Australian
Competition &
Consumer
Commission

PRICING METHODOLOGY FOR THE GSM AND CDMA TERMINATION SERVICES

Draft Report

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1. Introduction

Under Part XIC of the *Trade Practices Act 1974* (the Act), the Australian Competition and Consumer Commission (the Commission) is responsible for arbitrating disputes about access to particular declared services and also for assessing access undertakings relating to access to such declared services. One of the prime issues that arise under these processes is the determination of an appropriate access price.

In March 2002, the Commission varied the declaration of domestic GSM originating and terminating access services (the GSM services) to make it mobile technology-neutral with respect to technologies currently deployed or in use in Australia, namely GSM and CDMA services.

Under section 152AR of the *Trade Practices Act 1974* (the Act) standard access obligations apply to declared services. These require that access to a declared service must be provided to other carriers on request. Where the carrier providing the declared service (access provider) and the carrier seeking access (access seeker) are unable to reach agreement in relation to the terms and conditions of access, either party can seek an arbitrated outcome from the Commission.[1]

Where the Commission is notified of an access dispute in relation to the terms and conditions of access it is required to make a written determination.[2] The determination may deal with any matter relating to access and, in forming that determination, the Commission must take certain legislative criteria into account (these are outlined in Chapter 3).

A description of the GSM and CDMA origination service is in Appendix A, along with an outline of the Commission's views on pricing principles for this service. The Commission's view is that a similar pricing approach to the one used in the GSM termination service may be appropriate, but that this is a matter best addressed in particular arbitrations.

1.1 Overview of the Commission's pricing principles

The purpose of this document is to outline the broad pricing principles that the Commission is likely to use if notified of a dispute on the supply of GSM and CDMA termination services for the carriage of fixed-to-mobile calls.

The Commission put forward a view in its March 2002 report "*Variation to make the GSM Service Declarations Technology-Neutral*" that there were factors leading to the supply of GSM and CDMA termination services at prices above the efficient costs of provision:

[1] Section 152CM of the *Trade Practices Act 1974*.

[2] Section 152CP of the *Trade Practice Act 1974*.

- once an end-user is connected to a mobile network, the mobile carrier has control over access to GSM and CDMA termination for that end-user; and
- consumer ignorance allows the mobile carrier to increase access prices for GSM and CDMA termination services without feeling the full effect of the increase. This is because an end-user calling can do no better than base calling decisions on estimates of the average access price for GSM and CDMA 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 and CDMA termination. While the Commission considers that some factors somewhat mitigate control over access and consumer ignorance (such as closed user groups – mobile subscribers who are as concerned about the price of receiving calls as making a call) it does not believe these overcome the ability and incentive of mobile carriers to sustain above-cost access prices at this time. However, the Commission recognises that it may be possible in the future for developments in the market to further diminish control over access and consumer ignorance.

It is noted that sustained above-cost access prices for GSM and CDMA termination are more likely to be a problem when the service is supplied in relation to fixed-to-mobile calls rather than mobile-to-mobile calls. This is because, in the case of mobile-to-mobile calls where uniform traffic patterns exist, reciprocal access prices between mobile carriers are equally a revenue stream and a cost. Therefore, unless traffic patterns are unbalanced or mobile carriers engage in price discrimination, no competitive advantage exists in sustaining above-cost GSM and CDMA termination for mobile-to-mobile termination – except to the extent that by keeping them at the same level as when the service is supplied in relation to fixed-to-mobile calls, mobile carriers will circumvent any possibility of other carriers transiting calls via alternative (lower cost) termination paths. Accordingly, it is the Commission's view that it is sufficient for any regulatory focus to be on access prices for GSM and CDMA termination when the service is supplied in relation to fixed-to-mobile calls.

GSM and CDMA termination is only one element of the mobile services market the Commission has examined. The provision of mobile calls essentially involves the interaction of four 'joint products':

- GSM and CDMA origination services (which differ from the declared GSM and CDMA origination services in that they allow a mobile subscriber to call other mobile and fixed line networks and not just 13/1300 and 1800 number services offered by fixed line networks);
- GSM and CDMA termination services for which the mobile carrier charges other fixed network and mobile network carriers;
- mobile access (subscription) services including connection, handset and monthly access for which the mobile carrier charges the mobile subscriber; and
- outgoing call services, which use GSM and CDMA origination services and possibly GSM and CDMA termination services or PSTN termination services, and for which the mobile carrier charges the mobile subscriber.

The revenue streams from GSM and CDMA termination, mobile access services and outgoing call services are interdependent, such that with effective competition a change in one revenue stream will, in the long term, be associated with an offsetting change in another stream.

The Commission has concluded that the mobile services market, at this time, is becoming increasingly competitive, particularly at the retail level. In this respect it notes the presence of four mobile networks, generally decreased retail prices for mobile access services and outgoing call services and increased product offerings, all indicating an increasingly competitive environment. This said, the Commission has remaining concerns about the effect of the pricing of GSM and CDMA termination on competition and efficiency in the mobile services and fixed-to-mobile markets.

The Commission continues to consider that the most appropriate pricing methodology, having regard to the legislative criteria, is a form of the proposed retail benchmarking approach. Under this approach, changes in each mobile carrier's access prices will be benchmarked against the retail price movements for the overall mobile package (access and outgoing calls). The initial 'starting point' for the 'glide path', created by this pricing rule, will be the lowest current access price. The Commission understands that this price is about 24.5 cents per minute.

The advantage of pegging changes in access prices to changes in the average retail price for the overall mobile package is that the provision of GSM and CDMA termination mirrors the increasingly competitive retail element of the mobile services market. The Commission considers that this is desirable because it is likely to improve allocative efficiency in the mobile services and fixed-to-mobile markets, and will reduce the potential for integrated carriers to engage in anti-competitive behaviour in the fixed-to-mobile market. In effect, a relevant competitive discipline is being placed on GSM and CDMA termination, to overcome the relatively weak competitive forces which currently exist.

In conjunction with such a pricing approach the Commission also proposes to implement a monitoring program that will be used to ascertain:

- whether an increasingly competitive mobile services market is driving retail prices (and therefore access prices for GSM and CDMA termination and retail prices for fixed-to-mobile calls) down;
- whether there are increasing competitive forces on GSM and CDMA termination (e.g. increased evidence of closed user groups and increased use of call back); and
- whether integrated mobile carriers (who are likely to face lower internal access prices for GSM and CDMA termination) engage in anti-competitive pricing of fixed-to-mobile calls. The Commission may also rely on its powers under Part XIB if this conduct is observed.

The Commission intends to closely monitor increases in competition for the supply of GSM and CDMA termination and the extent of any structural change that promotes consumer awareness. This will inform the Commission's considerations of the benefits of the application of pricing regulation on GSM and CDMA termination services in the future.

The Commission intends to review the proposed pricing approach in 2003.

The Report is structured as follows:

Chapter two identifies the declared service which is the focus of this Report and outlines how it is used to provide end-to-end calls to GSM and CDMA mobile phones;

Chapter three outlines the legislative background which the Commission must take into account when making a final determination in an access dispute;

Chapter four discusses the Commission's views regarding mobile carriers control over access to GSM and CDMA termination;

Chapter five outlines the possible pricing methodologies that could be used to determine access prices for GSM and CDMA termination; and

Chapter six provides the approach and reasoning adopted by the Commission in forming its view on the appropriate pricing methodology for GSM and CDMA termination access services.

2. The domestic GSM and CDMA termination service

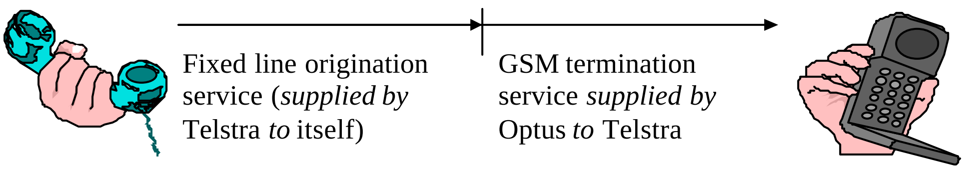
The GSM and CDMA termination service is a wholesale service used by carriers and service providers to supply particular call products to end-users. The GSM and CDMA termination service is described as:

> … an Access Service for the carriage of telephone calls (i.e. 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.[3]

The GSM and CDMA termination service is used to terminate calls to mobile subscribers. Essentially it enables mobile subscribers to receive calls from end-users connected to other networks (a fixed line network, another mobile network, or the same mobile network). The service can be used to supply fixed-to-mobile calls, or mobile-to-mobile calls. It is supplied by mobile carriers to themselves and to other carriers. For example, in the case of a fixed-to-mobile call if an end-user connected to Telstra's fixed line network wants to call a mobile subscriber connected to the SingTel Optus (Optus) GSM network, Telstra would need to purchase the GSM termination service from Optus in order for the fixed line end-user to be able to make the call. This is shown in Diagram 1.

