MOBILE SERVICES REVIEW 2003

SUBMISSION BY AAPT LIMITED

13 JUNE 2003

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1 Introduction

1.1 This submission comments on certain of the issues raised in the Commission's Discussion Paper on the Mobile Services Review released in April 2003. Its focus is on mobile termination services, because it is in respect of those services AAPT believes it is best placed to comment. It is also the area that, in AAPT's view, is most deserving of Commission attention and appropriate regulation.

1.2 The submission is structured consistently with the Discussion Paper. The abbreviations used in the submission are set out in Annexure A.

2 Executive summary

2.1 AAPT submits that the central issue in this review of mobile termination services is the fact, recognised by the Commission, that mobile service providers have the power to set above-cost termination charges.

2.2 Above-cost termination charges are at odds with what would be expected to occur in an effectively competitive market. Above-cost termination charges create inefficiencies in the market for termination services and in the markets for listed services – including inefficient investment incentives – and fail to promote competition in the markets for listed services.

2.3 AAPT submits that these outcomes, as well as the need to achieve any-to-any connectivity, indicate that maintaining the mobile termination declaration is necessary if the legislative criteria are to be met.

2.4 AAPT further submits that the most appropriate methodology for determining access prices for mobile termination services is TSLRIC. It is apparent that the retail benchmarking approach favoured by the Commission in its previous decision has failed to achieve its objectives, largely as a result of the failure of retail prices to fall as expected. **[c-i-c]** The failure of the retail benchmarking approach suggests the need for another access pricing methodology.

2.5 The advantages of TSLRIC access prices are widely recognised, including by the Commission. While the Commission has expressed concerns about the use of TSLRIC in its previous pricing methodology decision, developments in the mobile services market since this decision suggest that the Commission's earlier concerns are no longer relevant. To further ease the Commission's concerns, in this submission AAPT suggests several proxies for TSLRIC that may be taken as indicative of TSLRIC access prices and which avoid the need to construct a full TSLRIC model. These proxies suggest that current termination charges are significantly in excess of the appropriate level.

3 Declaration

1. In order to achieve the objective of promoting the LTIE, should the domestic GSM and CDMA terminating access service declaration continue unchanged, be varied or be revoked? Please explain your answer with reference to the objective of promoting the LTIE.

3.1 AAPT submits that, in order to achieve the objective of promoting the LTIE, the mobile termination declaration must remain in place.

3.2 Section 152AB of the TPA provides that the Commission, in determining whether declaration will promote the LTIE, must consider the extent to which declaration will result in the achievement of the following objectives:

(a) the promotion of competition in markets for listed services;

(b) the achievement of any-to-any connectivity in relation to carriage services that involve communication between end-users; and

(c) the encouragement of economically efficient use of, and economically efficient investment in, the infrastructure by which listed services are supplied.

3.3 The Commission considers these three objectives "secondary objectives", as they are the means by which the LTIE is promoted.[1] Given that the secondary objectives may sometimes conflict, the Commission considers that it must not

[1] ACCC, *Telecommunications services – Declaration provisions*, July 1999, page 35.

only determine the effect of declaration on each secondary objective, but also consider the overall effect of declaration on the LTIE:

> *"The analytical process used by the Commission generally involves three steps:*
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> - ***First**, the Commission considers the likely result of declaration in terms of each secondary objective.*
> - ***Second**, the Commission considers whether the likely result of declaration on each secondary objective will promote the long-term interests of end-users.*
> - ***Third**, the Commission must make an overall assessment of whether, having regard to the cumulative results of declaration on the secondary objective, declaration will promote the long-term interests of end-users."*[2] (emphasis in original)

3.4 In support of its submission that the continued declaration of mobile termination services is in the LTIE, AAPT intends to follow the Commission's approach. To this end, in response to various questions posed by the Commission in its Discussion Paper, AAPT assesses the extent to which declaration contributes to the achievement of the secondary objectives later in this submission.

3.5 Briefly, AAPT's conclusions regarding the achievement of the secondary objectives are that:

(a) continuation of the mobile termination declaration will assist with avoiding anti-competitive behaviour and thereby promote competition in markets for listed services;

(b) continuation of the mobile termination declaration will prevent mobile service providers attempting to deter entry or restrict competition by refusing termination services, and will thus promote the objective of any-to-any connectivity; and

(c) continuation of the mobile termination declaration offers the most effective means of ensuring prices for termination services are cost-reflective, which in turn is the most effective way of encouraging efficient use of, and investment in, infrastructure.

3.6 Against this background, the declaration should be viewed as clearly being in the LTIE. There is no conflict between the secondary objectives in terms of their

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[2] ACCC, *Telecommunications services – Declaration provisions*, July 1999, page 36.

contribution to the LTIE. As the Commission has recognised in its *Telecommunications services – Declaration provisions*, where the secondary objectives are each in the LTIE and do not conflict, declaration will promote the LTIE.

3.7 For these reasons, AAPT submits that continued declaration of mobile termination services is in the LTIE. In particular, AAPT considers that the promotion of competition is centrally important to the promotion of the LTIE, and submits that the continued declaration of termination services is significantly more effective than revocation in ensuring that competition continues to develop in a range mobile services market.

3.8 The Commission appears to welcome comment in relation to an appropriate expiry date for the declaration, but it has not posed a specific question on this issue.[3] In AAPT's submission, the expiry date cannot and should not be as early as June 2004 if the objectives of continuing the declaration are to be achieved. The reasons for AAPT holding this view will appear from its analysis in the sections below.

4 Service descriptions

2. If the service description were varied, should it be broadened to include termination of calls on 3G networks?

4.1 In AAPT's submission, the Commission should be satisfied that the declaration is broad enough to include the termination of voice calls on 3G networks. In that way, the declaration will cover the extent to which 3G networks affect the provision of fixed-to-mobile services.

4.2 AAPT believes that the termination of calls on 3G networks is covered by the declaration in its present form. The definition of the listed service that has operated since March 2002 is in these terms:

> *"… 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*

[3] ACCC, *Mobile Services Review 2003: An ACCC Discussion Paper*, April 2003, page 6.

GSM and CDMA number ranges of the Australian Numbering Plan and directly connected to the Access Providers network." [4]

4.3 The definition does not confine the networks used by the B-parties to networks of a particular generation of technology. It attaches to assigned numbers for the digital mobile number range. To the extent that 3G networks use numbers in this range, the termination of calls to these networks will fall within the definition.

5 Market definition

3. In which market/s is the mobile termination service supplied? Does a "single operator" market definition apply to this service? What are the relevant downstream markets?

5.1 In AAPT's submission, the relevant market in which mobile termination services are supplied is the market for termination on each individual network. While this market definition differs from the Commission's definition of the relevant market in its July 2001 final report on GSM termination[5] (in which the market was defined as the market in which a mobile call is supplied), AAPT submits that there is now further market evidence of a distinction between wholesale and retail markets, which suggests the need for a narrower market definition. AAPT provides reasons for favouring a "single operator" market definition below.

5.2 While AAPT favours a "single operator" market definition, it is nevertheless the case that the ultimate question is one of market power, not market definition. Even if the Commission should continue to favour a relatively broad definition of the market, it is nevertheless apparent, and has been recognised by the Commission, that the provision of mobile termination services is a source of market power.

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4 ACCC, *Mobile Services Review 2003: An ACCC Discussion Paper*, April 2003, page 41. The source of this quote, attributed in footnote 78 of the Commission's Discussion Paper, is page 58 of the Commission's *Variation to make the GSM Service Declarations Technology-Neutral, Final Report*. However, the wording of the service description on page 58 of the *Variation to make the GSM Service Declarations Technology-Neutral, Final Report* is as follows:

> ***"Domestic GSM and CDMA 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 or CDMA number ranges of the Telecommunications Numbering Plan 1997 and directly connected to the AP's GSM or CDMA network."*

This wording would alter the conclusion expressed in the text.

5 ACCC, *Pricing Methodology for the GSM Termination Services*, July 2001 (hereafter, *2001 Report*).

5.3 Finally, AAPT suggests that the relevant downstream markets for consideration are the markets for fixed-to-mobile and mobile-to-mobile call services.

The market for mobile termination services

5.4 It is widely accepted that the appropriate approach to market definition is to begin with the product or service in question, and include in the market with this relevant product or service all demand-side and supply-side substitutes that impose a sufficient price constraint[6].

5.5 According to this approach, where there is no significant demand-side or supply-side substitution for the relevant product or service, that product or service constitutes a market. In AAPT's submission, an application of this approach leads to the conclusion that, since there is no significant substitute for termination services offered by an individual network, termination services for each network constitute a separate market.

5.6 This has been the conclusion of the UK Competition Commission in its recent report on mobile termination services.[7] The UK Competition Commission began the process of market definition by defining the relevant service as mobile termination services and, finding no significant substitution possibilities for the mobile termination services of an individual network, concluded that the relevant market was a "single operator" market.

5.7 AAPT submits that there is a significant area of agreement between the Commission and the UK Competition Commission. Their approaches to market definition are the same. Additionally, in its *2001 Report*, the Commission has substantially agreed with the UK Competition Commission's conclusion that there is no significant possibility of substitution for the termination services of each individual network. Given these similarities, it could be expected that the Commission and the UK Competition Commission would arrive at similar market definitions. That this is not the case is a result of the fact that the Commission and

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6 This has been accepted practice in Australia since *QCMA*. *Re Queensland Co-operative Milling Association Ltd and Defiance Holdings Ltd* (1976) ATPR 40-012, at 17,247. It is advocated in the Commission's *Merger Guidelines*. ACCC, *Merger Guidelines*, June 1999, para 5.41 – 5.42.

7 Competition Commission, *Reports on references under section 13 of the Telecommunications Act 1984 on the charges made by Vodafone, O2, Orange and T-Mobile for terminating calls from fixed and mobile networks*, Presented to the Director General of Telecommunications December 2002.

the UK Competition Commission began the process of market definition from different starting points – where the UK Competition Commission defined the market by taking the relevant service to be termination services, the Commission took the relevant service to be a mobile call.

5.8 As discussed below, AAPT supports the UK Competition Commission's market definition and submits that, given the current state of the market for mobile services, the Commission's previous approach to market definition is no longer appropriate, and risks failing to adequately consider the nature of competition in the market.

The relevant service

5.9 It is widely accepted that market definition in Australia is a purposive process. This is recognised in the Commission's *Merger Guidelines*.[8] The relevant purpose of the current mobile services review is the consideration of the conditions for access to mobile termination services. Therefore, in defining the relevant market, it makes sense to begin with this service, and to consider what is substitutable with this service. In fact, this is the approach recommended by the Commission in its Discussion Paper:

> *"The Commission will conduct its assessment by following the same steps that it has taken in its assessment of the potential for declaration to promote competition in previous declaration inquiries. This involves first defining the service and then considering the market in which the eligible service is or would be supplied and other related markets in which competition may be promoted. . . .*
>
> *The declared GSM and CDMA termination service is now described as:*
>
> > *'. . . 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 and CDMA number ranges of the Australian Numbering Plan and directly connected to the Access Providers network.'"*[9]

5.10 In contrast, in its *2001 Report*, the Commission began the process of market definition by taking a GSM mobile call as the relevant service and consequently defined the market broadly.[10] Indeed, AAPT submits that the Commission's

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8 ACCC, *Merger Guidelines*, June 1999, para 5.41.

9 ACCC, *Mobile Services Review 2003: An ACCC Discussion Paper*, April 2003, pages 40-41. See footnote 4 for a discussion of the Commission's service description.

10 ACCC, *Pricing Methodology for the GSM Termination Service: Final Report*, July 2001, page 25.

starting point in its *2001 Report* leads to an inappropriately broad market definition, given the purpose of the Commission's review.

5.11 To begin with a mobile call, and to consider what may be substitutable with this service, as the Commission did in its *2001 Report*, is to fail to reflect the actual situation in which mobile termination services are bought and sold in the market. Mobile termination is essentially a wholesale product – individual callers do not separately negotiate with mobile service operators for termination services; instead they rely upon their fixed-line or mobile service provider to negotiate for termination services. Mobile calls, on the other hand, are essentially a retail product – they are consumed by individual retail consumers.

5.12 Consequently, to begin with a mobile call as the relevant product is to attempt to analyse market interactions occurring at the wholesale level through the lens of interactions at the retail level. In considering the regulation of mobile termination, the Commission should be primarily concerned with wholesale interactions between various mobile service providers and the companies with whom they interconnect. It is at this wholesale level that access occurs. It is at the wholesale level that any market power will exist and that any anti-competitive behaviour will occur. It is also from this wholesale level that inefficiencies will originate.

5.13 This is not to deny that what occurs at the retail level is an important factor in the market. The demand for termination services in the wholesale market is derived from retail demand for the ability to interconnect with all mobile networks. However, in order to properly understand the effect of the retail market on the wholesale market for termination services, it is necessary to first understand the nature of the wholesale market.

