the A-party should be provided as part of the CCS#7 signalling for this service.

#### 4.4.4. Nature of switchports

At POIs the calls will be delivered to the AP at 2.048Mbit/sec Switchports. The switchports will operate at 2.048Mbit/sec in accordance with the ITU Recommendations G.703, G. 704 and G.732 (Blue Book).

#### 4.4.5. Send and receive speech levels

The send and receive levels for speech will be -13 dBr unless specified otherwise in the Australian Network Performance Plan.

4.4.7. The AP will provide Echo Control as normal for GSM calls between the end customer and the AP's gateway exchange.

#### 4.5. Interconnection Forecasting, ordering and provisioning arrangements

##### 4.5.1 Forecasting and planning requirements

##### 4.5.1.1. Forecast of port requirements

For each POI the AS should provide forecasts, at least half yearly, of switchport requirements for 6, 12, 18, 24, 30 and 36 months from the time of the forecast.

Forecasts should be provided on dates to be agreed between the AP and the AS and forecast the switchport requirements from operative dates of 31 December and 30 June. Forecasts will be discussed by the AP and the AS with a view to agreement within 30 Business Days. The forecasts will be used by the AP for network planning and not charging purposes.

#### 4.5.1.2. Forecast of network capacity requirements

For each POI and for each charging district of the AP the AS should provide forecasts, at least half yearly, of traffic requirements for 6, 12, 18, 24, 30 and 36 months from the time of the forecast. These forecasts should provide daily and weekly profiles for the traffic forecasted and advice of any material non-uniformities in the dispersion of the terminating access traffic. Forecasts should be provided on dates to be agreed between the AP and the AS and forecast the traffic requirements from operative dates of 31 December and 30 June. Forecasts will be discussed by the AP and the AS with a view to agreement within 30 Business Days.

#### 4.5.1.3. Ordering of Switchports.

The AP will accept orders for switchports up to the level of the agreed forecasts for each POI. The AS should order switchports allowing 6 months for their provision.

4.5.1.4. The AP will provide access up to the level of the agreed traffic forecasts for each POI.

4.5.1.5 The AS may request and the AP will give reasonable consideration to, and use reasonable endeavours to provide, such provision, but is under no obligation to provide access or switchports above the level of the agreed forecasts. If such access is provided, delivery times may be longer than those specified in 4.5.1.3.

### 4.6. Interconnection Ordering Requirements

#### 4.6.1 Compliance testing

The AS will be required to demonstrate compliance with the agreed CCS#7 signalling system prior to the provision of the service.

4.6.1.1 The AP and the AS will develop an agreed test plan and the AS will provide results of tests to this plan from an appropriate test house or other such party. The AP will provide the results of such tests if it is not otherwise seeking a switch access service from the AS.

4.6.1.2 The AP and the AS shall review the test results of 4.6.1.1. within 20 business days and if the AP accepts that the test results of 4.6.1.1 are satisfactory then the AP and the AS will agree a date for commissioning tests.

4.6.1.3. The test results of 4.6.1.1 will form the prime documentary basis for ongoing operations, fault analysis and fault management of signalling between the AP and the AS.

#### 4.6.2. Network Conditioning

Network Conditioning of the AP's network will be required before the provision of the service.

#### 4.7. Operational and Fault handling arrangements

The AP will provide a contact point for the Operation and Maintenance of the service. Faults may be reported to this centre which will manage the clearance of these faults.

#### 4.8 Inter C/CSP Billing frequency

The AP will invoice the AS on a monthly basis for this service.

#### 4.9 Provision of Tones and Network Announcements

Where calls attempting this service do not progress to the end customer the call may be connected to tones as per AUSTEL Technical Standard TS002 or to a network RVA in the AP's network.

#### 4.10 Customer Billing

Customer billing should be in accordance with an approved telecommunications access code.

#### 4.11 Interconnect Call Records

If required by the AS to carry out distance based charging of calls made using this service, the AP will provide, at the request of the AS, interconnect call records to the AS which will include the following information:

- (a) time and date of answered communication;
- (b) communication duration;
- (c) charge zone in which the relevant mobile number is taken to have been located;
- (d) switch identifier;
- (e) calling party number;
- (f) called party number;

(g) any other information agreed between the AP and the AS.

Interconnect call records will be provided at times and by electronic means to be agreed between the AP and the AS.