Diagram 1 – The GSM termination service

Call from fixed-line end user to mobile phone end-user



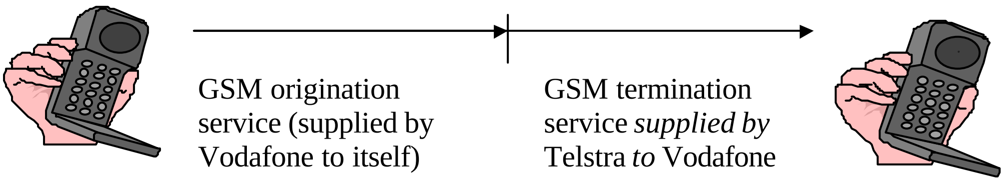
Use of the GSM termination service to supply a fixed-to-mobile call

In the case of a mobile-to-mobile call, if a mobile subscriber connected to Vodafone's GSM network wants to call a mobile subscriber connected to Telstra's GSM network, Vodafone would need to purchase the GSM termination service from Telstra in order for the mobile subscriber connected to its network to make the call. This is shown in Diagram 2.

[3] *Variation to make the GSM Service Declarations Technology-Neutral, Final Report*, Australian Competition and Consumer Commission, March 2002, p. 58.

Diagram 2 – The GSM termination service

Call from mobile phone end-user to another mobile phone end-user



Use of the GSM termination service to supply a mobile-to-mobile call

Pre-selection of fixed-to-mobile calls

The Australian Communications Authority modified its ‘pre-selection’ determination in 1999 to include fixed-to-mobile calls in the pre-selection basket of national long distance and international calls. Following from this, an end-user jointly pre-selects a carrier for national long distance, international and fixed-to-mobile calls. For this reason pre-selected carriers now also purchase GSM and CDMA termination services from mobile carriers (in order to supply fixed-to-mobile calls). For example, if AAPT is a pre-selected carrier for an end-user who makes calls to a mobile subscribers connected to Telstra’s GSM and CDMA networks then AAPT would need to purchase GSM and CDMA termination services from Telstra in order for its pre-selected end-user to be able to make these calls. AAPT may also need to purchase the fixed line origination service from the carrier whose network the pre-selected end-user is connected to.

3. Legislative background

The object of Part XIC of the Act is to promote the long-term interests of end-users (the LTIE) of carriage services or of services provided by means of carriage services.[4] This will be achieved, in part, through establishing the rights of third parties to gain access to services that are necessary for the competitive supply of services to end-users.

An important part of the access regime is the terms and conditions of access, including the price or a method for ascertaining the price. Under Part XIC of the Act the Commission cannot accept an undertaking unless satisfied that the terms and conditions specified are reasonable.[5] In determining whether terms and conditions are reasonable, regard must be had to the following matters:

- whether the terms and conditions promote the LTIE;
- the legitimate business interests of the carrier or carriage service provider concerned, and the carrier's or carriage service provider's investment in facilities used to supply the declared service concerned;
- the interests of persons who have rights to use the declared service concerned;
- the direct costs of providing access to the declared service concerned;
- the operational and technical requirements necessary for the safe and reliable operation of a carriage service, a telecommunications network or a facility; and
- the economically efficient operation of a carriage service, a telecommunications network or a facility.[6]

This does not, by implication, limit the matters to which regard may be had.[7]

When arbitrating access disputes the Commission must have regard to the same matters. In addition, in making a determination the Commission must take into account the value to a party of extensions, or enhancement of capability, whose cost is borne by someone else.[8]

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[4] Sub-section 152AB(1) of the Act.

[5] The Commission must also ensure that the terms and conditions in undertakings and any arbitration determination is consistent with any Ministerial pricing determination in place. See section 152CH of the Act.

[6] Sub-section 152AH(1) of the Act.

[7] Sub-section 152AH(2) of the Act.

[8] Paragraph 152CR(1)(e) of the Act.

The Commission discusses each of the criteria in Chapter 6, in deciding the appropriate pricing principle for GSM and CDMA termination services.

4. GSM and CDMA termination

In the Final Report on the '*Variation to make the GSM Service Declarations Technology-Neutral*', the Commission noted that several issues had been raised which could potentially serve to mitigate control over access and consumer ignorance. However, the Commission's view is that the competitive forces on GSM and CDMA termination are relatively weak at this point in time.

4.1 Control over access to GSM and CDMA termination in relation to fixed-to-mobile calls

The Commission's economic consultants noted that the smaller the mobile carrier (in terms of market share), the less likely it is to internalise the demand-reducing effects of an increase in its access price for GSM termination. That is, the less concentrated the market for mobile services, the higher the retail prices of fixed-to-mobile calls. This results from a greater number of smaller mobile carriers having the same incentive to increase their access prices, due to the minimal impact on the one (average) retail price of a fixed-to-mobile call.

In its submission to the Commission's Discussion Paper on the Pricing Methodology for the GSM Termination Service, Telstra argued that there is little incentive for a mobile carrier to increase the access price for GSM termination, as an increase will be matched very quickly by rival mobile carriers.[9] It also noted that mobile carriers will not necessarily benefit from higher access prices for GSM termination as the carriers will compete more aggressively for the higher termination revenues by lowering mobile access (subscription) fees. The Commission believes that this also applies to CDMA termination.

The Commission accepts there are incentives for the mobile carriers to not continually increase the access price for GSM and CDMA termination if they know other mobile carriers will retaliate in order to retain market share. Also, there will be a point at which an increase in the access price for GSM and CDMA termination will not result in an increase in the revenue stream. This occurs because as access prices for GSM and CDMA termination increase, resulting in an increase in the retail prices for fixed-to-mobile calls, end-users calling mobile networks may begin to question the prices they are paying and at a certain point may reduce their demand for calls.

The Commission's market inquiries indicate that access prices for GSM and CDMA termination, when used to provide fixed-to-mobile (and mobile-to-mobile calls) have been trending down. This also does not support the conclusion that access prices for GSM and CDMA termination will trend upwards as the market becomes less concentrated. However, the downward trend in access prices for GSM and CDMA termination could be due to a number of factors, such as changes in the costs of providing GSM and CDMA termination or the threat of regulation.

[9] Telstra submission – Response to Professor Gans's Discussion Paper, p. 3.

That said, the Commission notes that control over access and, to some degree, consumer ignorance allows mobile carriers to sustain above-cost access prices for GSM and CDMA termination. This occurs from the incentive to increase prices when the service is used to supply fixed-to-mobile calls, as access prices for GSM and CDMA termination are an important revenue source. Furthermore, sustaining above-cost access prices for GSM and CDMA termination may also allow mobile carriers to cross-subsidise mobile access service fees and increase demand for mobile subscription.

As noted in the Final Report on the '*Variation to make GSM and CDMA Terminating Services Technology-Neutral*', the incentives that integrated mobile carriers face, when supplying GSM and CDMA termination to each other in relation to fixed-to-mobile calls, are important. In isolation, it would seem that the incentive to negotiate a 'low' or 'high' access price will be dependent on the traffic patterns that exist between the mobile carriers. For example, assume there are two integrated mobile carriers and that Carrier A originates a lot more fixed-to-mobile calls than Carrier B. This implies that Carrier B will terminate a lot of fixed-to-mobile calls (relative to those it terminates on Carrier A's network) and therefore will have an incentive to negotiate 'high' access prices as it represents a net benefit in terms of termination revenue (higher revenue, relative to cost). Carrier A would seem to have an incentive to negotiate 'low' access prices as they represent an increased cost to the carrier, relative to the revenue received. The incentives, though, are more complicated than they appear.

Where Carrier A terminates more calls on Carrier B's network than on its own network in providing fixed-to-mobile calls, there are two reasons why it may prefer to keep access prices high.