5.14 For these reasons, AAPT agrees with the Commission's stated approach to market definition in the Discussion Paper – market definition must begin by considering substitution for mobile termination services. Only in this way can the process of market definition reflect the purpose of the current review of mobile termination services.

5.15 AAPT submits that there is no significant demand-side or supply-side substitution for mobile termination services for each individual mobile service provider. In AAPT's submission, the Commission has itself previously recognised the absence of substitution for mobile termination services for each mobile service provider. Consequently, should the Commission approach the question of market definition in a purposive manner, AAPT expects that the Commission would define the relevant market as the market for mobile termination services on each individual network, as the UK Competition Commission has done. It is difficult to reconcile the Commission's finding in its *2001 Report* that mobile carriers "sustain above-cost access prices for GSM termination"[11] with a product market defined any more broadly than this.

Substitution for the mobile termination services of an individual network

5.16 In considering substitution possibilities for mobile termination services it is necessary to consider both supply-side substitution and demand-side substitution.

5.17 On the supply side, substitution for the termination services of mobile service provider A would occur if mobile service provider B would switch to the supply of termination services to customers subscribing to mobile service provider A in response to an increase in the termination charge levied by mobile service provider A. This supply-side substitution would require that calls to a mobile customer could be terminated on a network other than the network to which the customer is subscribed for the purposes of making outbound calls. This does not, and cannot, occur.

5.18 That supply-side substitution of termination services is not a relevant constraint has implicitly been recognised by the Commission. In its *2001 Report*, the Commission observed:

> *"[O]nce an end-user is connected to a mobile network, the mobile carrier has control over access to GSM termination for that end-user . . .".*[12]

In other words, it is not possible for a customer of one network to secure mobile termination from another network.

5.19 That supply-side substitution of termination services is not a relevant constraint has also been recognised by the UK Competition Commission. In its report on mobile termination, the Competition Commission found that:

[11] ACCC, *Pricing Methodology for the GSM Termination Service: Final Report*, July 2001, page 4.

[12] ACCC, *Pricing Methodology for the GSM Termination Service: Final Report*, July 2001, page 4.

> *"There are currently no practical technological means of terminating a call other than on the network of the MNO [mobile network operator] to which the called party subscribes and none that seems likely to become commercially available in the near future."*[13]

5.20 Oftel also concluded that there are no effective supply-side substitutes for mobile termination services in its recent review of mobile termination.[14]

5.21 On the demand side, substitution would occur if mobile service provider A would substitute some other service for the termination services offered by mobile service provider B in response to an increase in the charges for this termination. The analysis of demand-side substitution is complicated by the fact that termination services are a wholesale product, the demand for which is derived from demand in the retail market for calls to mobile customers. Consequently, it is necessary to assess the possibility of demand-side substitution at both the wholesale level and the retail level.

5.22 At the retail level, demand-side substitution fails to provide a constraint on the pricing of termination services. Neither the A-party making the call nor the B-party receiving the call will constrain the price of termination services.

5.23 For the A-party, substitution possibilities are limited – while there are a number of different ways that a person can be contacted, it is nevertheless the case that other technologies do not provide significant substitution for mobile phones. This has been recognised by the Commission in its finding that none of fixed-line, 3G mobile or SMS are in the same market as mobile telephony:

> *"As in its Draft Report, the Commission considers the relevant product market to be one in which a mobile call is supplied, incorporating technologies such as CDMA and GSM. The market does not include fixed line, 3G mobile and SMS services, but does include both post-paid and pre-paid mobile packages."*[15]

5.24 This finding is consistent with the UK Competition Commission's findings on the possibility of retail substitution:

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13 Competition Commission, *Reports on references under section 13 of the Telecommunications Act 1984 on the charges made by Vodafone, O2, Orange and T-Mobile for terminating calls from fixed and mobile networks*, Presented to the Director General of Telecommunications December 2002, para 2.147.

14 Oftel, *Review of mobile wholesale call termination markets: EU market review*, May 2003, para 3.100.

15 ACCC, *Pricing Methodology for the GSM Termination Service: Final Report*, July 2001, page 30.

> *"At the retail level, there are no ready alternatives to making a call to a mobile (such as calling a fixed line or using SMS) and no adequate consumer strategies (such as call-back) that are easy to use and effective enough to put sufficient pressure on termination charges."*[16]

Oftel has also concluded that possibilities for retail demand-side substitution are limited:

> *"3.23 The Director has considered a range of different possible types of substitution:*
>
> - *mobile to fixed calls as a substitute for off-net calls;*
> - *mobile-to-mobile calls as a substitute for fixed-to-mobile calls;*
> - *on-net mobile-to-mobile calls as a substitute for off-net calls;*
> - *SMS as a substitute for mobile-to-mobile calls;*
> - *unified messaging and message clips';*
> - *voice over Internet Protocal calls; and*
> - *call-back arrangement.*
>
> *3.24 However, as explained below, the Director considers that none of the above is likely to have a constraining effect on voice call termination charges."*[17]

5.25 Not only do A-parties lack the ability to substitute between different mobile networks for contacting B-parties, but they are also unable to substitute between different B-parties on the basis of termination charges. The reason, as recognised by the Commission in its *2001 Report*, is that customers are unaware of the termination charge associated with a particular mobile number. So, even if the A-party is trying to call any B-party from a particular class – for instance, any plumber – the A-party is still unable to call the B-party whose network offers the lowest termination charge. This ignorance has only increased with the advent of mobile number portability, which removes the ability of A-parties to determine the mobile network on which their call is being terminated.

5.26 The relevance of the A-party's inability to substitute is that, since customers of any telephony network will demand the ability to contact mobile phones connected to other networks, it will be necessary for any service provider to offer its customers any-to-any connectivity and, therefore, it will be necessary for any

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[16] Competition Commission, *Reports on references under section 13 of the Telecommunications Act 1984 on the charges made by Vodafone, O2, Orange and T-Mobile for terminating calls from fixed and mobile networks*, Presented to the Director General of Telecommunications December 2002, para 2.147.

[17] Oftel, *Review of mobile wholesale call termination markets: EU market review*, May 2003, paras 3.23-3.24.

service operator to purchase termination services from each mobile service provider.

5.27 For the B-party, termination charges do not affect the purchasing decision, or do so only to a limited extent. The reason is that B-parties do not pay the termination charges. The limited exception to this is for closed user groups, where subscribers are as concerned about termination rates as they are about the price of making a phone call. However, as the Commission itself has recognised in its *2001 Report*, the ability of mobile service providers to discriminate between closed user groups and other consumers by offering different prices for on-net and off-net termination reduces the effect of this possible source of substitution:

> *"While these groups are able to put pressure on access prices for GSM termination, mobile carriers can effectively segment these particular users by charging lower prices for 'on-net' calls (calls that remain on the mobile carrier's network). Prices for other consumers (i.e. those who commonly call 'off-net') would be unaffected if carriers pursued such a strategy."*[18]

5.28 This reflects the finding of the UK Competition Commission:

> *"For most mobile users, incoming call charges are a relatively low priority. There is evidence of a degree of price-sensitivity on the part of a minority of mobile users, including particular groups such as large businesses. The MNOs have, however, in our view largely neutralized the pressure which these groups would otherwise have been able to exert on termination charges by offering such users more favourable terms than the generality of mobile customers, usually in the form of differential tariff rates."*[19]

5.29 Oftel also dismisses B-party substitution as a relevant constraint:

> *"On the basis of the evidence and the arguments discussed above, the Director considers that the behaviour of mobile subscribers in response to a rise in termination charges above the competitive level and, thus, in the price of calls to their mobiles is unlikely to render this increase unprofitable. The majority of subscribers are unlikely to react to a price increase and the presence of some users who choose their mobile network also on the basis of the cost of incoming calls is not sufficient to constrain voice call termination charges (because of the ability of the MNOs to*

18 ACCC, *Pricing Methodology for the GSM Termination Service: Final Report*, July 2001, page 18.

19 Competition Commission, *Reports on references under section 13 of the Telecommunications Act 1984 on the charges made by Vodafone, O2, Orange and T-Mobile for terminating calls from fixed and mobile networks*, Presented to the Director General of Telecommunications December 2002, para 2.147.

separate these customers from the other through special self-selecting arrangements).”[20]

5.30 Partly as a result of this lack of demand-side substitution at the retail level, it is also the case that demand-side substitution at the wholesale level cannot be considered to present a constraint on the price of termination services. In order to offer a viable service in any relevant retail telephony market, it is necessary to provide any-to-any connectivity to customers. In order to do this, it is necessary to purchase termination services from each mobile service provider. The termination services of one mobile service provider will not prove an adequate substitute for the termination services of another; nor will any telephony service provide the necessary any-to-any connectivity. In short, and as recognised by the Commission in its *2001 Report*:

> *“[O]nce an end-user is connected to a mobile network, the mobile carrier has control over access to GSM termination for that end-user . . .”.*[21]

This control, and the need to offer any-to-any connectivity, prevents demand-side substitution from occurring at the wholesale level.

5.31 That there is an absence of demand-side substitution at the wholesale level is the conclusion of Oftel[22] and is consistent with the UK Competition Commission’s findings:

> *“On the demand side, Oftel and all the MNOs agreed that substitution at the wholesale level was not currently feasible, since an operator wishing to offer calls to customers belonging to a particular mobile network must purchase termination from that network in order to do so.”*[23]

The relevant market

5.32 Following the Commission’s recommended approach to market definition, and accepting the Commission’s previous findings regarding the lack of substitution for the mobile termination services of a particular network, leads to the conclusion that the relevant market is the market for termination services on each individual network.

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[20] Oftel, *Review of mobile wholesale call termination markets: EU market review*, May 2003, para 3.83.

[21] ACCC, *Pricing Methodology for the GSM Termination Service: Final Report*, July 2001, page 4.

[22] Oftel, *Review of mobile wholesale call termination markets: EU market review*, May 2003, para 3.85.

5.33 This is the decision of the UK Competition Commission and of Oftel. Having defined the market according to a process the same as the Commission's recommended approach – to examine substitution possibilities for mobile termination services[24] - and having, as discussed above, ruled out substitution for these services in a manner consistent with the Commission's previous decisions, the UK Competition Commission concludes that "each MNO has a monopoly of call termination on its own network."[25]

5.34 AAPT submits that this is the correct approach, and the correct result, for this inquiry.

Common pricing constraint

5.35 Despite its apparent support for the proposition that there are limited substitution possibilities for mobile termination services, the Commission in its *2001 Report* found that the relevant market is the market in which a mobile call is supplied. The Commission came to this decision largely as a result of the perception that there was common pricing constraint created by a link between the wholesale and retail levels of the market:

> *"In the long-term the increase in revenue from higher access prices for GSM termination will be offset by a reduction in revenue from mobile access service fees and charges for outgoing call services.*
>
> *Where there is not effective competition, there will still be a link between the revenue streams but they are unlikely to be exactly offset.*
>
> *In its Draft Report, the Commission was of the view that due to the interdependencies between the wholesale and retail elements necessary to provide a GSM mobile call, they should be included in the same market. This remains the Commission's view."*[26]

5.36 Since the Commission's *2001 Report*, there is increasing evidence that the link between the retail and wholesale markets is not as strong as the Commission

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23 Competition Commission, *Reports on references under section 13 of the Telecommunications Act 1984 on the charges made by Vodafone, O2, Orange and T-Mobile for terminating calls from fixed and mobile networks*, Presented to the Director General of Telecommunications December 2002, para 2.101.

24 See Competition Commission, *Reports on references under section 13 of the Telecommunications Act 1984 on the charges made by Vodafone, O2, Orange and T-Mobile for terminating calls from fixed and mobile networks*, Presented to the Director General of Telecommunications December 2002, paras 2.91-2.93.

25 Competition Commission, *Reports on references under section 13 of the Telecommunications Act 1984 on the charges made by Vodafone, O2, Orange and T-Mobile for terminating calls from fixed and mobile networks*, Presented to the Director General of Telecommunications December 2002, para 2.147.

26 ACCC, *Pricing Methodology for the GSM Termination Service: Final Report*, July 2001, page 26.

considered it to be. As discussed in section 8, retail prices in the mobile services market have been increasing. This suggests that there is not effective competition in the retail market. This is supported by the Productivity Commission's finding that there are significant difficulties faced by new entrants into the mobile services market.