## 5. Domestic AMPS Originating Access Service

The following service description is provided for Domestic AMPS originating access and applies to the provision of Domestic AMPS Originating access service by Telstra as AP to any AS (AS).

The Service as described comprises a number of different elements as follows:

- a) Access via a AS number ranges required to achieve the objective of any-to-any connectivity unless the AP has not sought or is not seeking terminating access to the end - customers in question
- b) Call Barring
- c) POI Location
- d) Signalling
- e) CLI provision
- f) Provision of Switchports
- g) Network Conditioning
- h) Fault Handling
- i) Inter C/CSP Billing

Restrictions on availability and others factors relating to the provision of Access are further described below.

In accordance with the Trade Practices Act Part XIC, these elements:

- may not be available from all APs; and
- may have restrictions in their availability.

**Domestic AMPS Originating Access** is an Access Service for the carriage of telephone calls (ie. voice, data over the voice band) to a POI from A-parties assigned numbers from the AMPS number ranges of the Australian Numbering Plan and directly connected to the AP's AMPS network.

### 5.1. Availability

The availability of the services may vary depending on the geographic and technical capability of the AP's network at the time at which a request for the service is made or the service is delivered.

The AP will make available to ASs documents describing the availability of this service on its network. See 5.3 & 5.4

## 5.2. Channel Capacity

The service will establish a connection for the purposes of voice communication with the standard bandwidth of 3.1kHz.

## 5.3. Services

5.3.1 The service is provided on a call that is made with an AS specific code including Special Services number ranges and codes (with some exceptions) as per table AOASD7, in accordance with the Australian Numbering Plan.

### 5.3.2(blank)

### 5.3.3 Service Restrictions

At least annually, the AP will advise of end-customer services that may restrict the provision of this service in a Table AOASD5.

### 5.3.4 Barring

The AP may provide a service that will allow barring of service codes at the request of the end -customer.

A-parties may request generic barring services which may restrict access to these services.

The AP should detail this barring in a table AOASD6.

## 5.4. Interconnection Handover arrangements

The AP and the AS are each responsible for the provision, installation, testing, making operational and monitoring of all the network on their respective sides of the POI.

### 5.4.1. POIs

**"Point of Interconnection"** or **"POI"** means an agreed location which:

(a) is a physical point of demarcation between the networks nominated by the AS and the AP; and

(b) is associated (but not necessarily co-located with) with one or more gateway exchanges of each of the networks nominated by the AS and the AccessProvider .

Calls originated by the A-party will be handed over to the AS at Points of Interconnection agreed by the AS and the AP in respect of the POIs nominated by the AP in accordance with 5.4.1.1 and 5.4.1.2.

#### 5.4.1.1 POI locations

The AP will provide a table (Table AOASD1) listing of POIs where this service may be provided. This listing will be updated at least annually. The AS may request a point of interconnect with the AP's network at a location other than one specified by the AP. The AP must, to the extent technically and operationally feasible, permit the location of a point of interconnect at that location.

#### 5.4.1.2 Number ranges

The AP will provide a table (AOASD2) of the number ranges to which this service gives access.

The POIs in Table AOASD1 will be the "near end hand-over" POIs.

#### 5.4.2. Signalling

5.4.2.1. Signals for this service will use CCS#7 signalling. Unless otherwise agreed, this CCS#7 signalling will be in accordance with the NIIF/CIF Interconnection-ISUP specification.

5.4.2.2 The AP will provide a table (Table AOASD4) of the locations where the AS may interconnect its CCS#7 signalling network with that of the AP for the purpose of accepting this service.

5.4.2.3 Signalling interconnection may not be provided at all POI's. These POIs of 5.4.1.1 may provide for interconnection of voice circuits only. Control of voice circuits where direct signalling interconnection is not provided, will be via "quasi-associated signalling" using Signalling Transfer Point (STP) operation, with signalling via a nominated other gateway where signalling interconnection is provided.

#### 5.4.3. CLI

The CLI of the A-party will be provided as part of the CCS#7 signalling for this service.

#### 5.4.4. Nature of switchports

At POIs the calls will be delivered to the AS at 2.048Mbit/sec Switchports. The switchports will operate at 2.048Mbit/sec in accordance with the ITU Recommendations G.703, G. 704 and G.732 (Blue Book).

#### 5.4.5. Send and receive speech levels

The send and receive levels for speech will be -13 dBr unless specified otherwise in the Australian Network Performance Plan.