Firstly, it will not want to negotiate a reciprocal access price too 'low' as this would provide other fixed line carriers with an incentive to negotiate alternative paths to fixed-to-mobile termination (via Carrier B).

Secondly, maintaining a high termination price inflates the retail fixed-to-mobile price for other carriers (as other carriers use Carrier A's GSM and CDMA termination service as an input) while not inflating Carrier A's own costs. This provides the Carrier A with an opportunity to reduce the price of 'on-net' fixed-to-mobile calls (calls which stay entirely on the integrated carriers' networks), and increase its competitiveness relative to fixed-only carriers providing fixed-to-mobile calls.[10]

4.2 Control over access to GSM and CDMA termination in relation to mobile-to-mobile calls

The Commission's economic consultants concluded that in the case of mobile-to-mobile calls unregulated access prices for GSM termination, when set independently (i.e. without

[10] This type of response is analysed at a theoretical level by J.J. Laffont, P. Rey and J. Tirole, "Network Competition II: Price Discrimination", *The RAND Journal of Economics*, Spring 1998, Vol. 29, No. 1, pp. 38-56, and was also raised by the Commission's economic consultants.

any interaction of mobile carriers) may be set too high and that when negotiated may be set too low.

Assuming consumer ignorance, the Commission's economic consultants concluded that mobile carriers will be indifferent between the precise levels of reciprocal access prices for GSM termination, as their profits are the same regardless. This is because if each mobile carrier was to negotiate a slightly higher access price (increasing their revenue streams) it also increases the marginal cost (decreasing revenue) for other mobile carriers and ultimately itself. Therefore, assuming no price discrimination, there is no advantage to the mobile carriers in negotiating higher access prices for GSM termination. In this respect the Commission's economic consultants submitted that mobile carriers would not be deterred from negotiating access prices for GSM termination equal to marginal costs, and unregulated outcomes (provided negotiations are efficient) will result in efficient pricing. This argument could also be applied to CDMA termination.

The Commission notes that PowerTel supported the conclusion that mobile carriers will be indifferent to the level of access prices for GSM and CDMA termination in relation to mobile-to-mobile calls (as mobile carriers will generally expect that a mobile subscriber will make as many calls as it receives).[11]

However, it is the Commission's view that where mobile carriers have uniform (or similar) traffic patterns, there may be an incentive to negotiate reciprocal access prices for GSM and CDMA termination in the supply of mobile-to-mobile calls, that are as high as those negotiated when the service is used to supply fixed-to-mobile calls. By keeping the access prices for the supply of mobile-to-mobile calls at similar levels to access prices when used to supply fixed-to-mobile calls, mobile carriers will circumvent any possibility of other carriers transiting calls via alternative (lower cost) termination paths. In this respect, market inquiries indicate that the access prices for GSM and CDMA termination are largely the same for both fixed-to-mobile and mobile-to-mobile calls.

The Commission also notes that mobile carriers may favour high GSM and CDMA termination prices for mobile-to-mobile calls in order to price discriminate between 'on-net' and 'off-net' calls – by raising other carriers costs to terminate calls the mobile carrier can increase the attractiveness of on-net calls.

This said, it does not appear necessary to regulate access prices when used to supply mobile-to-mobile calls at this time. This is primarily because commercial negotiations appear to result in prices linked to GSM and CDMA termination when used for fixed-to-mobile calls.

4.3 The impact of control over access and consumer ignorance

It remains the Commission's view that control over access to GSM and CDMA termination, and to an extent consumer ignorance, results in mobile carriers sustaining above-cost access

[11] PowerTel submission to the Discussion Paper on the Pricing Methodology for the GSM Termination Service, p. 4.

prices for GSM and CDMA termination. The Commission considers that the competitive forces on GSM and CDMA termination will remain relatively weak at least in the near future. That said, the Commission recognises that 'closed' user groups and the possibility of fixed-line callers requesting mobile subscribers to call them back may increasingly place a competitive focus on access prices for GSM and CDMA termination.

It has been argued to the Commission that above-cost pricing of GSM and CDMA termination does not necessarily imply a market power problem which requires regulatory intervention to correct. This is because the ability to set above-cost termination prices could be offset by effective competition in the retail side of the mobile market.

In submissions to the Draft Report on the Pricing Methodology for the GSM Termination Service, carriers argued that the effect of any above-cost pricing is minimal if the market for mobile services as a whole is effectively competitive:

> ..we consider that the very fact that there is effective competition at the retail level translates to an effective competitive discipline on all revenue streams of mobile operators (including revenue gained through GSM termination.)[12]
>
> To be overly concerned that the price of *one component* of one product of a multi-product firm generates above-normal returns makes no economic sense. The relevant issue is whether the firm *as a whole* is earning above-normal returns.[13]

The Commission notes that if the overall market for mobile services was effectively competitive (such that no excess profits were being earned), then any above-cost access prices for GSM and CDMA termination would be offset by below-cost retail prices (for mobile-to-mobile calls, subscription, etc.). In principle, the Commission would then need to consider whether regulated reductions in access prices (and therefore fixed-to-mobile prices) would be welfare-improving. That is, it would need to consider the efficiency gains from lower access (and hence retail) prices against any efficiency losses from higher prices in other elements of the mobile market (such as mobile subscription).

If the retail level of the market for mobile services was not effectively competitive, then above-cost access prices for GSM and CDMA 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.[14] The Commission notes, however, that if retail competition is becoming increasingly effective, then it is to be expected that overall excess profits will

[12] Vodafone submission to the Draft Report on the Pricing Methodology for the GSM Termination Service, p. 11.

[13] NERA submission to the Draft Report on the Pricing Methodology for the GSM Termination Service, p. 6.

[14] This approach is consistent with the view of Oftel expressed in its current review of access prices for mobile termination: "If Oftel were to conclude that mobile markets other than call termination were some way from being effectively competitive, then it would be unlikely to regard the previous argument (that above-cost termination prices will be offset by competitively-determined retail prices) as providing a sound justification for not taking regulatory action." See *Review of Price Controls on Calls to Mobiles*, Oftel, February 2001, pp. 21-22.

decline or be eliminated in the near future. The Commission considers the evidence as to the competitiveness of the mobile market in the following Chapter.

This said, the Commission will also need to consider whether integrated mobile carriers, who notionally face lower internal access prices than fixed line carriers seeking access to GSM and CDMA termination, use this advantage to undertake anti-competitive pricing in the fixed-to-mobile market. This potential for anti-competitive pricing in downstream markets may occur even in the existence of a competitive overall mobile market.

5. Comparison of pricing methodologies

The Commission considers that there are essentially three pricing methodologies which are appropriate to assess the effects of against the legislative criteria outlined in Chapter 3. These are:

- forbearance;
- the cost based approaches of TSLRIC and retail-minus (i.e as a proxy for cost); and
- retail benchmarking.[15]

The Commission does not intend to assess short-run marginal cost pricing against the legislative criteria. In terms of cost based approaches, the Commission considers that TSLRIC is a better pricing benchmark than short-run marginal cost pricing in this instance. In this respect it notes that while a capacity-unconstrained short-run marginal cost price may appear to be efficient in the short-run it does not provide for the recovery of fixed and common costs. In addition, while it would be possible to vary the price in line with capacity constraints, this could result in large price fluctuations and potentially higher transaction costs for all parties. Accordingly, the Commission considers that, in this case, further analysis of the short-run marginal cost pricing approach against the legislative criteria is not warranted.

Further, the Commission does not intend to assess the benchmarking against total factor productivity approach against the legislative criteria. In terms of benchmarking approaches, the Commission considers that in an increasingly competitive mobile market a retail benchmarking approach is more appropriate. This is because it will reflect productivity gains and possibly reductions in excess profits as a result of competitive pressures at play in the market. Benchmarking against total factor productivity changes, however, will only reflect productivity gains. In addition, the Commission considers that a retail benchmarking approach is likely to be less difficult to implement (even given its associated implementation difficulties).

[15] A detailed discussion of these pricing methodologies is provided in Chapter 6 of the Final Report on the Pricing Methodology for the GSM Termination Service.