5.37 AAPT also notes that Oftel has recently rejected the argument that the markets for mobile services are linked by a common pricing constraint, and have done so on the grounds that mobile subscribers do not have to pay the cost of termination to their mobile phone:

> *"4.18 In order for there to be linked markets for mobile services, including call termination, mobile owners would have to purchase a bundle of services from MNOs that includes call termination. It is argued that although each element of the bundle would be likely to be considered a distinct market on the demand-side, the fact that they are supplied together and therefore face the same competitive constraints, would link them. MNOs would compete for customers on the price of the bundle overall.*
>
> *4.19 If this were the case, an MNO would not be able to raise call termination charges, and at the same time keep the same price level of the other services in the bundle, without customers switching networks in reaction to an increase in the price of the bundle overall. It would, however, be able to raise termination charges, and therefore the retail price of calls to mobiles, if at the same time it reduced prices for other services in the bundle to compensate and so retain customers.*
>
> *4.20 However, for this market definition to apply, mobile owners would have to value incoming calls and believe callers to mobiles to be sensitive to the price of incoming calls. This would only be so if mobile owners care about the cost of calling their mobile. If this were the case, a small but significant, non-transitory increase in termination charges would result in a sufficient loss of sales to make it unprofitable. Only in these circumstances would the termination charge of one MNO provide a competitive constraint on the termination charge of another MNO. However, as noted above, the evidence is that mobile owners are not sufficiently sensitive to the price for others to call them for this to be the case. Defining the market for termination within linked national markets for mobile services is, therefore, inappropriate."*[27]

5.38 In light of evidence that retail competition is not as effective as the Commission has previously considered, and of Oftel's approach to the argument that mobile services markets are linked, it is worth considering the Commission's discussion,

[27] Oftel, *Review of the charge control on calls to mobiles*, 26 September 2001, pages 19-20.

in its *2001 Report*, of the possibility that the retail market is not effectively competitive:

> *"If the retail level of the market for mobile services was not effectively competitive, then above-cost access prices for GSM termination will not necessarily be offset by below-cost retail prices. In such circumstances, a lack of effective retail competition, combined with control-over-access and consumer ignorance, may allow mobile carriers to sustain overall excess profits."*[28]

5.39 AAPT submits that this is the case, and that defining the relevant market as the market for termination services to each individual network will reflect this fact.

Market definition and market power

5.40 While maintaining its support for a market defined as the market for mobile termination services on an individual network, AAPT nevertheless submits that the ultimate question is one of market power, not market definition. That market definition is a useful step, but not an end in itself, is widely accepted in Australia.

5.41 AAPT submits that, whether the Commission determines that the relevant market is for termination services for each individual network, or is the broader market for mobile services, it is nevertheless the case, and has been recognised by the Commission, that mobile termination services are a source of significant market power.

5.42 If the relevant market is defined as the market for termination services for each individual network, it is clear that firms supplying mobile termination services possess market power. Under this definition of the market, each network operator is properly considered a monopolist in the provision of termination services on its network and has power over the price of these termination services.

5.43 However, even if the Commission continues to favour its broader market definition, it is nevertheless the case that mobile termination services are a source of market power because, even in the presence of retail market competition, service providers maintain control over the price of termination service on their network. That these two views – that the market is broad and that termination services are a source of market power – are consistent is implicitly accepted by

[28] ACCC, *Pricing Methodology for the GSM Termination Service: Final Report*, July 2001, pages 22-23.

the Commission in its *2001 Report*. Despite defining the market broadly, the Commission held that termination services could be priced above cost:

> *"The Commission put forward the view in the Draft Report that there were factors leading to the supply of the GSM termination service at prices above the efficient costs of provision:*
>
> - *once an end-user is connected to a mobile network, the mobile carrier has control over access to GSM termination for that end-user; and*
> - *consumer ignorance allows the mobile carrier to increase access prices for the GSM termination service without feeling the full effect of the increase. This is because an end-user calling can do no better than basing his/her calling decisions on estimates of the average access price for GSM termination.*
>
> *The Commission continues to believe that control over access to the end-user and consumer ignorance enable mobile carriers to sustain above-cost access prices for GSM termination."*[29]

5.44 A consideration of the structure of the mobile services market is sufficient to raise concerns about the present and likely future state of competition. It is highly concentrated – the level of concentration would not pass the Commission's thresholds under the *Merger Guidelines*[30]; and there is a comparatively high HHI[31].

5.45 There are significant barriers to entry to infrastructure-based competition in mobiles which include the following.

(a) The requirement for spectrum (or radio frequencies). The network operators require licences to use spectrum within specified frequencies and within specified geographic areas. The cost of spectrum is substantial.

(b) Sunk costs. A network provider must acquire and deploy base stations and other radio communications infrastructure. A large proportion of these costs are sunk once incurred and cannot be recovered if the network provider subsequently leaves the market. The cost of acquiring spectrum can also be sunk.

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29 ACCC, *Pricing Methodology for the GSM Termination Service: Final Report*, July 2001, page 4.

30 ACCC, *Merger Guidelines*, June 1999, page 44.

31 The HHI is a useful indicator of the degree of concentration in a market. As the Commission is aware, this is used by the FTC and the DOJ in the United States. The HHI is the sum of the squares of the market shares of

(c) The need to conclude roaming and interconnection or access agreements with existing network operators (whether fixed or mobile).

(d) Customer switching costs. There is a cost to customers of switching between network operators. Although the introduction of MNP has helped to reduce these costs, there are other costs, such as connection charges, which remain.

(e) Environmental restrictions affecting the location and construction of mobile network infrastructure.

(f) Access to towers and other infrastructure.

(g) Network effects, which arise when the value to customers of belonging to a particular network increases with the number of other members of the network.

(h) Economies of scale. The three mobile network operators are many times larger than any actual or potential entrant. It is also probably true that the Australian market would not support the entry of another facilities-based operator in the mobile services market. As a result of this, the three mobile network operators are likely to enjoy substantial economies of scale, which would result from the greater volumes of traffic and opportunities to optimise network configuration to take advantage of such volumes.

5.46 The Commission's *Merger Guidelines* provide that:

> *". . . effective entry is that which is likely to have a marked impact within a two year period, either by deterring or defeating the attempted exercise of significant market power by the merged firm."*[32]

5.47 Even if a relatively large carrier were to enter the market and have sufficient funds to establish its own network, it is unlikely that it would be able to significantly constrain or deter the exercise of market power by mobile network operators within a two year period. This is because the construction of a large network, the acquisition of large customer base and the signing of interconnection agreements

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each firm in the market. The HHI of the wholesale market is well in excess of 1,800, the level regarded as highly concentrated in the US horizontal merger guideline.

32 ACCC, *Merger Guidelines*, June 1999, para 5.126.

all take a long time. AAPT's experience in constructing a CDMA network supports this view.

5.48 Importantly, the Commission's own comments on the state of competition in the mobile market are relevant. In its January 2000 report on declaration of long-distance mobile services[33], the Commission concluded that:

> *"The mobile services market is highly concentrated with only three mobile carriers, one of which, Telstra accounts for around half of the market. The Commission considers that there are barriers to entry which limit the extent to which the threat of entry can constrain the behaviour of incumbents. In such a situation, actual entry is likely to be necessary to ensure effective competition."*[34]

5.49 The network effects in the market will become more significant as a barrier to entry as mobile data applications develop. One application likely to develop will be the provision of mobile Internet services, such as local directories. Since the use of mobile data protocols is likely to allow networks to select content providers, those networks with larger subscriber numbers will be likely to obtain premium content. This will make that network more attractive to new subscribers, which increases its ability to obtain premium content and so on[35].

5.50 Market conditions are also conducive to coordination between the mobile network operators. In addition to the high supply-side concentration and relatively low concentration on the buying side at both the wholesale and retail levels, market entry takes a long time, retail prices are identifiable and comparable and each of the incumbents are vertically integrated.

5.51 In short, AAPT submits that, irrespective of market definition, mobile termination services are a source of market power, and it is this market power which is relevant to a consideration of the declaration of, and appropriate pricing principles for, mobile termination services.

The downstream markets

5.52 While it is necessary to define the market in which mobile termination services are offered, the effects of access prices for mobile termination will not be

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33 ACCC, *Competition for Long-Distance Mobiles Report*, January 2000.

34 *Ibid*., para 4.3.9.

35 ACCC Media Release, MR 13/00, 28 January 2000.

confined to this market. The access price for mobile termination will also influence outcomes in downstream markets.

5.53 AAPT submits that there are two relevant downstream markets, as suggested by the Commission in its Discussion Paper: the market for fixed-to-mobile telephony and the market for mobile-to-mobile telephony.

6 Differential pricing

4. To what extent, if any, should the Commission be concerned about differential pricing between mobile-to-mobile "on-net" and "off-net" calls?

6.1 In AAPT's view, differential pricing between on-net and off-net mobile-to-mobile calls should be of concern to the Commission. That the discrimination widely occurs, and is beyond non-trivial levels, reflects the market power of the mobile network operators. The prospect of A-parties substituting the services of another mobile service provider in response to the higher price of off-net calls is inadequate to constrain the discrimination. The reality is that A-parties will wish or need to call B-parties on other networks and any operator to which they would consider switching will similarly differentiate between on-net and off-net calls. In addition, the lower rates normally form part of a bundled offering.

6.2 Such price discrimination also contributes to the operation of network effects in the market for the supply of termination services. The effect of this pricing conduct is to create an artificial premium for a large network. There are likely to be two immediate effects of such pricing conduct on consumer behaviour. First, in the absence of any other information, consumers are likely to select one of the larger networks on the basis that there would be an increased probability that whomever that customer calls will be subscribed to one of the larger networks, which will result in reduced overall calling costs. Secondly, it creates an incentive for groups of customers (such as family members, friends and businesses) to express a preference for the same network.[36] In short, the greater the market share

[36] Network effects "*... occur when a customer's value of a product increases with the number of people using that same product or a complimentary product*". C.K. Robinson, "Network Effects in Telecommunications merger: MCI WorldCom Merger, Protecting the Future of the Internets", conference paper to the Practicing Law Institute, San Francisco, California, August 1999 (available at http://www.usdoj.gov/atr/public/speeches/3889.pdf).

of the network operator, the greater the ability of that operator to both attract customers and to make its customers "sticky" and face switching costs if they were to consider moving to another network operator. The practice therefore adds to barriers to entry and reinforces market power, at both wholesale and retail levels.

6.3 There are also likely to be allocative efficiency implications of such price discrimination. The services incur the same cost. The differentials are not based upon considerations of demand responsiveness or any theory of Ramsey pricing, so they cannot be explained on the basis of economically efficient recovery of fixed and common costs.

6.4 To the extent that on-net calls are supplied at prices less than their economic cost, and cross subsidisation from other services (off-net calls and mobile termination) occurs, the demand for those other services is impacted by above-cost pricing and results in allocative inefficiencies.

6.5 Finally, AAPT believes that differential pricing which mobile networks to price discriminate between closed user groups and other customers and, in this way, minimise any constraint upon the power to set above-cost termination charges that may be caused by closed-user groups.

7 Consumer ignorance

5. To what extent are consumers ignorant of the network party they choose to call is directly connected to?

7.1 As a general rule consumers are ignorant of the network on which their fixed-to-mobile and mobile-to-mobile calls are terminated. Closed user groups, such as large businesses and family groups, are exceptions. There is no readily available means by which consuming A-parties can generally be informed of the relevant terminating networks at the time they make their purchasing decisions.

The sources and some of the implications of network effects (or externalities) is examined in Nicholas Economides, "The Economics of Networks", *International Journal of Industrial Organisation*, Vol. 14, No. 2 (March 1996). The relationship between network effects of this nature and barriers to entry in competition analysis was recognised and explained in US District Judge Jackson's findings of fact in *USA v Microsoft Corporation* (see findings of fact delivered on 5 November 1999).

7.2 As observed above, this consumer ignorance has been reinforced since the introduction of mobile number portability. The indications are that there has been a reasonably significant degree of number porting since the introduction of mobile number portability.[37]

8 Promotion of competition

6. How would continuing the existing mobile termination declaration, varying the declaration or revoking the declaration affect competition in the market in which the service is supplied and in the relevant downstream markets?

8.1 AAPT submits that the continued declaration of mobile termination services is the most effective means of promoting competition. The need to promote competition in the markets for listed services is important because, in the long-term, it is this competition which will be in the interests of end-users, and will provide these end-users with value in a more efficient manner than continued regulation. Consequently, continued declaration, by promoting competition, will provide end-users with benefits beyond those achieved during the period of the declaration.

8.2 In its *Telecommunications services – Declaration provisions*, the Commission outlines conditions under which declaration is likely to promote competition:

> *"Declaration of an eligible service is likely to promote competition where the following conditions are present:*
>
> - *the eligible service is an input that is used, or that could be used, to supply carriage services or services provided by means of carriage services (often referred to as 'downstream services'); and*
> - *competition in the market for the supply of the eligible service is unlikely to be effective in the future and this is likely to have a detrimental impact on competition in markets for downstream services."*[38]

Each of these two conditions is met.

8.3 Regarding the first condition, it is apparent that termination services are a necessary input into the downstream markets in which mobile-to-mobile and fixed-to-mobile services are supplied. Without termination services, operators in

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[37] Since September 2000, there have been 1,049,924 ports between networks. On this basis, AAPT believes that a reliable estimate is that up to 10% of mobile phones are not operated on the network the block allocation of their number would indicate.