5.4.7. The AP will not provide Echo Control unless this is a requirement within the AP's own network for calls between the end customer and the AP's gateway exchange.

## 5.5. Interconnection Forecasting, ordering and provisioning arrangements

### 5.5.1 Forecasting and planning requirements

#### 5.5.1.1. Forecast of port requirements

For each POI the AS should provide forecasts, at least half yearly, of switchport requirements for 6, 12, 18, 24, 30 and 36 months from the time of the forecast. Forecasts should be provided on dates to be agreed between the AP and the AS and forecast the switchport requirements from operative dates of 31 December and 30 June. Forecasts will be discussed by the AP and the AS with a view to agreement within 30 Business Days. Forecasts will be used for network planning and not for charging purposes.

#### 5.5.1.2. Forecast of network capacity requirements

For each POI and for each charging district of the AP the AS should provide forecasts, at least half yearly, of traffic requirements for 6, 12, 18, 24, 30 and 36 months from the time of the forecast. These forecasts should provide daily and weekly profiles for the traffic forecasted and advice of any material non-uniformities in the dispersion of the sources of originating access traffic. Forecasts should be provided on dates to be agreed between the AP and the AS and forecast the traffic requirements from operative dates of 31 December and 30 June. Forecasts will be discussed by the AP and the AS with a view to agreement within 30 Business Days.

#### 5.5.1.3. Ordering of Switchports.

The AP will accept orders for switchports up to the level of the agreed forecasts for each POI. The AS should order switchports allowing 6 months for their provision.

5.5.1.4. The AP will provide access up to the level of the agreed traffic forecasts for each POI.

5.5.1.5 The AS may request and the AP will give reasonable consideration to, and use reasonable endeavours to provide, such provision, but is under no obligation to provide access or switchports above the level of the agreed forecasts. If such access is provided, delivery times may be longer than those specified in 5.5.1.3.

## 5.6. Interconnection Ordering Requirements

### 5.6.1. Compliance testing

The AS will be required to demonstrate compliance with the agreed CCS#7 signalling system prior to the provision of the service.

5.6.1.1 The AP and the AS will develop an agreed test plan and the AS will provide results of tests to this plan from an appropriate test house or other such party. The AP will provide the results of such tests if it is not otherwise seeking a switch access service from the AS.

5.6.1.2 The AP and the AS shall review the test results of 5.6.1.1. within 20 business days and if the AP accepts that the test results of 5.6.1.1 are satisfactory then the AP and the AS will agree a date for commissioning tests.

5.6.1.3. The test results of 5.6.1.1 will form the prime documentary basis for ongoing operations, fault analysis and fault management of signalling between the AP and the AS.

### 5.6.2. Network Conditioning

Network Conditioning of the AP's network will be required before the provision of the service.

### 5.7. Operational and Fault handling arrangements

The AP will provide a contact point for the Operation and Maintenance of the service. Faults may be reported to this centre which will manage the clearance of these faults.

### 5.8 Inter AP/AS Billing frequency

The AP will invoice the AS on a monthly basis for this service.

### 5.9. Provision of, Tones and Network Announcements

Where calls attempting this service do not progress to the POI the call may be connected to tones as per AUSTEL Technical Standard TS002 or to a network RVA in the AP's network.

### 5.10 Customer Billing

Customer billing should be in accordance with an approved telecommunications access code.

## 6. Domestic AMPS Terminating Access Service

The following service description is provided for Domestic AMPS terminating access and applies to the provision of Domestic AMPS terminating access service by Telstra as AP to any AS.

The Service as described comprises a number of different elements as follows:

- a) Access for calls forwarded for termination in the AP's AMPS network
- b) POI Location
- c) Signalling
- e) CLI provision
- f) Provision of Switchports
- g) Network Conditioning
- h) Fault Handling
- i) Inter C/CSP Billing

Restrictions on availability and others factors relating to the provision of Access are further described below.

In accordance with the Trade Practices Act Part XIC, these elements:

- may not be available from all APs
- may have restrictions in their availability

**Domestic AMPS Terminating Access Service** is an Access Service for the carriage of telephone calls (ie. voice, data over the voice band) from a POI to B-parties assigned numbers from the AMPS number ranges of the Australian Numbering Plan and directly connected to the AP's network.