6. An assessment of pricing methodologies against the legislative criteria

GSM and CDMA termination pricing principles raise the difficult issue of the supply of one service in a broader bundle of services facing increasing competition. In deciding the most appropriate pricing principles – having regard to the legislative criteria – the Commission must therefore consider not only the supply of GSM and CDMA termination services in isolation, but broader competition in the mobile services market.

An assessment of the pricing methodologies against the legislative criteria is outlined in Chapter 7 of the Final Report on the Pricing Methodology for the GSM Termination Service. The Commission considers that this assessment also applies to CDMA termination.

The Commission concludes that the forbearance approach does not best meet the legislative criteria, given the current level of competition in the mobile services market, and particularly its termination element. In making this assessment, the Commission is conscious that an increasingly competitive market can generate outcomes that can not be replicated by a regulatory pricing approach, and that an increased competitive focus may develop on access prices for GSM and CDMA termination as the market matures. This said, the Commission has remaining concerns with competition and efficiency in the mobile services market, and the ability and motivation of integrated carriers to restrict competition in downstream markets that are supplied with GSM and CDMA termination services.

The Commission concludes, in line with the Final Report on the Pricing Methodology for the GSM Termination Service, that a cost-based approach to the pricing of GSM and CDMA termination services 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.

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. The Commission will monitor the market and seek to facilitate structural adjustment within the market. Other developments – such as increased use of closed user groups – may occur to increase competition for termination services.

The Commission also believes that a degree of regulatory intervention is appropriate at this time, having regard to the legislative criteria, in the form of a retail benchmarking approach. The retail benchmarking approach uses a reasonable proxy for the efficiency improvements and competition pressures on mobile prices – the price fall in the retail segment of the market – to provide a safety net that price falls continue to occur for the termination service. This is likely to reduce opportunities for anti-competitive pricing and improve allocative efficiency, and best promote the LTIE at this time.

This decision is 'on balance' and the pricing principles (including forbearance) which best promote the LTIE may change over time. In particular, the Commission recognises the limitations of the retail benchmarking approach and also the anti-competitive conduct provisions of the Act. If continued retail price falls do not eventuate or if price squeezing is observed in the fixed-to-mobile market, the Commission may need to reconsider this pricing principle at the time of the next review. This said, the Commission is likely to retain its current caution about cost-based regulation of mobiles and therefore clearer evidence of detriment caused by current pricing practices would need to be presented to it.

Implementation of the pricing principles

The Commission has noted concerns with the application of the benchmarking principle expressed in submissions to the Draft Report on the Pricing Methodology for the GSM Termination. Appendix E of the Final Report on the Pricing Methodology for the GSM Termination Service provides further detail on the practical implementation of the pricing principles and outlines the approach the Commission is likely to take in an arbitration. The Commission considers that the implementation approach outlined in Appendix B of this report applies to CDMA termination services as well as GSM termination services.

The Commission hopes that a benefit of issuing these pricing principles will be to enhance commercial negotiation and to minimise its involvement in regulation through access disputes. Consequently, it does not intend to encourage further delays in negotiations by undertaking an overly-complex price change methodology – this would clearly reduce the benefits of issuing the principles in the first instance.

Appendix A GSM and CDMA origination

The GSM and CDMA originating service is a wholesale service used by carriers and service providers to supply particular call products to end-users. As noted in Chapter 2, the GSM and CDMA termination service is described as:

> … an access service for the carriage of telephone calls (i.e. voice, data over the voice frequency band) to a POI from end-customers assigned numbers from the GSM and CDMA number ranges of the Australian Numbering Plan and directly connected to the AP's GSM or CDMA network.[16]

The service description notes that this means an access service for the carriage of telephone calls from an end-user connected to the Access Providers Network to a POI with the network of the Access Seeker *for the purposes of providing access to special number services such as 1800 numbers*.[17] It is not the more general origination service that allows mobile carriers to provide mobile subscribers with mobile-to-mobile and mobile-to-fixed calls.

The GSM and CDMA originating service is used to originate calls from GSM and CDMA mobile phones to 13/1300 and 1800 services. It is supplied by mobile carriers to themselves and other carriers to enable mobile subscribers to make calls to 13/1300 and 1800 services. For example, if a mobile subscriber (who is connected to Vodafone's GSM network) wants to book a taxi service using a 1300 number, and Primus provides the network ability for the taxi company to run the 1300 number service, Primus would need to purchase the GSM originating service from Vodafone for the mobile subscriber to be able to make the call. It may also need to purchase a fixed line terminating service from another carrier where it does not have its own network. This is shown in Diagram 1.

[16] *Variation to make the GSM Service Declarations Technology-Neutral*, *Final Report*, Australian Competition and Consumer Commission, March 2002, p. 58.

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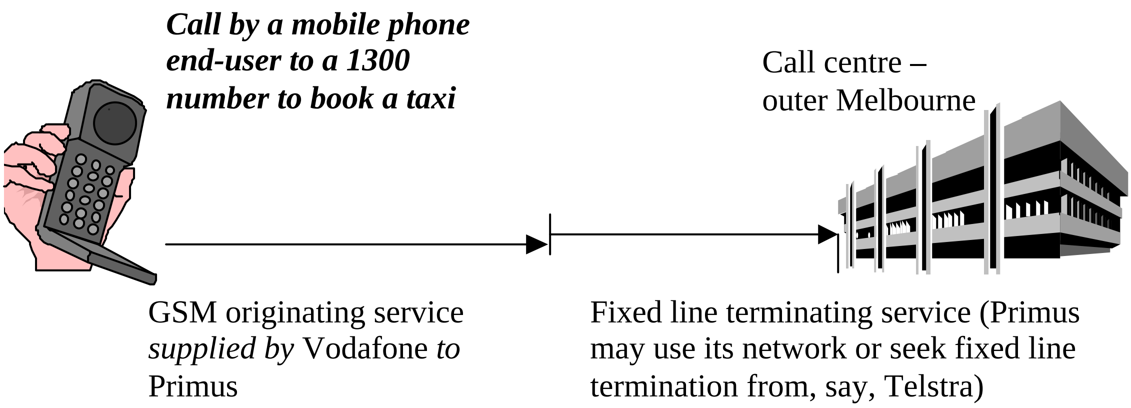
[17] *ibid.*, p. 19.

Diagram 1 – The GSM originating service: use of the GSM originating service to supply a 13/1300 or 1800 call



The Commission notes that in its submission to the Draft Report on the Pricing Methodology for the GSM Termination Service, Vodafone disagreed with the above analysis. It submitted that a fixed line carrier providing 1800 or 13/1300 services (Primus in the above example) does not purchase GSM origination.[18] Rather, Vodafone considers that the end-to-end call service from the mobile to the 1800 or 13/1300 number is provided by the mobile carrier. It notes that without GSM origination the call to the 1800 or 13/1300 number cannot be supplied. Vodafone submitted that both the mobile carrier and fixed line carrier providing 1800 or 13/1300 services have commercial imperatives to reach agreement.

However, the Commission notes that its understanding of the provision of GSM and CDMA origination is supported by the Australian Communications Industry Forum Interconnection Model. In particular principles G15 and G16 outline the following:

- the carrier providing the 1800 or 13/1300 services (Primus above) to the 'commissioning customer' (the taxi service above) is the prime service deliverer; and
- the mobile carrier originating the A-party's call (Vodafone above) and any transit service deliverers are the supporting service deliverers to the carrier/prime service deliverer providing the 1800 or 13/1300 service (Primus).[19]

This suggests that the carrier providing the 1800 or 13/1300 services, as the prime service deliverer, is responsible for the call and as such would purchase GSM and CDMA origination from the mobile carrier originating the A-party's call.

[18] Vodafone submission to the Draft Report on the Pricing Methodology for the GSM Termination Service. p.27.

[19] *ACIF Interconnection Model* – G538, August 1999, p. 13, 18.

Control over access and consumer ignorance

The Commission's economic consultants noted that although their advice, and paper, focused on the regulation of access prices for GSM termination, the same issues apply to the GSM and CDMA origination services which allow for mobile calls to be made to 1800 and 13/1300 number services. In particular, that control over access and consumer ignorance allows mobile carriers to sustain high access prices for GSM and CDMA origination.