[38] ACCC, *Telecommunications services – Declaration provisions*, July 1999, page 39.

these downstream markets will be unable to offer the any-to-any connectivity that customers demand. The Commission has recognised that termination services are an essential input in its Discussion Paper:

> *"The domestic Global System for Mobiles (GSM) and Code Division Multiple Access (CDMA) terminating access service (mobile termination service), therefore, provides carriage of voice and data from a point of interconnection to the end-user connected to a GSM or CDMA network, and is* ***an essential input for the provision of fixed-to-mobile and mobile-to-mobile call services*** *between end-users on different networks."*[39] (emphasis added)

8.4 Regarding the second condition, the Commission noted in its *2001 Report* that:

> *". . . control over access to the end-user and consumer ignorance enable mobile carriers to sustain above-cost access prices for GSM termination."*[40]

8.5 Above-cost access prices are highly indicative of ineffective competition in the market for mobile termination. Furthermore, as discussed in section 4, AAPT suggests that, regardless of whether the market for termination services is defined narrowly as the market for termination on each individual network, or broadly as the market for mobile services, it is apparent that the nature of mobile termination provides market power.

8.6 Given that termination services meet these two criteria, it is clear that declaration of termination services will promote competition. In particular, AAPT expects that continued declaration will promote competition in the downstream markets for fixed-to-mobile and mobile-to-mobile services by preventing dominant mobile service providers using their control over termination to their subscribers to engage in anti-competitive behaviour. For example, continued declaration of termination services, in conjunction with appropriate pricing principles for termination charges, should prevent mobile network operators from engaging in price squeezes. The ability to impose price squeezes derives from the wholesale market power of the network owner. The incentive to do so arises from the operators' vertical integration and market power at both wholesale and retail levels. The relevance of market power, particularly at the retail level, to the

[39] ACCC, *Mobile Services Review 2003: An ACCC Discussion Paper*, April 2003, page 28.

[40] ACCC, *Pricing Methodology for the GSM Termination Service: Final Report*, July 2001, page 4.

incentive of a vertically integrated firm to engage in exclusionary conduct is widely recognised.

8.7 AAPT's experience is with the supply of fixed-to-mobile calls. That is properly an area of focus for the Commission.[41] Fixed-to-mobile pricing is a vital element of AAPT's competitive offerings. At present, the proportion of the revenue from AAPT's switched customers that is attributable to fixed-to-mobile calls is in the order of **[c-i-c]**.

8.8 In contrast, the revocation of termination declaration will allow mobile service providers to take advantage of the ineffective competition for termination services by engaging in anti-competitive behaviour. Evidence provided by AAPT that mobile service providers have been imposing price squeezes through a combination of high termination rates and capped retail fixed-to-mobile pricing during the period since the Commission's *2001 Report*[42], suggests that, with a revocation of declaration or ineffective regulation, anti-competitive behaviour will be a significant feature of the mobile services market.

8.9 For these reasons, AAPT submits that, in order to promote competition in the markets for listed services, and therefore contribute to the LTIE, it is necessary to continue the declaration of mobile termination services.

9 Pass through

7. To what extent have past decreases in the price of mobile termination services been passed through to end-users in the form of lower fixed-to-mobile prices? To the extent they have not, what implications does this have for declaration of mobile termination services? Would regulation still be in the LTIE if there was no guarantee of "pass through"?

9.1 AAPT's observation is that overall fixed-to-mobile prices have declined. However, that trend is inconsistent as between customer classes. Published prices for consumers and small businesses have increased, while the prices offered to larger corporate accounts have been reduced.

[41] ACCC, *Mobile Services Review 2003: An ACCC Discussion Paper*, April 2003, page 31.

[42] See Annexure B to the submission for a description of price squeeze behaviour on the part of the mobile network operators.

9.2 AAPT can confirm that its fixed-to-mobile prices have generally tracked downwards in line with lower termination rates. AAPT's recent decision to introduce capped fixed-to-mobile pricing will bring its pricing, in terms of revenue per minute, down further.

9.3 There are both legal and policy difficulties associated with any requirement of pass through.

(a) There may be an issue with whether the Commission has the power to require pass through. Under Part XIC of the TPA, its main functions in respect of the terms of access are to assess undertakings (and accept or reject them) and arbitrate notified access disputes. It is only in respect of arbitration that it has the power to compel particular terms through a determination. Determination may deal with:

> *"any matter relating to access by the access seeker to the declared service including matters that were not on a basis for notification of the dispute."*[43]

The legislation includes a list of examples of matters which the determination may address, including "any other terms and conditions of the access seeker's access to the declared service"[44]. However, none of the examples refer to the access seeker's operations once access has been provided.[45]

(b) Competition in the downstream markets would be distorted if access seekers were required to give effect to flow through but access providers retained pricing freedom.

9.4 AAPT submits that, in examining the relationship between pass through and the LTIE, several points need to be considered. First, the benefits of decreased termination charges need not be passed through to consumers exclusively in the form of lower fixed-to-mobile prices. Rather, as recognised by the Commission in their *Telecommunications services – Declaration provisions*, decreased termination charges can be in the LTIE to the extent that they are passed through

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[43] Subsection 152CP(2).

[44] Paragraph 152CP(2)(d).

as increases in quality or the diversity of goods and services. Second, in considering whether decreased mobile termination charges will be passed through to end-users and contribute to the LTIE it is important to remember that the relevant consideration is the *long-term interests* of end-users. Since lower termination charges will facilitate entry, they will contribute to the LTIE even if fixed-to-mobile prices are not immediately reduced.

The LTIE is concerned with the long-term

9.5 Given recent increases in retail prices in the mobile services market, the Commission may be concerned that any decreases in termination charges may not be passed through to consumers in the form of lower prices. After all, the Commission's finding in its *2001 Report* that the wholesale and retail markets were linked, such that a change in the price of termination charges would be mirrored by changes in the prices of other services, was predicated on the Commission's finding that the retail market was effectively competitive:

> *"If the retail level of the market for mobile services was not effectively competitive, then above-cost access prices for GSM termination will not necessarily be offset by below-cost retail prices. In such circumstances, a lack of effective retail competition, combined with control-over-access and consumer ignorance, may allow mobile carriers to sustain overall excess profits. The Commission notes, however, that if retail competition is becoming increasingly effective, then it is to be expected that overall excess profits will decline or be eliminated in the near future."*[46]

If the retail market is not effectively competitive, as recent increases in retail prices could suggest, there is an argument to be made that decreased termination charges will not be passed through into lower retail charges, but will be retained as excess profits.[47]

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45 Construing section 152CP e*jusdem generis*, the argument would be that the general power is limited to the access arrangement between seeker and provider.

46 ACCC, *Pricing Methodology for the GSM Termination Service: Final Report*, July 2001, pages 22-23.

47 It is worth noting, however, that even a profit-maximising monopolist will rationally lower its retail price given a reduction in its marginal cost; in other words, even a monopolist in the retail supply of mobile services could be expected to pass through to its retail customers some of the benefits of a reduction in its costs. Consequently, an argument could be made that regulation that achieved a decrease in the costs of such a monopolist would be in the LTIE.

9.6 However, it is important to recognise that, when considering the LTIE, it is the *long-term* that is relevant. The Commission discusses its understanding of the term "long-term" in its *Telecommunications services – Declaration provisions*:

> *"Reflecting its use within the context of economic concepts such as 'competition' and 'efficiency', the Commission is of the view that 'long-term' should be interpreted from an economic perspective. Accordingly, in its view, the long-term is not a set period, but rather the time taken for the substantive consequences of a declaration decision to unfold."*[48]

9.7 When considering the long-term in the context of the regulation of mobile termination services, it is particularly relevant to consider the effect of that regulation on the conditions for entry. In its *2001 Report*, the Commission recognised that one of the key benefits of price regulation would be the reduced likelihood of anti-competitive pricing.[49] The Commission also expressed the intention to review its decision regarding the appropriate pricing methodology in the event that price squeezing is observed.[50]

9.8 AAPT submits that the Commission was correct to identify the reduced threat of anti-competitive behaviour as one of the main benefits of regulation of mobile termination services. The evidence provided by AAPT that the mobile networks are engaging in a price squeeze[51] supports the conclusion that regulation can play an important role in diminishing anti-competitive behaviour.

9.9 The relevance of a reduction in anti-competitive behaviour to the LTIE is that any such reduction will facilitate entry into the retail market for the provision of mobile services. Entry will in turn increase competition in the retail market and will create the conditions under which reductions in the cost of termination will be passed through to consumers. These cost reductions may not be guaranteed to be passed through immediately but, in the long-term, with the increase in competition, it is likely that pass through will be achieved.

9.10 In short, in examining the question of pass through and the LTIE it is important to remember that one of the primary reasons for regulating mobile termination

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48 ACCC, *Telecommunications services – Declaration provisions*, July 1999, pages 33-34.

49 ACCC, *Pricing Methodology for the GSM Termination Service: Final Report*, July 2001, page 72.

50 ACCC, *Pricing Methodology for the GSM Termination Service: Final Report*, July 2001, page 78.

51 See Annexure B.

charges is to facilitate entry, and that this entry will ultimately create the competitive environment in which pass through is ensured. This logic has been expressed by the Commission in its *Telecommunications services – Declaration provisions*:

> *"To form a view as to the consequences of declaration, it will in most cases be appropriate to identify particular short to medium-term impacts that are likely to occur as a result of declaration. These impacts can be then used to form a view as to the consequences of declaration over the long term. For instance, if the Commission is of the view that declaration is likely in the short to medium-term to promote competition by reducing barriers to market entry, it can form a view about the consequences of reduced barriers to entry in terms of the end-users' interests over the long term."*[52]

The LTIE is concerned with the interests of end-users

9.11 Bearing in mind that the increased competition engendered by entry can be expected to prevent mobile service providers earning excess profits, it is also important to realise that decreased termination costs can be in the LTIE even it retail prices charged to end-users do not decrease. The reason is that the *interests* of end-users includes more than just low prices. The Commission has recognised this in its *Telecommunications services – Declaration provisions*:

> "*The access provisions in Part XIC seek to promote the long-term interests of end-users through exposing telecommunications markets to greater competition and creating an environment where there are incentives for investment and innovation. In general, competition fosters innovation, drives efficiency, and puts pressure on business to deliver consumers 'value for money'. Consequently, in interpreting the term 'long-term interests of end-users' within the context of Part XIC, the Commission is of the view that the term refers to end-users' economic interests. These interests include lower prices, increased quality and greater diversity of goods and services."*[53]

9.12 Consequently, AAPT submits that the regulation will still be in the LTIE even if there is no guarantee that decreases in termination charges would be passed through to consumers in the form of lower prices.

9.13 First, AAPT submits that it is likely to be the case that lower termination charges will be passed through to consumers in the form of increased service quality. As is

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[52] ACCC, *Telecommunications services – Declaration provisions*, July 1999, page 33.

[53] ACCC, *Telecommunications services – Declaration provisions*, July 1999, page 33.

the case in most industries, improvements in service quality in the dependent markets are the result of investments undertaken on the part of service providers. As termination charges decrease, and assuming that service providers in dependent markets do not immediately pass these savings on to consumers, they will be able to afford to engage in investments to improve service quality.

9.14 Secondly, AAPT submits that the benefits of lower termination charges are likely to be passed through to consumers in the form of a greater diversity of goods and services. As discussed previously, lower termination charges reduce the possibility of anti-competitive conduct, such as price squeezing. This is likely to facilitate entry and with the entry of new service providers comes an increase in the diversity of goods and services. This is particularly the case because it is generally new entrants who provide the impetus for product differentiation in the market by searching for a profitable niche not already dominated by large incumbents.

9.15 For these reasons, AAPT expects that regulation will be in the LTIE even in the absence of a guarantee that cost savings will be immediately passed through to end-users in the form of lower retail prices for fixed-to-mobile and mobile-to-mobile calls.

10 Connectivity

9. How would continuing the existing mobile termination declaration, varying the declaration or revoking the declaration affect the achievement of the objective of any-to-any connectivity?

10.1 In deeming the declaration of GSM originating and terminating services, the Commission was specifically concerned with the achievement of 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."*[54]

10.2 AAPT submits that declaration of mobile termination services continues to be necessary for the achievement of any-to-any connectivity. AAPT considers it clear

[54] ACCC, *Deeming of Telecommunications Services*, June 1997, page 19.

that, given the current technological constraint that prevents the provision of termination services by a service provider other than that service provider to which a customer subscribes for the purpose of making outgoing calls, any-to-any connectivity can only be achieved if a mobile service provider will provide termination to all other fixed and mobile service providers.