### 6.1. Availability

The availability of the services may vary depending on the geographic and technical capability of the AP's network at the time at which a request for the service is made or the service is delivered.

The AP will make available to ASs documents describing the availability of this service on its network. See 6.3 & 6.4

### 6.2. Channel Capacity

The service will establish a connection for the purposes of voice communication with the standard bandwidth of 3.1kHz.

### 6.3. Services

6.3.1 The service is provided on a call that is handed over for termination to a customer directly connected to the AP's AMPS network..

6.3.2 (Blank).

### 6.3.3 Service Restrictions

At least annually, the AP will advise of end-customer services that may restrict the provision of this service eg. Services barred from accepting Reverse Charge Calls in a Table ATASD5.

### 6.4. Interconnection Handover arrangements

The AP and the AS are each responsible for the provision, installation, testing, making operational and monitoring of all the network on their respective sides of the POI.

#### 6.4.1. POIs

**"Point of Interconnection"** or **"POI"** means an agreed location which:

(a) is a physical point of demarcation between the networks nominated by the AS and the AP; and

(b) is associated (but not necessarily co-located with) with one or more gateway exchanges of each of the networks nominated by the AS and the AccessProvider .

Calls originated by the A-party will be handed over to the AP at Points of Interconnection designated by the AP in respect of the POIs nominated by the AP in accordance with 6.4.1.1 and 6.4.1.2.

#### 6.4.1.1 POI locations

The AP will provide a table (Table ATASD1) listing of POIs where this service may be provided. This listing will be updated at least annually. The AS may request a point of interconnect with the AP's network at a location other than one specified by the AP. The AP must, to the extent technically and operationally feasible, permit the location of a point of interconnect at that location.

#### 6.4.1.2 Number ranges

The AP will provide a table (Table ATASD2) of the AMPS number ranges accessible with this service.

## 6.4.2 Signalling

6.4.2.1. Signals for this service will use CCS#7 signalling. Unless otherwise agreed, this CCS#7 signalling will be in accordance with the NIIF/ACIF Interconnection-ISUP specification.

6.4.2.2 The AP will provide a table (Table ATASD4) of the locations where the AS may interconnect its CCS#7 signalling network with that of the AP for the purpose of accepting this service.

6.4.2.3 Signalling interconnection may not be provided at all POI's. These POIs of 6.4.1.1 may provide for interconnection of voice circuits only. Control of voice circuits where direct signalling interconnection is not provided, will be via "quasi-associated signalling" using Signalling Transfer Point (STP) operation, with signalling via a nominated other gateway where signalling interconnection is provided.

## 6.4.3. CLI

Unless otherwise agreed the CLI of the A-party should be provided as part of the CCS#7 signalling for this service.

## 6.4.4. Nature of switchports

At POIs the calls will be delivered to the AP at 2.048Mbit/sec Switchports. The switchports will operate at 2.048Mbit/sec in accordance with the ITU Recommendations G.703, G. 704 and G.732 (Blue Book).

## 6.4.5. Send and receive speech levels

The send and receive levels for speech will be -13 dBr unless specified otherwise in the Australian Network Performance Plan.

6.4.7. The AP will provide Echo Control as normal for AMPS calls between the end customer and the AP's gateway exchange.

## 6.5. Interconnection Forecasting, ordering and provisioning arrangements

### 6.5.1 Forecasting requirements

#### 6.5.1.1. Forecast of port requirements

For each POI the AS should provide forecasts, at least half yearly, of switchport requirements for 6, 12, 18, 24, 30 and 36 months from the time of the forecast. Forecasts should be provided on dates to be agreed between the AP and the AS and forecast the switchport requirements from operative dates of 31 December and 30 June. Forecasts will be discussed by the AP and the AS with a view to agreement

within 30 Business Days. The forecasts will be used for network planning and not for charging purposes.

#### 6.5.1.2. Forecast of network capacity requirements

For each POI and for each charging district of the AP the AS should provide forecasts, at least half yearly, of traffic requirements for 6, 12, 18, 24, 30 and 36 months from the time of the forecast. These forecasts should provide daily and weekly profiles for the traffic forecasted and advice of any material non-uniformities in the dispersion of terminating access traffic. Forecasts should be provided on dates to be agreed between the AP and the AS and forecast the traffic requirements from operative dates of 31 December and 30 June. Forecasts will be discussed by the AP and the AS with a view to agreement within 30 Business Days.