In this respect the Commission notes that if a business decides to provide a 13/1300 or 1800 service, and to accept calls from mobiles, it has no alternative but to purchase the GSM and CDMA origination service. However, it is noted that such a business may have greater incentives to inform itself about access prices for GSM and CDMA origination (or the net payment). Therefore, it appears mobile carriers may be able to sustain high access prices for GSM and CDMA origination, although perhaps not to the extent they are able to for the GSM and CDMA termination service.

The Commission considers that the pricing issues associated with the GSM and CDMA origination service would be best resolved, using a similar framework as proposed for GSM and CDMA termination services, in the context of the access disputes. The Commission understands, however, that in the context of commercial negotiations access price for GSM and CDMA origination generally mirror the access prices for GSM and CDMA termination. Therefore, given the Commission's proposed regulatory response for access prices for GSM and CDMA termination, commercial negotiations may lead to agreements about access prices for GSM and CDMA origination (outside the context of the access disputes.

Appendix B Implementation of the retail benchmarking approach

This Appendix is to provide further guidance on the likely approach to implementation of a retail benchmarking approach in any future access disputes and for the purposes of ongoing monitoring of retail and wholesale price movements. It follows from additional consultation with the industry, in August and September 2001, on a variety of implementation issues. Submissions from the carriers are referred to below and are available from the Commission's website (www.accc.gov.au). Broadly the issues considered were:

- the determination of the starting access price; and
- the calculation of retail price movements.

In the Final Report on the Pricing Methodology for the GSM Termination Service the Commission was of the view that the most appropriate pricing methodology was a retail benchmarking approach. Under this approach there was slight distinction in how the approach would be applied to access disputes that were current at the time and access disputes that may arise in the future. In particular, it was considered that:

- for current access disputes, the starting access price would likely be the lowest access price in the market and the retail price movements of the relevant mobile carrier should be deducted from that initial starting point; and
- for future access disputes, the starting access price (applying a yield methodology and period-on-period approach) would likely be the most recent agreed access price between the access seeker and the access provider and the retail price movements of the relevant mobile carrier should be deducted from that initial starting point.

It is noted that since the Final Report on the Pricing Methodology for the GSM Termination Service was released all access disputes that were current at the time have been withdrawn. Accordingly, this Appendix provides guidance on the likely approach regarding implementation for any future access disputes and for the purposes of ongoing monitoring.

Further, there is one additional section in this Appendix that was not in Appendix E of the Final Report on the Pricing Methodology for the GSM Termination Service. This relates to the backdating of final determinations in access disputes and is addressed in section B.3. Industry specifically raised this issue and the Commission felt it would be useful to provide some guidance.

B.1 Determination of the starting access price

As noted above, the Final Report on the Pricing Methodology for the GSM Termination Service proposed that for future access disputes (applying a yield methodology and period-on-period approach) the starting access price would likely be the most recent access price agreed between the access seeker and access provider.

Some carriers submitted that, applying a yield methodology and period-on-period approach, the most recent agreed access prices were an appropriate starting point for future access disputes. In particular, Vodafone[20] submitted that the correct starting point should be the most recent access price between the access seeker and access provider and RSL COM[21] considered that after the first six-month period for implementing the retail benchmarking approach such an access price would be appropriate.

That said, some carriers did not agree that for future access disputes the most recent agreed access price would be appropriate. Telstra considered that the price prevailing at 1 July 2001, adjusted cumulatively, would be the appropriate price.[22] In this respect it was not supportive of a period-on period approach and considered that a cumulative approach would provide the most appropriate incentives for commercial negotiations and would minimise access disputes. The issue of a period-on-period versus cumulative approach is discussed below in section B.2.5 and, as the Commission considers a period-on-period approach is preferable, it does not affect the conclusions made in this section.

Optus submitted that future access disputes should not use the most recent access price agreed between the access seeker and access provider. Rather it considered the access price which prevailed just before the pricing periods that are being used to determine the retail price movements should be used.[23] It considered that selecting a start date towards the end of the pricing period would give access seekers some sort of retrospective price reduction from this price. As a result the access prices would only ever be arbitrated access prices as there would be no incentive for access providers to commercially negotiate.

The Commission understands Optus is concerned that using the most recent agreed access price between the access seeker and access provider would potentially allow access seekers to reap lower access prices than would otherwise occur. This is because access seekers could commercially negotiate an access price taking into account the retail benchmarking approach and then have that price further reduced via arbitration (for example, by the retail price movements in the previous two six-monthly periods). The Commission considers the possibility of such regulatory gaming does exist. It, therefore, proposes that where the parties cannot agree on the starting point, the most recent agreed access price that did not take the retail benchmarking approach into account in commercial negotiations should be used.[24]

Where a dispute is notified and parties have not previously taken the retail benchmarking approach into account in commercial negotiations, the competitive discipline of retail price movements will not have been applied. The opportunities for gaming as described above

[20] Vodafone submission on implementation issues, p. 3.

[21] RSL COM submission on implementation issues, p. 1.

[22] Telstra submission on implementation issues, p. 2, 4, 5.

[23] Optus submission on implementation issues, p. 5-8.

[24] The Commission notes an access dispute may be notified on the basis that the parties are unable to agree on the extent of retail price movements. In such a case the Commission would likely use the starting price agreed by the parties (most likely the access price carried over from the previous agreement).

would, therefore, be limited. In circumstances where parties have previously taken the retail benchmarking approach into account in commercial negotiations, the competitive discipline of retail price movements will have been applied in some manner. The Commission considers that using the most recent agreed access price that did not take into account the retail benchmarking approach in commercial negotiations should act as a disincentive for gaming. This is because the Commission prefers a period-on-period application of retail price movements (discussed in section B.2.5) and as such would only apply the retail price movements over the previous two six-month periods. Accordingly, access seekers may find themselves in a worse position if they attempt to game the situation.

Approach

For future access disputes the starting access price would likely be the most recent agreed access price between the access seeker and access provider that did not take the retail benchmarking approach into account in commercial negotiations.

B.2 Calculation of retail price changes

In the Final Report on the Pricing Methodology for the GSM Termination Service it was noted that the retail benchmarking approach provides that access prices for GSM termination will fall at the same rate as retail prices for mobile services provided by a mobile carrier. That is, access prices in the current time period are dependent on a mobile carrier's past retail price movements (the change in average retail prices between, say, time period 1 and time period 2).

In its submission Telstra raised the issue of the retail price movement index that will be used to determine access prices for GSM termination (in access disputes) and for disclosure purposes (to facilitate commercial negotiations).[25] Telstra was of the understanding that a single composite weighted index would be developed for the industry and applied in these situations. It sought clarification on this issue.

As noted above, under the retail benchmarking approach each mobile carrier's access prices are linked to its own retail price movements. In this respect a retail price movement index for each mobile carrier would likely be developed for the purpose of making determinations in access disputes. Further, if the Commission considers that releasing carrier-specific retail price movement indexes would facilitate commercial negotiations then it would likely make such indexes publicly available.

There are two practical issues which need to be considered in regard to how the retail price movements will be determined:

- the time period for assessing retail price movements (i.e. between time period 1 and time period 2); and

[25] Telstra submission on implementation issues, p.4.

- how to determine the average price per minute and price change for each time period, in particular whether to use a yield or retail basket approach, the services for inclusion in such calculations and the issue of adjusting for quality.

B.2.1 Time period for assessing retail price movements

In the Final Report on the Pricing Methodology for the GSM Termination Service the Commission proposed to use calendar six-month periods – that is, 1 January to 30 June, and 1 July to 31 December – to determine the retail price movements. While it noted that there were several possible time periods for determining retail price movements, ranging from a monthly basis to an annual basis, it considered calendar six-month periods to be preferable. This is because such a timeframe is not so short so as to be administratively burdensome (for either the carriers or the Commission) and at the same time is not so long as to provide limited scope for regular downward pressure on access prices over the next two years.

Many carriers considered that six-monthly assessments of retail price movements were appropriate for reasons outlined by the Commission. That said, both AAPT[26] and PowerTel[27] proposed that retail price movements be assessed quarterly. AAPT submitted that six-monthly assessments may prove to be too long a period in practice. It was concerned that at the conclusion of each six-month period, some time must be allowed for the collection and analysis of data and that this could lead to a significant lag beyond the end of the six-month period. PowerTel submitted that commercial negotiations may be necessary to implement the adjustments which would create delays in implementation.