10.3 In considering whether declaration continues to be necessary for the achievement of any-to-any connectivity, it is necessary for the Commission to consider whether mobile service providers will provide termination to all other fixed and mobile service providers in the absence of declaration. AAPT submits that this will not occur; rather, in the absence of declaration, the large mobile networks will, for instance, have an incentive to refuse to provide termination services to smaller mobile carriers and to potential new entrants because, by doing so, the large mobile networks will inhibit or prevent the development of competition in the market for mobile services.

10.4 The Commission has previously recognised, in its *2001 Report*, the possibility that control over termination services will lead to anti-competitive behaviour, even within an environment in which termination services are declared.[55] AAPT submits that this anti-competitive behaviour will only be exacerbated, to the detriment of the achievement of any-to-any connectivity, if the current mobile termination declaration is revoked.

11 Efficiency

10. How would continuing the existing mobile termination declaration, varying the declaration or revoking the declaration impact on the efficient use of and efficient investment in infrastructure?

11.1 In considering the effect of declaration on the objective of achieving the efficient use of, and efficient investment in, infrastructure, AAPT intends to adopt the Commission's approach, detailed in its *Telecommunications services – Declaration provisions*, by considering efficiency in terms of productive, allocative and dynamic efficiency. AAPT will then consider the relevant legislative criteria outlined in section 152AB of the TPA.

[55] ACCC, *Pricing Methodology for the GSM Termination Service: Final Report*, July 2001, pages 72 and 78.

Productive efficiency

11.2 Productive efficiency is achieved when firms produce the goods and services they offer to consumers at least cost. In this case, declaration of termination services could contribute to productive efficiency either by encouraging mobile service providers to provide termination at least cost or by encouraging productive efficiency in a related downstream market.

11.3 The Commission has previously noted in its *2001 Report* that there are strong incentives to produce efficiently in the mobile services market, regardless of the pricing principles adopted. AAPT agrees that, to the extent that the mobile services market is characterised by effective competition, there will be a strong incentive to produce efficiently regardless of whether or not termination services are declared. However, if there is ineffective competition in the mobile services market, as may be suggested by increasing retail prices, then declaration, by facilitating entry into the mobile services market, will provide an added incentive to produce efficiently.

11.4 In short, AAPT submits that the continued declaration of mobile termination services can only have a positive effect on productive efficiency.

Allocative efficiency

11.5 Allocative efficiency is achieved when prices of resources reflect their underlying costs. When cost-reflective prices are achieved, resources are allocated to those uses in which they are valued most highly.

11.6 In AAPT's submission the surest way of achieving cost-reflective prices for mobile termination services is to continue the mobile termination declaration. As the Commission noted in its *2001 Report*, prior to the development of any pricing principles for termination services, these services were supplied at prices that were greater than cost.[56] Termination charges continue to be greater than cost due to the ineffectiveness of the pricing methodology adopted in the *2001 Report*.

11.7 The result of above-cost termination services is a series of inefficient distortions in the mobile services market.

[56] ACCC, *Pricing Methodology for the GSM Termination Service: Final Report*, July 2001, page 4.

(a) *Inefficient subsidisation of mobile access fees*. This subsidisation leads to inefficiently high levels of mobile subscribership and inefficiently low levels of termination to mobile subscribers. The Commission recognises that this is a source of allocative inefficiency in its *2001 Report*.[57] Some mobile service providers have suggested that this cross-subsidisation is actually efficient because the cross-subsidisation of mobile access fees encourages customers to enter the market and that cross-subsidisation, in this way, provides a balance for the tendency for mobile subscribership to be at socially undesirably low levels because some of the benefits of mobile subscribership are external to the subscriber. AAPT submits, however, that this argument is not a convincing reason to consider the allocative inefficiency associated with cross-subsidisation as benign. As Professor King observed in the roundtable discussion of mobile services held by the Commission, the external benefit of mobile subscribership is only one of many externalities that effect the mobile services market, and to consider the effects of one externality, but not the others, is inappropriate.[58]

(b) *Inefficient cross-subsidisation of the costs of handsets*. Since high termination charges are used to cross-subsidise handset prices, customers acquire handsets and turnover handsets at inefficient levels.

(c) *Inefficiently high levels of customer churn*. Since customers are not charged the value of access to a mobile network, customers switch networks at inefficient levels.

(d) *Inefficient cross-subsidisation of the costs of mobile services by fixed-to-mobile customers*. This cross-subsidisation leads to inefficiently low levels of fixed-to-mobile calls and inefficiently high levels of mobile subscribership. Associated with this is a productive inefficiency as customers have incentives to us high-cost mobile technology in place of low-cost fixed telephony

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57 ACCC, *Pricing Methodology for the GSM Termination Service: Final Report*, July 2001, page 70.

58 ACCC, *Telecommunications Round-table Discussion on Mobile Services*, 3 March 2000, pages 52-53 of transcript.

11.8 Each of these inefficiencies has been recognised by the UK Competition Commission as arising as a direct result of above-cost mobile termination charges.

11.9 Importantly, these inefficiencies flow from above-cost termination charges even if the retail mobile services market is effectively competitive. This is because they result from inefficient cross-subsidisation between various services within the mobile services market, rather than the aggregate price level for mobile services. Consequently, effective competition in the mobile services market cannot remove these allocative inefficiencies.

11.10 Rather, AAPT submits that the only way to overcome these allocative inefficiencies is to take more effective steps toward ensuring termination charges are cost-reflective. This will not be the case if the mobile termination declaration is revoked. The surest way of ensuring mobile termination charges are cost-reflective is to maintain the termination declaration and to adopt a TSLRIC pricing methodology for mobile termination charges.

Dynamic efficiency

11.11 Dynamic efficiency is achieved when firms undertake appropriate and timely investment to adopt new technology and products to meet changing consumer tastes and changing productive opportunities. In considering the effect of continuing the declaration of mobile termination services on dynamic efficiency, it is necessary to consider mobile termination services from two perspectives: the acquisition of termination services and the provision of termination services.

11.12 Considered from the perspective of the provision of termination services, it has been previously argued by Telstra, in the context of the Commission's consideration of whether the declaration should extend to CDMA termination services, that declaration may reduce incentives to invest and thus impair dynamic efficiency.[59]

11.13 AAPT believes that appropriate regulation need not cause a systematic reduction in expected returns, which would in turn lead investors to expect that they will be denied the opportunity to earn a competitive return on capital. In particular, AAPT

[59] ACCC, *Variation to make the GSM Service Declarations Technology-Neutral*, March 2002, page 40.

does not accept that continued declaration of termination services will impair dynamic efficiency. There are three points that need to be considered.

11.14 First, declaration of termination services need not reduce incentives to invest. AAPT supports the adoption of TSLRIC based pricing for termination services partly due to the fact, recognised by the Commission, that TSLRIC will encourage economically efficient investment in infrastructure. If AAPT's proposal is accepted, then declaration will only impair dynamic efficiency if TSLRIC is applied incorrectly.

11.15 Second, regulation tends to deter efficient investment when regulatory changes are unexpected. It is unexpected changes, not expected ones, that tend to disrupt expected returns on investment projects and, in this way, discourage future investment. In the instant case, it would be the revocation of the mobile termination declaration that would be unexpected and, therefore, the revocation of the declaration that would be most likely to create uncertainty in the mind of investors.

11.16 Third, in assessing the extent to which the secondary objectives are met, the Commission must undertake a "with and without test".[60] For this reason, it is necessary to consider the effect on dynamic efficiency if the declaration is removed. AAPT submits that, if the declaration were revoked, the impediment to dynamic efficiency will be greater than any dynamic inefficiency resulting from continued declaration. That dynamic inefficiency may emerge in the absence of declaration has been recognised by the Commission in its *2001 Report*:

> *"There has been some debate over whether current access pricing is likely to lead to 'over-investment' (inefficient build / buy decisions) by access providers and access seekers in mobile network infrastructure. This argument reflects concern that fixed subscribers may effectively cross-subsidise mobile subscribers by paying inflated prices for GSM termination service (through payment for fixed-to-mobile calls). It could be argued that this additional revenue allows mobile carriers to reduce the price of mobile subscription, to a level greater than would be possible if the mobile infrastructure was provided on a 'stand-alone' basis."*[61]

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[60] ACCC, *Telecommunications services – Declaration provisions*, July 1999, page 36.

[61] ACCC, *Pricing Methodology for the GSM Termination Service: Final Report*, July 2001, page 70.

11.17 While the Commission is concerned about the effect of higher access prices on dynamic efficiency, AAPT submits that one of the results of a revocation of the mobile termination declaration would be an increase in termination charges and, consequently, an increase in dynamic inefficiency.

11.18 This is consistent with the finding of the UK Competition Commission that high termination charges cause fixed subscribers to subsidise mobile subscribers and that this leads to distorted investment decisions by network operators:

> *" . . . consumers who make more fixed-to-mobile or off-net calls than on-net calls unfairly subsidise those who mainly receive calls on their mobile phones or who mainly make on-net calls, or who make little use of their mobile phones . . . This leads to the undervaluation of mobile phone handsets by the MNOs' customers combined with a greater turnover ('churn') than would take place if customers paid charges which reflected the proper valuation of such handsets.* ***This leads to yet further distortions in greater expenditure in mobile customer acquisition*** *. . ."*[62] (emphasis added)

11.19 In short, dynamic inefficiency is a danger whenever prices diverge from costs – if prices are below cost, insufficient investment is likely; if prices are above costs, excessive investment is likely. AAPT submits that the best way to ensure that prices for termination are cost-reflective is to continue the current declaration and to adopt a TSLRIC pricing methodology. In this way, declaration can achieve significant improvements in dynamic efficiency.

The legislative criteria

11.20 Section 152AB of the TPA requires the Commission to consider, when assessing the objective of efficient use of, and efficient investment in, infrastructure:

(a) whether it is technically feasible for the services to be supplied;

(b) the legitimate commercial interests of suppliers of the services; and

(c) the incentives for investment in infrastructure by which the services are provided.

11.21 AAPT submits that none of these factors would suggest that the efficiencies associated with declaration will not be achieved.

11.22 First, the fact that mobile termination services have long been supplied is ample evidence that it is technically feasible, and reasonably cost-effective, to supply mobile termination services.

11.23 Secondly, declaration need not interfere with the legitimate business interests of suppliers of mobile termination services. The fact that termination services have historically been supplied in the absence of declaration provides prima facie evidence that declaration of termination will not interfere with these legitimate business interests. Furthermore, AAPT supports the adoption of a TSLRIC pricing methodology, which the Commission itself has recognised will promote the legitimate business interests of access providers.[63]

11.24 Finally, as discussed at length in this section, declaration of termination services need not interfere with incentives to invest in infrastructure but should promote incentives for efficient investment to occur.

Conclusion on efficiency

11.25 For these reasons, AAPT submits that efficient use of, and efficient investment in, infrastructure is overwhelmingly more likely to be promoted by a continuation of the mobile services termination declaration than it is to be promoted by a revocation of the declaration. A continuation of the declaration will best ensure the achievement of cost-reflective access prices and, in this way, facilitate improvements in productive, allocative and dynamic efficiency. These improvements will be in the LTIE.

11. What are the costs of providing mobile termination services?

11.26 While AAPT has looked into this issue in the past, because it has not constructed and does not operate a mobile network, it cannot fully describe or estimate the costs of providing mobile termination services.

[62] Competition Commission, *Reports on references under section 13 of the Telecommunications Act 1984 on the charges made by Vodafone, O2, Orange and T-Mobile for terminating calls from fixed and mobile networks*, Presented to the Director General of Telecommunications December 2002, para 1.8.

[63] ACCC, *Access Pricing Principles – Telecommunications*, July 1997, pages 29-30.

12. How significant do network effects continue to be when determining an appropriate price for mobile termination?

11.27 AAPT comments on the relevance of network effects elsewhere in this submission (see section 4 and the discussion of market power and section 5 regarding differential pricing).

13. What are the costs of compliance of the mobile termination service?

11.28 AAPT believes that the costs of compliance will be negligible.

12 Pricing methodologies and principles

14. Have retail charges for mobile services increased, as indicated by the data collected under the Commission's monitoring program? Is the retail benchmarking pricing methodology still an appropriate pricing principle for use with this service?

12.1 Because of the expense of private negotiations and arrangements, and AAPT's small share of the market, AAPT cannot comment in detail about the retail charges for mobile services.

12.2 In its *2001 Report*, the Commission explicitly stated that its retail benchmarking pricing methodology was appropriate only to the extent that retail charges fall with time:

> *"The benchmarking approach generates efficiency gains by using a proxy for the overall competitive pressure and efficiency improvement in the mobile sector – the price changes in the retail element of the market. That is, **the approach relies on firms competing by lowering retail (and hence termination) charges towards cost**, even it this has a negative effect on industry profitability."*[64] (emphasis added)

If retail prices do not fall, then the retail benchmarking approach does nothing to address the above-cost pricing of termination identified by the Commission.