#### 6.5.1.3. Ordering of Switchports.

The AP will accept orders for switchports up to the level of the agreed forecasts for each POI. The AS should order switchports allowing 6 months for their provision.

6.5.1.4. The AP will provide access up to the level of the agreed traffic forecasts for each POI.

6.5.1.5 The AS may request and the AP will give reasonable consideration to, and use reasonable endeavours to provide, such provision, but is under no obligation to provide access or switchports above the level of the agreed forecasts. If such access is provided, delivery times may be longer than those specified in 6.5.1.3.

### 6.6. Interconnection Ordering Requirements

#### 6.6.1 Compliance testing

The AS will be required to demonstrate compliance with the agreed CCS#7 signalling system prior to the provision of the service.

6.6.1.1 The AP and the AS will develop an agreed test plan and the AS may provide results of tests to this plan from an appropriate test house or other such party. The AP will provide the results of such tests if it is not otherwise seeking a switch access service from the AS.

6.6.1.2 The AP and the AS shall review the test results of 6.6.1.1. within 20 business days and if the AP accepts that the test results of 6.6.1.1 are satisfactory then the AP and the AS will agree a date for commissioning tests.

6.6.1.3. The test results of 6.6.1.1 will form the prime documentary basis for ongoing operations, fault analysis and fault management of signalling between the AP and the AS.

#### 6.6.2. Network Conditioning

Network Conditioning of the AP's network will be required before the provision of the service.

#### 6.7. Operational and Fault handling arrangements

The AP will provide a contact point for the Operation and Maintenance of the service. Faults may be reported to this centre which will manage the clearance of these faults.

#### 6.8 Inter C/CSP Billing frequency

The AP will invoice the AS on a monthly basis for this service.

#### 6.9. Provision of Tones and Network Announcements

Where calls attempting this service do not progress to the end customer the call may be connected to tones as per AUSTEL Technical Standard TS002 or to a network RVA in the AP's network.

#### 6.10 Customer Billing

Customer billing should be in accordance with an approved telecommunications access code.

## 7. Transmission Capacity

The following service description is provided for the provision of Domestic Transmission Capacity by any AP to any AS.

The service as described comprises a number of different elements as follows:

- a) the provision of transmission capacity at 2.048Mbit/s between defined Transmission Points (TPs), at least one of which must be a Transmission Point of Interconnection (TPOI);
- b) TPOI Locations;
- c) Fault Handling;
- d) Inter C/CSP Billing

Restrictions on availability and others factors relating to the provision of Access are further described below.

In accordance with the Trade Practices Act Part XIC, these elements:

- may not be available from all APs, and
- may have restrictions in their availability.

**"Domestic Transmission Capacity"** means a service for the provision of media independent transmission capacity at 2.048 Mbit/s between defined TPs, at least one of which must be a TPOI, except for capacity on major inter-capital city routes, ie the routes between Brisbane, Sydney, Canberra, Melbourne, Adelaide and Perth.

### 7.1. Availability

7.1.1 The service will be available nationally subject to paragraph 7.1.2, except for capacity on the routes between Brisbane, Sydney, Canberra, Melbourne, Adelaide and Perth.

7.1.2 The availability of the services may vary depending on the geographic and technical capability of the AP's network at the time at which a request for the service is made or the service is delivered.

7.1.3 The AP will make available to the AS documents describing the availability of this service on its network. See 7.3 & 7.4

### 7.2. Channel Capacity

The service will be delivered at the standard bit rate of 2.048Mbit/s.

### 7.3. Service

7.3.1 The service is provided on a permanent basis between two TPs, at least one of which must be a TPOI.

#### 7.4. Handover arrangements

The AP and the AS are each responsible for the provision, installation, testing, making operational and monitoring of all the network on their respective sides of the POI.

##### 7.4.1. TPs

**"Transmission Point"** or **"TP"** means an agreed location which:

- (a) is a TPOI; or
- (b) is located at any point in the AS network other than a customer location; or
- (c) is located at a customer location.

##### 7.4.2 TPOI

**"Transmission Point of Interconnection"** or **"TPOI"** means an agreed location which:

- (a) is a physical point of demarcation between the networks nominated by the AS and the AP; and
- (b) is co-located with a PSTN gateway exchange of the AS or of the AP.