The Commission does not consider that moving to quarterly assessments would remove the delays associated with collecting information and notes that determining quarterly retail price movements may be administratively more burdensome. It is noted that under the new Regulatory Accounting Framework (RAF)[28] the mobile carriers supplying GSM services will provide the Commission with six-monthly and annual reports which include much of the information necessary to determine retail price movements (under the yield approach). Specifically, information on retail revenues and minutes of use for services. In the sense that this information is already provided to the Commission, the associated delays should be minimised.

In contrast, Optus proposed that retail price movements be assessed on an annual basis.[29] Optus submitted that it should not have to bear the administrative cost of gathering data more regularly than required ‘given that the Commission would likely only ever set mobile termination prices annually’. In this regard the Commission notes that it would only become explicitly involved in setting access prices only if an access dispute is notified. Otherwise, the Commission anticipates its involvement may only be through publishing

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[26] AAPT submission on implementation issues, p. 3.

[27] PowerTel submission on implementation issues, p. 2.

[28] The Commission notes that under the Chart of Accounts Cost Allocation Manual the mobile carriers were reporting on a quarterly basis.

[29] Optus submission on implementation issues, p. 9.

information on retail price movements (which may feed into commercial negotiations). It would not be involved in setting annual access prices.

In relation to the provision of information by mobile carriers who do not report on a traditional financial year basis, Optus submitted that it would have difficulties providing audited pricing information for periods outside of its financial reporting period of 1 April to 31 March.

On balance, the Commission considers that six-month periods are an appropriate time period for determining retail price movements. As such, for the purpose of resolving any future access disputes, and ongoing monitoring of retail price movements, the Commission considers that retail price movements would likely be determined either according to the calendar six-month periods noted above or the six-month periods within the financial reporting period of 1 April to 31 March. This should provide mobile carriers with sufficient flexibility depending on their reporting periods (as also provided under the RAF) and minimise the compliance costs for mobile carriers.

Approach
Retail price movements would likely be determined on a six-month basis. For the purpose resolving any future access disputes, and ongoing monitoring of retail price movements, the calendar six-month periods of 1 January to 30 June and 1 July to 31 December or the six-month periods within the financial reporting period of 1 April to 31 March would likely be used to determine retail price movements.

B.2.2 A yield methodology versus a retail basket approach

In the Final Report on the Pricing Methodology for the GSM Termination Service the Commission noted that a yield method of calculating retail price movements appeared to be the most appropriate approach for arbitration of access disputes. This involves determining average retail prices by dividing a mobile carrier's total mobile revenue from retail activities by the total number of its mobile minutes from origination services in a given period. In this way a revenue per minute figure (a proxy for average prices) for a mobile carrier is derived that can be compared between periods in order to determine the retail price movements.

The necessary calculations are shown below.

$$(1) \qquad \frac{\text{Revenue from retail mobile services}}{\text{Mobile minutes from originating services}} = \text{revenue per minute} = \text{average price}$$

$$(2) \qquad \frac{\text{Revenue per minute}_2 - \text{Revenue per minute}_1}{\text{Revenue per minute}_1} = \text{\% change in average price}_{1=>2}$$

That said, it noted that a 'retail basket' type approach, similar to that adopted by the Communications Research Unit (CRU), could also be used to determine average prices. This approach involves constructing representative bundles to determine average prices for given usage profiles. A mobile carrier price index is formed from these baskets/profiles and is compared over time to determine the retail price movements.

The Final Report on the Pricing Methodology for the GSM Termination Service noted that the yield approach has advantages in that the information required under a yield approach is relatively easier to obtain than the information that would be required under a 'retail basket' type approach and it takes into account free minutes provided as a part of the overall retail package. Therefore, it is relatively easier to update on a regular basis, and in a more timely fashion. Further, and importantly, it does not enable mobile carriers to substitute free minutes for lower call prices.

In general carriers were supportive of a yield approach and preferred it to a 'retail basket' approach. It was noted that a yield approach is administratively more simple and likely to reduce the regulatory costs (particularly for the mobile carriers) associated with implementing a retail benchmarking approach.

Vodafone considered that a 'retail basket' approach was a first best solution but noted that there were a number of problems that could possibly arise.[30] In particular, it stated that the complexity of a 'retail basket' approach means there are opportunities for access seekers and providers to game the approach to their own commercial advantage. Vodafone is supportive of a retail benchmarking approach that is more of a guideline than a rule[31] and in this respect submitted that it would be preferable to use the simpler yield approach. That said, it noted that the yield approach would need to make some allowance for the existence of innovative pricing in the retail market that takes advantage of excess capacity (off peak and on-net pricing).

To address this potential distortion Vodafone recommended that carriers should have the flexibility to deliver regulated prices falls in wholesale markets in ways that reflect the context of the retail price change. For example, if retail prices declined by 5 per cent because of discounted call minutes in off-peak times then a mobile carrier should be able to deliver a 5 per cent fall in wholesale rates by offering discounted off-peak wholesale minutes.

Optus also expressed concerns about a yield approach not allowing for innovative pricing and submitted that this would likely create distortions.[32] In this sense Optus did not support a yield methodology as it was of the view these distortions were likely to be less under a 'retail basket' approach. In particular it noted that under a yield approach there were likely to be distortions because:

[30] Vodafone submission on implementation issues, p. 4.

[31] Vodafone noted that using a rule rather than a guideline or principle may chill commercial negotiations and mire the industry in complex, costly and a drawn-out set of regulatory debates. It considered that where commercially negotiated outcomes are the norm the Commission should use a more market-orientated approach to regulation. Using a guideline or principle would also provide the Commission with the flexibility to take account of other relevant factors in access disputes.

[32] Optus submission on implementation issues, p. 10.

- peak and off-peak minutes are treated the same, diminishing the incentive of mobile carriers to price off-peak minute in an efficient way; and
- on-net pricing, that is free on-net minutes and capped pricing, is penalised when this is really only a mechanism designed to effectively utilise existing network capacity.

It submitted that as a ‘retail basket’ approach does not take into account minutes of use then mobile carrier’s pricing decisions are less likely to be affected, although it does acknowledge that the distortions will not be totally eliminated just minimised.

It is noted that Vodafone’s and Optus’ arguments are, at a broad level, about whether the retail benchmarking approach will reduce the extent of retail price competition. In the Final Report on the Pricing Methodology for the GSM Termination Service the Commission was of the view that there are sufficient competitive forces in the retail element of the mobile services market to continue to drive retail price competition, despite the linking of retail price movements to access prices for GSM termination. The recent price increases for some mobile services by both Telstra and Optus are noted. While the reason(s) for these price increases are not totally clear it is acknowledged they may be, to some extent, a strategic response to the Final Report on the Pricing Methodology for the GSM Termination Service. However, given other mobile carriers and re-sellers have not announced similar price increases to date and subscribers are able to churn between providers more easily in light of mobile number portability, the Commission considers the competitive dynamics in the market remain to be played out.

Further, as noted in the Final Report on the Pricing Methodology for the GSM Termination Service the Commission considers that the benefits of greater precision (that may result under a retail basket approach) are unlikely to outweigh the higher implementation costs.

The Commission also understands that a retail basket approach, as modelled by the CRU, does include minutes of use. Specifically, minutes of use are used in defining the bundle or user profile and therefore the number of calls that an end-user makes. Additionally, any free minutes which constitute discounted pricing for the end-user are also included in determining average prices. In this respect the Commission considers that average prices determined under a yield method are unlikely to be significantly different from those determined under a retail basket approach.

Off-peak and on-net calls are a form of outgoing calls that mobile carriers receive revenue from and/or which contribute to minutes of use. Not including these calls could distort the average price figures, as such calls would appear to be an important form of discounting for the mobile carriers. That is, by not including off-peak and on-net call revenues and minutes of use, the measure of average price is likely to be higher than what end-users effectively face. These call types and the pricing of them effectively lower the average price faced by end-users. That said, the Commission will consider using peak/off-peak revenue weights in the revenue calculations. In any event, as most mobile carriers already have off-peak and on-net pricing initiatives in place any distortions under a yield methodology would not be as large as if such pricing initiatives did not exist.

Vodafone suggested that carriers should have the flexibility to deliver regulated prices falls in wholesale markets in ways that reflect the context of the retail price change. While the Commission does not propose to determine retail price movements of mobile carriers for different call types (for example, peak/off-peak calls and on-net/off-net calls) this should not preclude commercial negotiations in relation to access prices incorporating such considerations where relevant.