12.3 In addition, if retail prices do not fall over time, then the retail benchmarking approach does nothing to promote competition in the market for listed services. In its *2001 Report* the Commission stated that:

[64] ACCC, *Pricing Methodology for the GSM Termination Service: Final Report*, July 2001, page 76.

> *" . . . the benchmarking approach may be favourable to the promotion of competition as it is likely to reduce the gap between the price and cost of termination . . ."*[65]

Without falls in retail prices, the gap between price and cost will not be reduced and competition in the downstream market will not be promoted.

12.4 Finally, if retail prices do not fall over time, the retail benchmarking approach does nothing to promote allocative efficiency. In its *2001 Report*, the Commission considered increasing competition in the retail market as a necessary condition for improvements in allocative efficiency:

> *"The Commission considers that the proposed retail benchmarking approach will likely improve allocative efficiency over time if:*
>
> - *there is increasing competition in the retail element of the mobile market; and*
> - *retail and termination costs move in similar ways."*[66]

Without falls in retail prices, the inefficiently high termination costs will not be lowered to efficient levels.

12.5 Given that the Commission itself has recognised that the retail benchmarking approach will fail to meet the legislative criteria if retail price reductions are not forthcoming, and given the evidence gathered by the Commission that retail prices have indeed not fallen, AAPT submits that the retail benchmarking approach can no longer be considered an appropriate pricing methodology for mobile termination services. In the interests of meeting the legislative criteria, the Commission must adopt a more appropriate pricing methodology.

15. If the Commission were to determine that continued declaration of a mobile termination service were in the LTIE, which pricing principle would be the most appropriate for determining a price for this service? Why?

12.6 In AAPT's submission, the most appropriate principle for determining a price for mobile termination is TSLRIC.

12.7 In general, TSLRIC has well known advantages. In its *Access Pricing Principles*, the Commission has recognised that:

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65 ACCC, *Pricing Methodology for the GSM Termination Service: Final Report*, July 2001, page 75.

66 ACCC, *Pricing Methodology for the GSM Termination Service: Final Report*, July 2001, page 76.

> *". . . TSLRIC is consistent with the price that would prevail if the access provider faced effective competition, and usually best promotes the long-term interests of end-users."*[67]

The Commission recognises six advantageous attributes of TSLRIC pricing:

(a) it encourages competition by encouraging entry and exit in dependent markets;

(b) it encourages economically efficient investment in infrastructure;

(c) it provides for efficient long-term use of existing infrastructure;

(d) it provides incentives for access providers to minimise the costs of providing access;

(e) it promotes the legitimate business interests of access providers by allowing efficient access providers to fully recover the costs of producing the service;

(f) it protects the interests of persons who have rights to use the declared service.[68]

12.8 Professor Cornell, in her submission on behalf of AAPT to the Commission's 1999 discussion paper on pricing for GSM origination and termination, outlines the benefits of TSLRIC pricing for mobile termination charges:

> *"First, TSLRIC, properly calculated, represents the efficient cost of adding termination services to the rest of the services each network provides. This means that termination services will not be subsidized. TSLRIC is also the cost that an integrated network has to recover from its own intra-network termination services if it were the only provider of telecommunications services. Second, setting the price for termination services to recover the TSLRIC of providing them, but no more, creates the incentives for investments that best serve the interests of consumers by having those incentives arise entirely from how well or how poorly a network serves the interests of end-user consumers. This also works towards dynamic efficiency. Third, using the TSLRIC of the dominant network as the price ceiling for all networks mimics most closely how a competitive market for termination services would work if such a market were possible."*[69]

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[67] ACCC, *Access Pricing Principles – Telecommunications*, July 1997, page 29.

[68] ACCC, *Access Pricing Principles – Telecommunications*, July 1997, pages 29-30.

[69] Nina Cornell, *Pricing Termination Services*, 4 February 2000, page 6. Available on the ACCC's website: http://www.accc.gov.au/telco/accsdef/aapt_2x3.zip

12.9 A long-run incremental cost approach is favoured by both Oftel and the UK Competition Commission in their decisions on the pricing of mobile termination charges. Oftel stated:

> *"The Director is of the view that the most appropriate and economically efficient basis for regulatory charge controls is forward-looking LRIC. . . . LRIC based charges correspond more closely to the charges that would prevail in an effectively competitive market than accounting based measures of cost. It is a fundamental goal of price regulation to mimic the effects of a competitive market and this consideration underpins the use of LRIC."*[70]

12.10 The UK Competition Commission, discussing its approach of setting a price cap based on the LRIC of call termination services, stated that:

> *"In our view, this approach is both right and fair. It addresses the adverse effects through a methodology that is equitable, because it attributes costs on the basis of who causes them. If termination charges are regulated on this basis, it should mean that:*
>
> (a) *consumers do not pay too much for fixed-to-mobile or off-net calls;*
> (b) *consumers who make more fixed-to-mobile or off-net calls than on-net calls, or who make more off-net calls than they receive, will not unfairly subsidize other consumers;*
> (c) *cost-reflective call charges should minimize distortion in the volumes and patterns of calling;*
> (d) *there should be no displacement from less resource-intensive to more resource-intensive technology; and*
> (e) *there will be less incentive for the MNOs to subsidize handset acquisition, which should reduce the rate of replacement of handsets."*[71]

12.11 In its *2001 Report*, the Commission decided not to implement a TSLRIC approach. It appears there were two reasons for this decision: the Commission considered that GSM termination did not meet the conditions under which TSLRIC is generally considered appropriate and the Commission considered that the costs of implementing a TSLRIC approach would outweigh the benefits.

12.12 AAPT submits that developments in the industry since the Commission's *2001 Report* suggest the need to reconsider this decision. In particular, AAPT submits

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70 Oftel, *Review of mobile wholesale call termination markets: EU market review*, May 2003, para 7.13.

71 Competition Commission, *Reports on references under section 13 of the Telecommunications Act 1984 on the charges made by Vodafone, O2, Orange and T-Mobile for terminating calls from fixed and mobile networks*, Presented to the Director General of Telecommunications December 2002, para 1.10.

that the Commission's reasons for declining to implement a TSLRIC approach in its *2001 Report* are no longer justified.

Mobile termination meets the criteria for the use of TSLRIC

12.13 While the Commission's view, expressed in its *Access Pricing Principles*, is that TSLRIC should, in general, be the methodology adopted for the pricing of declared service, the Commission nevertheless determines the appropriate pricing principles on a case-by-case basis. It is considered appropriate to adopt a TSLRIC pricing methodology for services:

(a) that are well developed and have well established demand characteristics;

(b) that are necessary for competition in dependent markets; and

(c) where the forces of competition work poorly in constraining prices to efficient levels.

12.14 In its *2001 Report*, the Commission considered that, while GSM termination services met the second and third criteria, they did not meet the first. Regarding the second criterion, the Commission has accepted that GSM termination services are a necessary input into the provision of fixed-to-mobile services. The Commission appears to have maintained this opinion in its Discussion Paper:

> *"The domestic Global System for Mobiles (GSM) and Code Division Multiple Access (CDMA) terminating access service (mobile termination service), therefore, provides carriage of voice and data from a point of interconnection to the end-user connected to a GSM or CDMA network, and is an essential input for the provision of fixed-to-mobile and mobile-to-mobile call services between end-users on different networks."*[72]

12.15 Regarding the third criteria, in its *2001 Report*, the Commission also accepted that the forces of competition work poorly to constrain the prices of mobile termination to efficient levels. The Commission stated that it:

> *". . . continues to believe that control over access to the end-user and consumer ignorance enable mobile carriers to sustain above-cost access prices for GSM termination."*[73]

12.16 The Commission's decision that TSLRIC was not an appropriate pricing principle was based, therefore, on its finding that the market for mobile services was not

[72] ACCC, *Mobile Services Review 2003: An ACCC Discussion Paper*, April 2003, page 28.

[73] ACCC, *Pricing Methodology for the GSM Termination Service: Final Report*, July 2001, page 4.

well-developed. In the Draft Report that preceded the *2001 Report*, the Commission stated:

> *"The Commission accepts that the mobile services market is relatively new, that the demand characteristics of the market are developing. As detailed in section 5 of this Draft Report, mobile penetration in Australia is increasing and an increasingly greater number of call minutes are being made from and to mobile services."*[74]

12.17 In its *2001 Report*, the Commission outlined the dangers of TSLRIC in a market that is not well developed:

> *"There is a further risk in using cost-based pricing. The rapidly changing nature of the market means that excessive pricing problems may only be transitory, particularly as any TSLRIC modelling would require a lengthy process before a final access price could be determined (this would not be as great a concern if retail-minus was used). Changes might occur through ordinary market developments affecting the extent of control-over-access (e.g. increased use of closed user groups) or through the impact of 'structural' solutions to address the consumer ignorance problem . . ."*[75]

12.18 AAPT submits that the market for termination services is, in fact, well developed. The technology used to deliver the service is over 20 years old – the first commercial application, internationally, was in 1991. Termination services have been supplied (at least internally) in Australia since Telstra introduced GSM technology in 1993.

12.19 AAPT further submits that changes in the mobile services market since the Commission's *2001 Report* provide further support that the market is developed. As the Commission outlines in its Discussion Paper, subscriber growth since 2000 has decreased. This suggests that the mobile services market is well developed and that the demand characteristics are relatively stable.

12.20 The Commission's concern in its *2001 Report* that TSLRIC may be inappropriate in a rapidly changing market, because excessive pricing problems may only be transitory, also seems not to have been borne out. In AAPT's submission, the market has not changed in such a way as to mitigate against the excessive pricing problems identified by the Commission in their *2001 Report*. As AAPT has discussed earlier in this section, the pricing principles established in the *2001*

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74 ACCC, *Pricing Methodology for the GSM Termination Service: Draft Report*, December 2000, page 46.

75 ACCC, *Pricing Methodology for the GSM Termination Service: Final Report*, July 2001, page 73.

Report have done little to encourage prices for mobile termination that mirror effectively competitive prices. If anything, the excessive pricing problems identified by the Commission have intensified, as is demonstrated by increasing retail prices for mobile services. The structural changes the Commission envisaged have not occurred. Closed-user groups have not imposed a constraint on the pricing of termination charges because mobile service providers remain able to price discriminate between on-net and off-net calls. Structural solutions – such as providing A-parties with more information regarding the termination charges associated with calling a particular B-party – have not been developed. For these reasons, AAPT submits that there is now reason to expect that mobile termination services meet the criteria for the useful application of a TSLRIC pricing methodology.

12.21 As an additional matter, AAPT notes that Oftel has determined that LRIC pricing is appropriate to mobile termination pricing, despite arguments that the industry is subject to rapid change:

> *"7.9 Some respondents to the consultation document suggest that the use of LRIC is not desirable. For example, it is argued that using a LRIC model is not appropriate in a sector with high levels of investment and rapid technological change.*
>
> . . .
>
> *7.10 Oftel accepts that the methodology used to calculate termination charges should reflect the need to reward investment adequately and to take account of the impact of technological change. However, it is Oftel's view that its methodology does address these concerns. The need to reward investment underpins Oftel's judgement in assessing the cost of capital (notably, Oftel's calculations incorporate an equity risk premium in the Capital Asset Pricing Model in excess of that used by utility regulators). The effects of technical change, and the need to recover costs as asset prices fall, are explicitly taken into account in Oftel's methodology through the use of economic depreciation."*[76]

12.22 AAPT submits that a TSLRIC pricing methodology in this case can likewise reflect the need to reward investment and to take account of technological change.

[76] Oftel, *Review of the charge control on calls to mobiles*, 26 September 2001, page 34.

The costs of a TSLRIC approach do not outweigh the benefits

12.23 In its *2001 Report*, the Commission also expressed a reluctance to adopt a TSLRIC pricing methodology on the basis that the costs of doing so would outweigh the benefits:

> *"The Commission concludes, in line with the Draft Report, that a cost-based approach to the pricing of the GSM termination service also does not best meet the legislative criteria at this time. While the Commission recognises that cost-based approaches have favourable properties in the sense of limiting opportunities for anti-competitive behaviour by integrated carriers and potentially improving allocative efficiency, the costs of implementing the approach (both in terms of actual resource costs and the risks if implemented incorrectly) outweigh the benefits at this stage. In coming to this conclusion, the Commission has also considered the potential transitory nature of the problem."*[77]

12.24 AAPT submits that continued inefficiency in the provision of mobile termination services indicates that the costs of adopting a TSLRIC approach no longer outweigh the benefits. The continued inefficiency suggests that the problem is not, in fact, transitory, as the Commission suspected it may be. Mobile carriers continue to sustainably set above-cost termination charges. The sources of these above-cost prices – control over access to end-users and consumer ignorance – remain forceful impediments to efficiency. Nothing suggests that these problems will dissipate without the implementation of appropriate pricing principles for termination services. Since the problem shows signs of durability, AAPT submits that it is likely that the costs of implementing a TSLRIC methodology do not outweigh its benefits.