##### 7.4.2.1 TPOI locations

The AP will provide a table (Table TXCAP1) listing of TPOIs where this service may be provided. This listing will be updated at least annually. The AS may request a point of interconnect with the AP's network at a location other than one specified by the AP. The AP must, to the extent technically and operationally feasible, permit the location of a point of interconnect at that location.

##### 7.4.2.2 TPOI locations for this service defined in terms of the AS's network.

##### 7.4.3. Blank

##### 7.4.4. Nature of the interface

At TPOIs the connection interface will be at 2.048Mbit/sec. The interface will operate at 2.048Mbit/sec in accordance with the ITU Recommendations G.703, G. 704 and G.732 (Blue Book).

## 7.5. Forecasting, ordering and provisioning arrangements

### 7.5.1 Forecasting requirements

#### 7.5.1.1. Forecast of transmission capacity requirements

For each TPOI the AS should provide forecasts, at least half yearly, of transmission capacity requirements for 6, 12, 18, 24, 30 and 36 months from the time of the forecast. Forecasts should be provided on dates to be agreed between the AP and the AS and forecast the transmission capacity requirements on 31 December and 30 June. Forecasts will be discussed by the AP and the AS with a view to agreement within 30 Business Days.

7.5.1.2. The AP will accept orders for transmission capacity up to the level of the agreed forecasts for each TPOI.

## 7.6. Ordering Requirements

### 7.6.1 Compliance testing

If requested by the AS, the AP will take reasonable steps to facilitate tests by the AS of the interfaces for this service. These tests will be at the expense of the AS.

## 7.7. Operational and Fault handling arrangements

The AP will provide a contact point for the Operation and Maintenance of the service. Faults may be reported to this centre which will manage the clearance of these faults.

## 7.8 Inter C/CSP Billing frequency

The AP will invoice the AS on a monthly basis for this service.

## 7.9. Blank

## 7.10 Blank

## 7.11 Customer Billing

Customer billing should be in accordance with an approved telecommunications access code.

## 8. Digital Data Access Service

8.1 The following service description is provided for Domestic Data Access service and applies to the provision of Domestic Data Access Service by any AP to any AS (AS).

8.2 The service as described comprises a number of separate elements as follows:

- (a) Interconnect Terminal Point (ITP) Location;
- (b) network synchronisation;
- (c) connection between the ITP and a Digital Cross Connect Centre (DCCC);
- (d) connection between the DCCC and the AP's Network Boundary at the customer premises end;
- (e) a local connection between the customer's premises to the AP's Network Boundary;
- (f) provision of unimux equipment; and
- (g) an optional service monitoring and management tool.

8.3 Restrictions on availability and other factors relating to the provision of Access are further described below.

8.4 In accordance with the Trade Practices Act Part XIC, these elements:

- may not be available from all APs
- may have restrictions in their availability

8.5 **Digital Data Access Service** is an access service for the domestic carriage of data between an Interconnect Terminal Point (ITP) located at the AS's exchange or network facility and a NTU or unimux or modem located at the customer's premises where the customer is directly connected to the AP's network.

8.6 Availability.

The availability of the services may vary depending on the geographical and technical capability of the AP's network at the time at which a request for the services is made or the service is delivered.

8.7 Channel Capacity

The service will be based on digital technology. The local connection will operate, in accordance with ITU Recommendations, in the following range of speeds divided into two categories:

Subrate (X.50)	1200 bit/s, 2400 bit/s, 4800 bit/s, 9600 bit/s, 19.2 Kbit/s and 48 Kbit/s.
nx64 kbps	64 kbit/s (n=1) or multiples, up to 1984 kbit/s (n=31)

The trunk connection will be based on 1984 kbit/s in accordance with ITU Recommendations. Sub-rate muxing will use X50, or other appropriate signalling as appropriate. Nx64k muxing will use G704 interfaces.

The facilities of the service are summarised below relative to the two speed categories:

	<b>Subrate (X.50)</b>	<b>nx64 kbps</b>
Service	1200 bit/s to 48 Kbit/s	nx64 kbit/s where n = 1 to 31
Coverage	National service area	National service area
No. of Interfaces Available	One interface per customer access. One service per interface	Up to eight (8) services interfaces per customer access. One service per interface.
Types of Interface	X.21, X.21bis and V.35 (48 kbit/s only)	X.21, V.35, G.704.
Integration	Interworking with higher management facilities and network control. <ul style="list-style-type: none"> <li>• All speeds and interfaces</li> </ul>	Interworking with higher management facilities and network control. <ul style="list-style-type: none"> <li>• X.21 and V.35 at speeds 64 kbit/s, 128 kbit/s, 192 kbit/s, 256 kbit/s and 384 kbit/s.</li> <li>• G.704 at speeds 64 kbit/s to 1984 kbit/s</li> </ul>
Option Combinations	service monitoring and management tool enabling configuration management, redirection, alarm access and test access.	service monitoring and management tool enabling configuration management, redirection, alarm access and test access.