In the Final Report on the Pricing Methodology for the GSM Termination Service the Commission proposed that under the yield method it would use revenue per minute as a proxy for average price. Such an approach means that mobile carriers cannot substitute free mobile minutes for retail price reductions in order to avoid lower access prices for GSM termination. Most carriers were of the view that revenue per minute is the best proxy for average price under a yield approach. In particular, AAPT submitted that presently access seekers acquire the GSM termination service at a per minute usage charge and, therefore, it would be appropriate to use revenue per minute.[33] Vodafone submitted that it would not be appropriate to use revenue per subscriber as a proxy for average prices as per subscriber figures may reflect consumer spending rather than retail price movements.[34]

Approach

A yield method would likely be used to determine retail price movements using revenue per minute as a proxy for average prices.

B.2.3 Services for inclusion

In the Final Report on the Pricing Methodology for the GSM Termination Service the Commission provided its preliminary views as to services which should be included in the revenue calculations under a yield approach. It indicated that, while revenues from wholesale sources should be excluded from the revenue calculations under a yield approach, revenues (and minutes of use where relevant[35]) from the following GSM-related retail services should be included:

- outgoing calls;
- subscription (access) fees;
- sales of handsets;
- initial connection charges; and
- charges for SMS and voicemail services.

[33] AAPT submission on implementation issues, p. 3.

[34] Vodafone submission on implementation issues, p. 5.

[35] In regards to minutes of use, the Commission proposed that this would need to encompass the number of minutes of outgoing calls and voicemail messages, and the number of SMS messages.

It noted that outgoing calls and access fees (which incorporate handset subsidies) are the primary source of retail revenue for carriers.[36] Further, SMS messaging and voicemail were seen as increasingly important sources of revenue for mobile carriers and with strong take-up rates to date for these services it was considered that including them in revenue calculations would ensure that retail price reductions can not be transferred between core call services and value added services so as to avoid reductions in access prices for GSM termination.

Optus[37] and Vodafone[38] both raised concerns about the treatment of handset subsidies in the revenue calculations. In particular, they noted that as mobile carriers begin to move towards 'SIM-only' plans that do not include handset subsidies this will appear as a reduction in average prices when it really reflects a re-balance in payments by the end-user. It was noted that at the moment many end-users purchase a subsidised handset (at little or no charge) and that this subsidy is then recouped through access fees and outgoing call charges. Increasingly, however, as the market becomes more heavily penetrated and end-users retain their handsets from previous plans, mobile carriers will reduce the amount of subsidies paid and become less reliant on higher access fees and outgoing call charges to recoup these subsidies.

Optus suggested that in implementing a retail benchmarking approach the Commission could exclude 'SIM-only' plans or make an adjustment to its data to reflect their impact. Vodafone suggested that a net cost figure be derived for handsets and connections (taking into account both revenues and costs)[39] and that this figure then be deducted from the other revenues included in the revenue calculations. It noted that any net cost figure for connection would need to be spread over the average length of a contract, which would involve the Commission accessing the information necessary to determine net connection costs as far back as the average length of a contract. Vodafone submitted that this would involve relatively simple calculations and would have the benefit of ensuring that the changing market conditions are accurately reflected in the retail benchmarking approach.

The Commission considers that there is a need to take into account the 'SIM-only' plans, particularly given the likelihood of expanding uptake over the implementation period for the approach. Further, if the 'SIM-only' plans were excluded from the revenue calculations then it would enable mobile carriers to transfer price decreases to these plans and avoid reductions in access prices for GSM termination. The framework proposed by Vodafone appears to be an adequate means of taking into account the handset subsidy and the new 'SIM-only' plans. By incorporating these net connection costs in the revenue calculations

[36] The Commission also noted that Telstra earns revenues from mobile phones that are provided to customers as a substitute for landlines, in accordance with meeting its Customer Service Guarantee and Universal Service Obligation. The Commission's view is that such revenue should not be included in the calculation of the average price.

[37] Optus submission on implementation issues, p. 16.

[38] Vodafone submission on implementation issues, p. 9.

[39] This would take into account any revenues from sales of handsets plus connection fees, less any costs such as the purchase of the handset from the manufacturer or the subsidy paid to dealers.

the extent of the handset subsidy that is recouped from the access fees and outgoing call charges will be taken into account.

In its submission AAPT considered that because SMS is not supplied on a timed basis an increase in SMS traffic would increase revenue but would not be reflected in retail minutes, thereby distorting the glide path.[40] It also argued that SMS is not delivered using the same network elements as voice services and therefore should not be included. AAPT considered similar concerns apply to voicemail services.

The Final Report on the Pricing Methodology for the GSM Termination Service noted that the Commission had considered a number of different methods to incorporate SMS services under the yield method. In this respect it proposed to apply a yield method (in terms of average price for a message) to derive a price change, which is then revenue-weighted and combined with the other retail services to derive an overall retail price change. It was also proposed that voicemail services be included in revenue calculations, taking into account relevant revenues and call minutes associated with voicemail services. In this way the Commission does not consider that inclusion of SMS or voicemail services in the revenue calculations will distort the glide path.

Optus submitted that (wholesale) incoming call revenues should be included in the revenue calculations as they are ‘an integral part of the total mobile service offering’.[41] It argued that not including incoming call revenues would mean price reductions are understated for end-users who use their phones predominantly for incoming calls and who are a part of closed user groups.

The Commission does not intend to include these revenues in the revenue calculations as they are derived in the wholesale element of the mobile market. It is this element of the market, and indeed this revenue stream, which the Commission expressed concern about in the Final Report on the Pricing Methodology for the GSM Termination Service. In particular, it noted that control over access, and to an extent consumer ignorance, result in mobile carriers sustaining above-cost access prices for GSM termination. A retail benchmarking approach places a relevant competitive discipline (competition in the retail element of the mobile market) on the wholesale incoming call revenue steam of carriers. Including these revenues in the revenue calculations would diminish the impact of this competitive discipline.

Inclusion of revenues from the resale of mobile services was also raised. All responses on this issue did not consider their inclusion in the revenue calculations to be appropriate as revenue from resale belongs to the wholesale category. Telstra also submitted that because resellers set the retail prices of resale services, revenue from resale services would not reflect retail price movements of access providers.[42] Vodafone did not support the inclusion

[40] AAPT submission on implementation issues, p. 4.

[41] Optus submission on implementation issues, p. 15.

[42] Telstra submission on implementation issues, p. 4.

of revenue from resale because it anticipates having difficulties collecting and collating the information due to contractual obligations.[43]

In terms of providing the revenue and minutes of use information outlined above, both Optus[44] and Telstra[45] submitted that they did not envisage any difficulties.

Approach

Revenues and minutes of use from the following services would likely be used in the revenue calculations:

- outgoing calls;
- subscription (access) fees;
- sales of handsets;
- initial connection charges; and
- charges for SMS and voicemail services.

Revenues would likely be adjusted for 'SIM-only' plans, but revenues from resale and wholesale services would likely be excluded from the calculations.

B.2.4 Adjusting for quality change

In the Final Report on the Pricing Methodology for the GSM Termination Service the Commission noted that it would be unlikely to adjust retail price movements for changes in quality unless there is compelling evidence of an impact on the retail price changes that has occurred during a six-month period. This followed comments from Optus that, if the Commission did not correctly implement retail benchmarking, changes in the quality of mobile services may be mistaken for changes in real prices of outputs.[46] In particular, Optus submitted that over the last three years there has been a decrease in mobile subscription prices in absolute terms (caused by the rapid take-up of pre-paid services) but that this decrease mainly reflects the lower quality and costs of handsets in the pre-paid market.

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[43] Vodafone submission on implementation issues, p. 8.

[44] Optus submission on implementation issues, p. 15.

[45] Telstra submission on implementation issues, p. 4.

[46] Optus submission to the Draft Report on the Pricing Methodology for the GSM Termination Service, p. 35-36.

Optus suggested the development of a mobile subscription quality index to enable the separation of price and quality changes to mobile subscribers.

The Commission was of the view that attempting to calculate quality changes would be problematic. Further it noted that it may be the case that decreases in the quality of the overall retail package are offset by the increases in quality of the overall retail package (e.g improved handsets being provided at existing subscription prices). In such circumstances there would be little or no change in average quality and as a result there may be little benefit from price adjustments.