12.25 AAPT also notes that Oftel undertook a cost-benefit analysis on its LRIC-based control of mobile termination charges in the UK. On the basis of this cost-benefit analysis, Oftel concluded not only that the costs of imposing these charges outweighed the benefits, and outweighed the benefits to a greater degree than any other policy, but also that the net benefit of its LRIC based price controls outweighed the cost of implementing the price controls.[78]

12.26 While maintaining its submission that the benefits of a TSLRIC pricing methodology are likely to outweigh the costs, AAPT nevertheless recognises that

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[77] ACCC, *Pricing Methodology for the GSM Termination Service: Final Report*, July 2001, page 78.

the implementation of a TSLRIC pricing methodology is a costly and time consuming exercise. It is therefore appropriate that the Commission consider proxies for TSLRIC which can be used to indicate the appropriate price of termination services. This approach is consistent with the Commission's willingness, stated in its *Access Pricing Principles*, to consider observable pricing guides as indications that an access price is consistent with the broad principles used by the Commission to assess access prices.[79]

Conclusion on pricing principles

12.27 For these reasons, AAPT submits that TSLRIC is the appropriate methodology for the determination of charges for mobile termination services. The factors that led to the Commission's decision not to adopt TSLRIC pricing in its *2001 Report* are no longer sufficiently relevant to justify the continued loss of the efficiency gains offered by TSLRIC. Indeed it is worth revisiting the Commission's conclusion on pricing methodology in its *2001 Report* in light of continued evidence that retail prices are increasing:

> *"While the Commission has decided, on balance, not to undertake cost-based regulation at this time, it believes it is important to ensure that continued competitive pressure develops on termination prices."*

12.28 In the continued absence of such competitive pressure, TSLRIC pricing is now more necessary than ever.

16. If the Commission were to move to some form of cost-based pricing principle such as TSLRIC, should it construct a cost model to estimate costs, or benchmark against overseas measures of cost? Further, what, if any, mark-ups should be adopted to a pure TSLRIC measure if TSLRIC were to be used as the appropriate pricing principle for a mobile termination service?

TSLRIC pricing

12.29 AAPT submits that, if the Commission were to adopt a cost-based pricing principle such as TSLRIC, which AAPT considers to be the appropriate pricing methodology, then it would be preferable for the Commission to construct a cost model to estimate costs.

[78] Oftel, *Review of the charge control on calls to mobiles*, 26 September 2001, paras 8.12-8.14

[79] ACCC, *Access Pricing Principles – Telecommunications*, July 1997, Chapter 5.

12.30 Necessarily, in order to achieve the desirable properties associated with TSLRIC pricing, access prices must be set on the basis of TSLRIC. To the extent that actual access prices deviate from TSLRIC access prices, the outcome will be sub-optimal. Consequently, the Commission should make reasonable efforts to determine the TSLRIC of providing mobile termination services as accurately as time and access to information permit. The best way to do this, as recognised by the Commission in its adoption of a TSLRIC methodology for the PSTN network, is to construct a cost model.

12.31 AAPT further submits that there are reasons to expect that the construction of a cost model may be more straightforward for mobile termination services than for other services. These reasons include the following.

(a) The modelling of the costs of infrastructure is likely to be relatively straightforward for mobile termination services due to the fact that at least some of the necessary infrastructure is supplied on a commercial basis. For instance, the mobile tower facilities used by Vodafone and Optus are supplied under commercial arrangements with Crown Castle.

(b) The estimation of the cost of capital is also relatively straightforward due to the fact that a stand alone mobile network is operated by Vodafone.

(c) The LRIC models recently constructed by Oftel and the MMC can provide useful guidance to the Commission in the construction of a cost model.

12.32 AAPT recognises, however, that the development of a cost model may be time-consuming, and may delay the achievement of commercial arrangements regarding termination charges. Given the possibility of delay, it is relevant to consider the purpose of the current mobile services review, and of the Commission's general role as arbitrator of access disputes.

12.33 Given this, AAPT submits that it will be useful to consider a number of possible benchmark prices which can act as a useful indicators of the level of a true TSLRIC access price.[80]

[80] Having said that, AAPT strongly supports the principle of flexibility in relation to the commercial agreements ultimately reached by access providers and access seekers. Accordingly, benchmarks should be regarded as guiding considerations only.

12.34 In identifying examples of possible proxies, AAPT is seeking to demonstrate that it is possible to obtain some gauge of the extent to which termination prices are cost-reflective and the extent to which they depart from that standard. Given the problems the Commission has anticipated with the construction of a TSLRIC cost model, it is important that the Commission properly explore possible benchmarks and proxies.

12.35 Generally, the Commission should consider several categories of benchmarks, including the following.

(a) Suitable international comparisons, including comparisons with models constructed for mobile networks in overseas jurisdictions.

(b) Costs records, projections and estimates of the mobile network operators themselves, accepting that these figures may depart from the concept of forward-looking efficient costs. The Commission has considerable powers under Part XIC of the TPA to obtain information in appropriate circumstances. At the very least, the Commission should be seeking information regarding internal transfer prices, especially those of Telstra and Optus that are associated with the supply of fixed-to-mobile calls. The Commission has long recognised the potential usefulness of internal transfer price information.

(c) Observable pricing behaviour by the mobile network operators. In the sections below, AAPT explores some alternatives for this category.

12.36 In approaching the issue of benchmarks and cost proxies, the Commission will need to bear in mind its duties and functions under Part XIC, particularly its arbitral functions and duties. The Commission has responsibilities in respect of the speedy determination of notified access disputes.[81] These responsibilities are supported by wide powers for the gathering of relevant information.[82] There is

[81] See sections 152DB and 152DC of the TPA.

[82] Paragraph 152DB(1)(c) of the TPA.

also the power to make interim determinations which provides the Commission with considerable flexibility.[83]

12.37 A consideration of these duties and power suggests that, in this context, a useful approach might be for the Commission to consider the adoption of rebuttable presumptions based upon benchmarks and proxies. The presumptions would be rebuttal by relevant evidence produced by the parties to the access dispute, particularly access providers, who can be expected to possess most of the relevant information.

Pricing Conduct and Cost Proxies

12.38 In its *Access Pricing Principles*, the Commission states that retail prices may be a useful indicator of appropriate access prices:

> *"The retail price net of any costs the access provider avoids when it does not supply in the downstream market (avoided costs) will generally provide an upper limit to the cost of providing access."*

12.39 AAPT believes that it is feasible for the Commission to look at pricing conduct for guidance on the issue of costs. Its proposal is that the Commission consider three possible indicators:

(a) 50% of the lowest rate charged for unlimited or significant quantities of mobile-to-mobile usage within a given network;

(b) the rate charged for fixed-to-mobile terminations to large, but non-competing, corporations; and

(c) an imputed or inferred internal transfer price for vertically integrated operations supplying fixed-to-mobile calls.

12.40 The case for relying upon indications of this nature is best understood by reference to the LTIE. The market conditions that are most suited to promoting the LTIE are effectively competitive markets in which prices move as close as

[83] See generally section 152CPA of the TPA. Importantly, the legislation reserves to the Commission the power to revoke or vary an interim determination at any time. It is also clear from the Explanatory Memorandum accompanying the Telecommunications Legislation Amendment Act 1999, which clarified the interim determination power in the TPA, that interim determinations were intended by parliament to facilitate commercial negotiations, minimise the incentives for delay and promote competition (Explanatory Memorandum, pages 25 and 26).

possible to the economic cost of supply and in which investment is efficient and innovation is encouraged.

12.41 It should be possible to envisage the expected nature of wholesale and retail pricing in effectively competitive markets.

12.42 If there could be an effectively competitive market for termination services, that market would have several important characteristics. Because mobile network services most likely display economies of scale, it is likely that, in an effectively competitive market, mobile networks would offer volume discounts for termination. It is also likely that supplying in volume lowers the per unit costs even in the absence of economies of scale. Thus, in an effectively competitive market for termination services, mobile carriers would offer the largest users some form of volume discount.

12.43 Buyers of termination services, being other networks, would be large-volume buyers. They may well be the largest volume users. As such, they would be considered important to the suppliers of termination services because the large volumes would aid those suppliers in realising economies of scale. Thus, no supplier of termination services would risk trying to price itself out of that market.

12.44 In such a market, it is likely that there would be a single rate charged by all firms for the service. It would be a single rate because it would be close to cost, leaving little room for any firm to lower it still further. Even if a given firm currently experienced higher costs than another firm, the higher-cost firm would want to meet the price of the other firm in order to realize the economies of scale that could help it reduce its per-minute costs.

12.45 Although no mobile services are provided today in an effectively competitive market, the current retail market for mobile calls within a given network is the market that comes the closest to an effectively competitive market. Within that market, there are three possible choices of prices that could serve as surrogates for the competitive rate for termination. The first is to look at the best rate offered without a limit on the total number of calls for mobile-to-mobile calls within a given network, and charge 50% of that price. The second is to look at what is charged the biggest corporate but non-competing customers for fixed-to-mobile termination services. The third is to look at the internal transfer price of termination services provided by mobile network operators to themselves, and to take this internal transfer price as indicative of the efficient costs of termination.

Lowest retail rate for unlimited or significant usage

12.46 Although the lowest retail mobile-to-mobile rate for unlimited or significant usage within a given network is part of a bundle, this rate taken by itself is highly unlikely to be below cost for two reasons.

(a) Mobile-to-mobile usage is the ultimate product produced by mobile networks. Handsets are an adjunct to this product – necessary, but ultimately limited in the total number that can be absorbed by a given size of prospective market. Usage, on the other hand, has a much larger potential scope. Even in an effectively competitive market, a firm should not want to establish the price for the ultimate product below cost.

This can also apply for firms in less than effectively competitive market. Such firms have some amount of market power. Setting the price for the ultimate product below cost would be to give away market power and would not be profit maximising.

(b) The amount of usage is not fixed (or is at least significant). If the mobile network provider set the rate for usage below cost, it could not be certain how many minutes a given customer will use. An offer for unlimited usage at a price per minute or per call that does not recover cost would leave the provider with an undetermined cost for the total package of services.

Therefore, the lowest retail rate offered for unlimited mobile-to-mobile calls within the same network is a price that should be regarded as likely to cover costs.

Taking one half of that charge is a recognition that termination is only half of what is supplied in a mobile-to-mobile call; origination is the other half. It is reasonable to at least presume that a charge for termination at 50% of the best rate offered for mobile-to-mobile calls will cover cost.

12.47 Annexure C to this submission identifies a range of proxies for termination costs that follow this approach, and are based on plans available in the retail market. Many of the proxies are significantly below current mobile termination rates.

Termination rates for direct connect customers

12.48 The second possible surrogate is the rate charged the largest corporate, non-competing customers for termination services.

12.49 The customers who would most likely have the largest volume of terminating traffic are the fixed networks. If there were an effectively competitive market for termination services, therefore, the fixed networks would most likely be offered the lowest price for termination. A possible proxy for this is the price offered for large, but non-competing, corporate customers that connect directly. Even this price is likely to be an overstatement of the price that would be charged in an effectively competitive termination market because fixed networks connect in a number of locations into a mobile network, further lowering costs for the mobile network.

12.50 There are at least two reasons why this proxy measure is conservative.

(a) The proxy assumes that the only costs associated with providing on-net telephony services are the costs associated with termination and origination services. In reality, there are additional costs.

(b) The proxy assumes that the observable retail prices are equivalent to the competitive price, and therefore are reflective of efficient costs. In fact, the observable retail prices may exceed the competitive price and, to the extent that they do so, the proxy for TSLRIC will in fact include an inefficient mark-up associated with the retail market power of mobile operators.

The internal transfer price of termination

12.51 Another possible proxy for the TSLRIC of termination services is the internal transfer price for termination services. For instance, if an estimate of the termination rate that Telstra or Optus charge themselves can be determined, it is open to the Commission to assume that this internal transfer price is a useful proxy for the efficiently incurred costs of termination. If for some reason Telstra and Optus charge themselves internal charges for termination that do not reflect the efficient costs of termination, then AAPT submits that Telstra and Optus should explain why this is the case. Otherwise the internal transfer prices can be taken to indicate efficient costs.

12.52 AAPT is not aware that Telstra or Optus have publicly stated their internally charged termination rates. However, as outlined in Annexure D to this submission, it is possible to estimate these internal termination rates using retail prices and external termination rates.

12.53 The estimation undertaken in Annexure D proceeds as follows. Assume that the costs of any fixed-to-mobile call consist of origination, transmission and termination, and that origination and transmission costs are the same whether a call is on-net or off-net. An estimate of the costs of origination and transmission can be gained by deducting external termination charges from the retail price of off-net calls. This estimate of the costs of origination and transmission can then be deducted from the retail price of on-net calls in order to determine an estimate for the internal charge for termination services.