## 8.8 Services

The AP will publish at least half yearly tables detailing the geographic areas where there are restrictions on the provision of this service.

## 8.9 ITP

(a) "ITP" means N x 2Mbit/s Unimux equipment used solely for the purpose of terminating this service served by the connection to the AP's DCCC. The equipment

provided by the AP will interface with the AS's network via the digital data service interface specifications and at the specified speeds, and will be located at the AS's exchange or network facility.

(b) Data traffic will be handed over from and to the AS at the ITP agreed by the AS and the AP.

## **9. Conditioned local loop service**

The conditioned local loop service is a service for the supply of media independent unswitched conditioned transmission capacity of voice band width, being

- (a) a leased analogue based service;
- (b) a two-wire (twisted copper pair) service;
- (c) a service which supports full duplex voice telephony using loop/ring signalling; and
- (d) provided as a permanent control voice frequency transmission path between local exchanges and MDFs, CPE or first sockets.

## 10. AMPS to GSM Diversion Service

The following service description is provided for AMPS to GSM Diversion and applies to the provision of the service by any AP to any AS.

The Service as described comprises a number of different elements as follows:

- a) Forwarding calls from the AP's AMPS network to the AS's GSM network.
- b) POI location
- c) Signalling
- d) CLI provision
- e) Provision of Switchports
- f) Network Conditioning
- g) Fault Handling
- h) Inter C/CSP Billing
- i) Restrictions on availability and other factors relating to the provision of access are further described below.

In Accordance with the Trade Practices Act Part XIC, these elements:

- may not be available from all APs
- may have restrictions in their availability

**“AMPS to GSM Diversion”** means a service whereby all calls made to the disused AMPS mobile number of a former AMPS subscriber are diverted to a specified GSM POI of an AS.

### 10.1 Availability

The availability of the service may vary depending on the geographic and the technical capability of the AP's network at the time at which a request for the service is made or the service is delivered.

The AP will make available to ASs documents describing the availability of this service on its network.

### 10.2 Channel Capacity

The service will establish a connection for the purposes of voice communication with the standard bandwidth of 3.1 kHz.

### 10.3 Services

The service is provided on a call to a former customer of the AP's AMPS network, for which the former customer has indicated should be diverted to the AS's GSM network.

The service will be provided for a length of time consistent with the Numbering Plan.

### 10.4 Handover Arrangements

Handover arrangements will be consistent with arrangements agreed between the AP and the AS for any other calls made from the AP's network to the AS's network.

### 10.5 Forecasting Requirements

The AS should provide forecasts of AMPS to GSM Diversion requirements, at least half yearly, for 6, 12, 18, 24, and 36 months from the time of the forecast. Forecasts should be provided on 31 March and 30 September for the half year ending 31 December and 30 June. Forecasts will be discussed by the AP and the AS with a view to agreement within 30 Business Days.

The forecast will contain the total number of AMPS to GSM Diversion services required at the end of each six month period.

The AP will provide the service up to the level of the agreed forecast.

### 10.6 Ordering

AMPS to GSM Diversion services will be ordered on an individual basis using the agreed order form.

### 10.7 Operational and Fault handling

The AP will provide a contact point for the Operation and Maintenance of the service. Faults may be reported to this centre which will manage the clearance of these faults.

### 10.8 Inter C/CSP Billing frequency

The AP will invoice the AS on a monthly basis for this service.









### **13. Publication of Information**

The AP may, with the agreement of the AS, publish information relating to the AS's channel(s) for the purpose of promoting the services available over the AP's network, including program information.

### **14. Service Assurance**

The AP will provide service assurance in relation to the Broadcasting Access Service, which shall include the following:

- 14.1. Investigating faults reported by the AS;
- 14.2. Advising the AS if the fault is on the AS's side of the head end; and
- 14.3. Rectifying faults from the head end to the head end side of the STU.