Most carriers did not believe that retail price movements should be adjusted for quality given the complexity of such calculations. Optus, however, submitted that adjusting for quality is necessary and reiterated its concerns, suggesting the use of a mobile subscription quality index. [47]

The Commission continues to be of the view that unless there is compelling evidence of an impact on the retail price changes that have occurred during a six-month period retail price movements should not be adjusted for quality.

Approach

Retail price movements would not likely be adjusted to account for changes in quality of mobile services.

B.2.5 Possibility of 'credits'

In the Final Report on the Pricing Methodology for the GSM Termination Service the Commission noted its initial view that the use of a period-on-period approach may be preferred in determining retail price movements. A period-on-period approach involves a reduction in access prices by the percentage change in the average retail price for each six-month period. In contrast the use of a cumulative approach would involve ensuring access prices reflect the total percentage change in average retail prices since the setting of the initial access price.

The Commission considered that while the use of period-on-period or cumulative approaches would generally not lead to substantial differences in access prices, this issue may become important if disputes over access prices re-emerge during the two-year implementation period. In particular, if parties negotiated access prices on the basis of forecasted retail price changes, which were different from the actual retail price changes that eventuate, under a cumulative approach the Commission would need to take that difference into account in an access dispute (i.e. allow for 'credits'). The risk that the forecast retail price changes are incorrect could have rested with one party – a cumulative approach may mean that any risk is subsequently mitigated by the Commission by allowing for credits. A period-on-period approach does not allow for mobile carriers to build up 'credits' for

[47] Optus submission on implementation issues, p. 15-16.

reductions in access prices which are greater than retail price movements and may promote commercial negotiations as mobile carriers may be more willing to negotiate longer-term arrangements.

Several carriers were supportive of a period-on-period approach noting that the administrative difficulties associated with a cumulative approach did not lend it support. Further, Vodafone noted that under a cumulative approach arbitrated outcomes would become the rule rather than the exception because there would be incentives for all parties to seek arbitrated outcomes in the event that commercially negotiated prices did not align with expectations for retail price changes.[48]

That said, both Telstra[49] and the Centre for Telecommunications Information Networking (CTIN)[50] were supportive of a cumulative approach. Telstra submitted that it would be simpler and more likely to provide incentives for commercial negotiation (as compared to a period-on-period approach).[51] In this respect it stated that the Commission's assessed lowest access price in the market would be transparent and therefore negotiations would be encouraged. It was of the view that superimposing adjustments on the most recently agreed access prices would overly complicate the calculation of access prices and limit transparency. CTIN considered that a period-on-period approach would tempt distortions with mobile carriers either holding back or bringing forward price declines.

The Commission considers that a period-on-period approach is to be preferred for the reasons outlined above. In relation to Telstra's arguments, the Commission notes that as long as each mobile carrier's retail price movements are transparent (either because of the Commission publishing such information or mobile carriers making it available to access seekers) then commercial negotiations should not be hampered under a period-on-period approach. In addition, and as noted above, commercial negotiations may be hampered under a cumulative approach where the Commission would be required to make adjustments if forecasted retail price movements differed from actual movements.

Approach

Under a yield methodology, retail price movements would likely be implemented on a period-on-period basis.

[48] Vodafone submission on implementation issues, p. 10.

[49] Telstra submission on implementation issues, p. 4.

[50] CTIN submission on implementation issues, p. 3.

[51] In particular Telstra noted that if access seekers can obtain a rate equal to the most recent price between **any** access seeker and access provider then access providers will have little incentive to negotiate commercially below the maximum rate they could obtain under the Commission's proposed approach. The Commission notes that for the purposes of resolving future access disputes (under a yield method and a period-on-period approach) it proposed to use of the most recent agreed access price between **the** access seeker and the access provider. Therefore the Commission does not consider that such a disincentive exists.

B.3 Backdating of final determinations in access disputes

The Commission did not raise the issue of backdating in the Final Report on the Pricing Methodology for the GSM Termination Service as it considers that this issue is generally raised and resolved in the context of particular access disputes. However, both AAPT and Vodafone raised the issue in their submissions. In particular, they were concerned with the backdating of final determinations for access disputes that were current at that time.

AAPT stated that the need for a reasonable outcome on backdating is particularly acute in these matters as the public consultation on pricing principles had taken over 18 months.[52] It was of the view that failure by the Commission to address backdating would result in unregulated access prices during this period, which would be inconsistent with the objectives of Part XIC of the *Trade Practices Act 1974*. Vodafone considered that with the large number of commercially negotiated access prices, backdating prior to 1 July 2001 should only be considered where:

- access prices offered to the access seeker in the earlier period were not consistent with the market rates that existed at the time; or
- the access seeker can show that the access provider did not provide reasonable commercial offers to the access seeker during the period.[53]

The legislative framework of Part XIC provides the Commission with the discretion to backdate final determinations in access disputes. These provisions were introduced to encourage commercial agreement and co-operation during access disputes by removing incentives for delay and to ensure a considered and reasonable outcome is ultimately applied to the interim period which may otherwise be covered by an interim determination or a commercial agreement which one or more parties may be disputing.[54] There is, however, no explicit guidance as to those instances when the Commission should backdate final determinations.

While final determinations are no longer required for the access disputes current at the time the Final Report on the Pricing Methodology for the GSM Termination Service was released (as they have been withdrawn) it is noted that the Commission has a general presumption towards backdating final determinations made in access disputes. That said, in resolving access disputes the issue of backdating will be considered on a case-by-case basis, depending on the circumstances relevant to a particular access dispute. Further, it is noted that the Commission is currently developing arbitration guidelines for the purpose of facilitating access disputes and that the issue of backdating is being considered, more broadly, in that context.

[52] AAPT submission on implementation issues, p. 1-2.

[53] Vodafone submission on implementation issues, p. 4.

[54] Explanatory memorandum, p.33.

B.4 Monitoring and publication of information

In the Final Report on the Pricing Methodology for the GSM Termination Service it was noted that the Commission expected access prices should at least move in line with retail price movements of each mobile carrier for the next two years. Further, it noted that the retail benchmarking approach will be reviewed in two years time. Therefore, ongoing monitoring of the mobile market and publication of information will be important for two purposes:

- to ensure that sufficient information is available to inform parties of the retail price movements; and
- to assess the ongoing case for regulation of access prices for GSM termination at the end of the two year period.

B.4.1 Monitoring to enhance implementation

As noted above, the Commission will likely collect information on retail revenues and minutes of use for GSM services via the RAF (possibly supplemented to some extent). While in principle the collection of this information could be left to situations where there are particular access disputes, the Commission's view is that collating this information on a consistent basis for all mobile carriers is preferable. As noted in section E.2 this will allow the Commission to publicly release carrier-specific retail price movement indexes if it believes this will encourage commercial negotiation, subject to any confidentiality arrangements.[55]

B.4.2 Monitoring to assess on-going need for regulation

The Commission will also undertake monitoring activities to determine whether there is a need to extend the benchmarking approach past the two year implementation period, and, if not, whether the GSM originating and terminating service declaration should be revoked or to consider other forms of regulation.

As noted in Chapter 7 of the Final Report on the Pricing Methodology for the GSM Termination Service, the Commission considers that one of the issues industry should give further consideration to is the benefits of structural changes to improve consumer awareness of (a) access prices for GSM termination; and (b) which network the consumer has called. Industry should consider discussing such changes in a formal context, such as through ACIF. As noted, this will be one of the actions that the Commission will consider favourably in its review of GSM termination in two years, as it is likely to increase competitive pressure on access prices for GSM termination.

The Commission also noted in Chapter 5 of the Final Report on the Pricing Methodology for the GSM Termination Service that the overall mobile market appeared increasingly competitive. The Commission intends to undertake further monitoring of carrier conduct

[55] The Commission recently released a Discussion Paper on *Regulatory Principles for Public Disclosure of Record-Keeping Rule Information*.

and performance in this market, and its implications for the fixed-to-mobile market. This will likely take the form of the Commission requesting information on fixed-to-mobile prices (to compare against access prices) from fixed and integrated carriers, and cost and revenue data from mobile carriers. A specific Record Keeping Rule may also be appropriate for this purpose.