12.54 **[c-i-c]**

Conclusion

12.55 AAPT submits that the proxies for TSLRIC presented in Annexures C and D provide a strong indication that current termination prices are significantly above the efficient level. This, of course, is consistent with the Commission's finding that termination prices are above-cost. That termination charges appear to be significantly greater than the cost of termination is strongly suggestive of a need for the Commission to further investigate the efficient cost of providing termination services – whether this investigation takes the form of a full TSLRIC model or the use of appropriate proxies for TSLRIC – and to implement a pricing methodology that will bring access prices in line with, or at least closer to, efficient costs.

Annexure A – Abbreviations

3G	Third-Generation Networks
AAPT	AAPT Limited
CAN	Customer Access Network
CDMA	Code Division Multiple Access
Commission	Australian Competition & Consumer Commission
CWO	Cable & Wire Optus
DOJ	Department of Justice
FTC	Federal Trade Commission
GSM	Global System for Mobiles
HHI	Herfindahl-Hirschman Index
LRIC	Long Run Incremental Cost
LTIE	Long-term Interest End-users
MNO	Mobile Network Operator
MNP	Mobile Network Portability
Oftel	Office of Telecommunications
Optus	Cable & Wireless Optus Limited
Orange	Mobile communications business. Orange brand is licensed to Hutchison Telecommunications (Australia) Limited
POI	Point of Interconnection
PSTN	Public Switched Telephone Network
SMS	Short Message Service
Telstra	Telstra Corporation Limited
TPA	*Trade Practices Act 1974*
TSLRIC	Total Service Long Run Incremental Cost
UK	United Kingdom

Vodafone	Vodafone Australia
WACC	Weighted Average Cost of Capital

Annexure B - Relationship between retail prices for calls to mobiles and termination charges

[Confidential submission]

Annexure C – Retail prices as a guide to TSLRIC

1 AAPT submits that a useful proxy for the TSLRIC of termination services can be provided by retail prices. That retail prices can be a guide to access prices has been accepted by the Commission in its *Access Pricing Principles*.[84]

2 In its *Access Pricing Principles*, however, the Commission proposes a retail-minus approach as a guide to access prices. This is not what AAPT proposes. Rather, AAPT starts from the observation that prices in an effectively competitive market will approximate efficiently incurred costs. A conservative assumption, and an assumption that AAPT is not satisfied holds, is that the mobile services market is effectively competitive. This suggests that retail prices in the mobile services market reflect efficiently incurred costs. In particular, the lowest regularly available retail prices should be the most accurate reflection of efficient costs.

3 From these efficiently incurred costs, AAPT suggests it is possible to extract an estimate of efficiently incurred termination costs. The reason is that the two largest components of the costs of a mobile-to-mobile call are the costs of origination and termination. Origination and termination services use essentially the same infrastructure and impose similar costs. This suggests that, adopting another conservative assumption – that the only costs of a mobile-to-mobile call are the costs of origination and termination – the efficient costs of termination services can be estimated as 50 per cent of the lowest regularly available retail mobile-to-mobile price.[85]

4 It should be noted, however, that in order for this estimate to provide a useful proxy for the TSLRIC of termination services, it is important to only consider retail prices for on-net mobile-to-mobile calls. The reason that off-net mobile-to-mobile calls must be excluded is that the retail price for off-net calls will be, in part, determined by the cost of procuring termination services from competing networks and, as the Commission has recognised, these termination prices are likely to be above costs. Consequently, to base a proxy for TSLRIC on off-net retail prices would include in the proxy a mark-up that reflects the fact that current termination charges are above cost.

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[84] ACCC, *Access Pricing Principles – Telecommunications*, July 1997, page 23.

[85] The Commission has noted in its *2001 Report* (footnote 117) that termination may actually involve greater costs than origination and that, therefore, termination charges might be estimated as 60 per cent of retail costs. AAPT

5 In Table 2 below, AAPT records some currently available retail rates for mobile-to-mobile calls offered by Vodafone, Optus and Telstra. These retail rates, which typically contain a flagfall and per minute rate, need to be converted to a single per minute rate in order to be compared with the mobile termination charges AAPT currently incurs. This single per minute rate will vary with the duration of the call – the longer the call, the lower the rate. AAPT will conservatively assume that the mobile call duration is two minutes. On this basis, the retail prices of Vodafone, Optus and Telstra are converted into a single per minute retail rate, which is then halved to provide an estimate of efficient termination costs.

6 **[c-i-c]**

7 **[c-i-c]**

8 AAPT submits that these suggested proxies can provide a basis for identifying ceiling estimates of the efficient costs of termination. The assumptions upon which these figures are based are conservative. The following suggest that, if efficient termination costs were estimated more accurately, they would be significantly below these estimates.

(a) It was assumed that the retail market for mobile services is effectively competitive. To the extent that this is not the case, the estimates of efficient termination charges will include a component of monopoly rent.

(b) It was assumed that the only costs of providing mobile-to-mobile call services are call origination and call termination. In fact, there are also likely to be other costs. As the Commission recognised in its discussion of the retail-minus methodology in its *2001 Report*, mobile calls also include retail costs and transmission costs.

(c) Some of the estimates for efficient termination costs will include a mark-up that reflects the level of current termination costs. This will be the case for those retail rates available for all networks in Australia because some of the calls made under this rate will be off-net calls and include a cost of off-net termination.

9 In short, AAPT submits that the proxies of the efficient cost of termination services identified in Table 2 are indicative of the fact that current termination charges are

is not sure that this is the case, but does note its support of the Commission's general approach to the estimation of the costs of termination services.

significantly above cost and are also useful estimates of the appropriate price ceiling for cost-based termination charges.

Table 2: Retail prices as a proxy for efficient termination								
Call plan	*Monthly access fee*	*Monthly included calls*	*B-party*	*Peak / Off-peak*[86]	*Flagfall*	*Rate*[87]	*Retail per minute charge (2 minute call)*	***Proxy for Termination costs***
Vodafone mobile-to-mobile								
Options Plan	$29.95	$44.00	Vodafone	Peak	28.6 c	72.6 cpm	86.9 cpm	**43.5 cpm**
				Off	15.4 c	33 cpm	40.7 cpm	**20.4 cpm**
No plans	N / A	N / A	All networks	N / A	N / A	60 cpm (for first $25)	60 cpm	**30 cpm**
						57 cpm (for second $25)	57 cpm	**28.5 cpm**
						54 cpm (for third $25)	54 cpm	**27 cpm**
						51 cpm (for fourth $25)	51 cpm	**25.5cpm**
						48 cpm (for all calls after $100)	48 cpm	**24 cpm**
Vodafone mobile-to-mobile Business Choice								
Business Choice 40	$40	$40	1 nominated Vodafone mobile	N / A	0 c	10 c for 10 minutes	5 cpm	**2.5 cpm**
			Vodafone	N / A	0 c	20 c for 10 minutes	10 cpm	**5 cpm**
Business Choice 260	$260	$300	5 nominated Vodafone mobiles	N / A	0 c	10 c for 10 minutes	5 cpm	**2.5 cpm**
			Vodafone	N / A	0 c	20 c for 10 minutes	10 cpm	**5 cpm**

86 Note: peak and off-peak times vary with plans.

87 Note: for simplicity, all rates have been converted to a rate in cents per minute (cpm).

Optus mobile-to-mobile									
Pre-Paid Mobile Free Call	N / A	N / A	Any network	N / A	16.5 c	74 cpm	82.3 cpm	**41.1 cpm**
			Optus Pre-Paid Mobile	Off	0 c	0 cents for 20 minutes	0 cpm	**0 cpm**
Pre-Paid Mobile Flat Call	N / A	N / A	Any network	N / A	16.5 c	74 cpm	82.3 cpm	**41.1 cpm**
			Any network	Off	0 c	22 cents for 10 minutes	11 cpm	**5.5 cpm**
Your Call 33	$33	$33	Any network	N / A	24.2 c	88 cpm	100.1 cpm	**50.1 cpm**
			Any network	Off	0 c	30 cents for 10 minutes	15 cpm	**7.5 cpm**
			Optus mobile	Off	0 c	0 cents for 20 minutes	0 cpm	**0 cpm**
Your Call 99	$99	$99	Any network	N / A	18.7 c	41.8 cpm	51.2 cpm	**25.6 cpm**
			Any network	Off	0 c	30 cents for 10 minutes	15 cpm	**7.5 cpm**
			Optus mobile	Off	0 c	0 cents for 20 minutes	0 cpm	**0 cpm**
Your Call 250	$250	$250	Any network	N / A	18.7 c	35.2 cpm	44.6 cpm	**22.3 cpm**
			Any network	Off	0 c	30 cents for 10 minutes	15 cpm	**7.5 cpm**
			Optus mobile	Off	0 c	0 cents for 20 minutes	0 cpm	**0 cpm**
Optus mobile-to-mobile Business Edge									
Business Edge 33	$33	$33	Any network	N / A	18.7 c	61.6 cpm	71 cpm	**35.5 cpm**
			Any mobile network	Peak	18.7 c	20 cpm	29.4 cpm	**14.7 cpm**
			Optus mobiles on same account	N / A	0 c	10 c for 5 minutes	5 cpm	**2.5 cpm**

Business Edge 99	$99	$99	Any network	N / A	16.5 c	39.6 cpm	47.9 cpm	**23.9 cpm**
			Any mobile network	Peak	18.7 c	20 cpm	29.4 cpm	**14.7 cpm**
			Optus mobiles on same account	N / A	0 c	10 c for 5 minutes	5 cpm	**2.5 cpm**
Business Edge One 250	$250	$250	Any network	N / A	16.5 c	33 cpm	41.3 cpm	**20.6 cpm**
			Any mobile network	Peak	18.7 c	20 cpm	29.4 cpm	**14.7 cpm**
			Optus mobiles on same account	N / A	0 c	10 c for 5 minutes	5 cpm	**2.5 cpm**
Telstra mobile-to-mobile								
Pre-Paid CDMA Mobile	N / A	N / A	Any network	Peak	20 c	88 cpm	98 cpm	**49 cpm**
			Telstra mobile	Peak	20 c	66 cpm	76 cpm	**38 cpm**
			Any network	Off	20 c	44 cpm	54 cpm	**27 cpm**
			Telstra mobile	Off	20 c	5.5 cpm	15.5 cpm	**7.8 cpm**
$30 Plan with ‘18c for 5 minutes’	$30	$30, plus $6 credit	Any network	N / A	25 c	88 cpm	100.5 cpm	**50.3 cpm**
			Any network	Off	0 c	18 cents for 5 minutes	9 cpm	**4.5 cpm**
$100 Plan with ‘18c for 5 minutes’	$100	$100, plus $17.50 credit	Any network	N / A	25 c	44 cpm	56.5 cpm	**28.3 cpm**
			Any network	Off	0 c	18 cents for 5 minutes	9 cpm	**4.5 cpm**
$250 Plan with ‘18c for 5 minutes’	$250	$250, plus $30 credit	Any network	N / A	25 c	38 cpm	50.5 cpm	**25.3 cpm**
			Any network	Off	0 c	18 cents for 5 minutes	9 cpm	**4.5 cpm**
Telstra mobile-to-mobile business solutions								
$30 Plan with ‘Business Hours’	$30	$30, plus $5 credit	Any network	Off	20 c	60 cpm	70 cpm	**35 cpm**
			Any network	Peak	20 c	30 cpm	40 cpm	**20 cpm**

$30 Plan with 'Any Mobile'	$30	$30, plus $5 credit	Any network	N / A	20 c	60 cpm	70 cpm	**35 cpm**
			Any mobile network	N / A	20 c	22 cpm	32 cpm	**16 cpm**
$100 Plan with 'Business Hours'	$100	$100, plus $40 credit	Any network	Off	18 c	40 cpm	49 cpm	**24.5 cpm**
			Any network	Peak	18 c	30 cpm	39 cpm	**19.5 cpm**
$100 Plan with 'Any Mobile'	$100	$100, plus $40 credit	Any network	N / A	18 c	40 cpm	49 cpm	**24.5 cpm**
			Any mobile network	N / A	18 c	22 cpm	31 cpm	**15.5 cpm**
$250 Plan with 'Business Hours'	$250	$250, plus $60 credit	Any network	Off	18 c	36 cpm	45 cpm	**22.5 cpm**
			Any network	Peak	18 c	30 cpm	39 cpm	**19.5 cpm**
$250 Plan with 'Any Mobile'	$250	$250, plus $60 credit	Any network	N / A	18 c	36 cpm	45 cpm	**22.5 cpm**
			Any mobile network	N / A	18 c	22 cpm	31 cpm	**15.5 cpm**

Annexure D – Internal termination charges as a proxy for TSLRIC

[Confidential submission]