SUBMISSION TO THE AUSTRALIAN COMPETITION AND CONSUMER COMMISSION

Response to ACCC Draft Decision

Mobile termination access service

30 April 2004

Executive Summary

In its letters to the Australian Competition and Consumer Commission (the Commission) of 1 April 2004, 16 April 2004 and 28 April 2004 (Prior Correspondence) Vodafone put to the Commission a number of serious concerns about the Commission's Draft Decision in relation to the mobile terminating access service. As is evident from that correspondence these concerns fall into two categories:

- The procedure followed by the Commission in making the Draft Decision and the procedure followed by the Commission since the release of the Draft Decision, both in terms of the timeframe allowed to interested parties to respond and the Commission's response to requests made and the questions put to the Commission by Vodafone in the Prior Correspondence and the meeting between representatives of Vodafone and officers of the Commission on 8 April 2004; and

- The substance of the Draft Decision in a significant number of fundamental respects.

As foreshadowed in its letter to the Commission of 28 April 2004 this is a submission by Vodafone in response to the Draft Decision in accordance with the deadline for response imposed by the Commission and is made on the basis set out in that letter.

Accordingly, this submission must be read together with and is subject to the matters raised in the Prior Correspondence which together with this submission constitute the response to date by Vodafone to the Draft Decision.

Our views contained in this submission can be broadly summarised as follows:

- The Commission has taken a simplistic and unnecessarily broad view of what services should be included in the service description relating to the mobile terminating access service. It is not justified in including 3G voice termination in the service description. Regulation of 3G will impact on investment and there is little, if any, benefit to end-users that will result from regulating the service. The Commission's argument is only one of regulatory consistency. Vodafone is unaware of any other regulator in the world intervening in 3G in this way;

- The Commission has also acknowledged that it does not have any information or undertaken any analysis regarding the costs of operating a 3G network. Even if the Commission proceeds with regulation of 3G voice termination, it is inappropriate for the Commission to simply assume that it should be regulated on the same terms as existing services;

- Vodafone supports the Commission's view that mobile termination services in respect of data (SMS, MMS, etc) is not in the LTIE. However, Vodafone is very concerned that the Commission has put the industry on notice that it may regulate these services in future. Given that data services in the context of mobile networks is very immature, it is inappropriate for the Commission to be even contemplating such a move at this time. To do so sends negative signals to the market and puts future investment in these services at risk;

- The Commission contends that the market relevant to its Draft Decision is that of call termination on each mobile operator's network. Vodafone disagrees with the Commission's analysis and conclusions in regard to market definition and market power. Vodafone's view, supported by expert analysis undertaken by Frontier Economics, is that it is appropriate to define the market as a broad cluster market for mobile services. In any case, Vodafone does not have market power, regardless of how the market is defined and therefore intervention on this basis is not justified;

- Contrary to the Commissions view, the outbound mobiles market is effectively competitive. We note that the Commission appears to have changed its view on the competitiveness of the outbound market. While its revised view may assist to justify its intervention in mobile termination prices, it is inconsistent with both the nature of the market and the behaviour of the participants in it. It is also inconsistent with the conclusions that the Commission reached in its recent Final Decision regarding regulation of the Transmission Capacity Service;

- The Commission also concludes that economic profits are being earned in the outbound mobiles market. The analysis supporting this conclusion is fundamentally flawed and is based on questionable data regarding Telstra and Optus, both of which are fully integrated fixed and mobile networks. In Vodafone's view, industry reports and press releases regarding those

businesses do nothing to inform the economic profitability of the market. Vodafone believes that, as a stand-alone mobile operator, it provides the best proxy for any economic profitability analysis. In order to aid the Commission, Vodafone has done such an analysis using essentially the same methodology employed by OFTEL in its analysis of the economic profitability of the UK mobiles market. As we demonstrate, Vodafone does not earn economic profits;

- Vodafone does not believe that regulation of the mobile terminating access service will enhance competition in either the mobiles market or any downstream fixed to mobile market. On the contrary, we expect competition in the mobiles market to be diminished and competition in the market in which F2M calls are provided will remain unchanged. Given that, any further regulation of the mobile terminating access service will simply result in a value transfer between mobile and fixed players. This is not in the LTIE;

- Vodafone has serious concerns regarding the Commission's proposed pricing principle. In Vodafone's view, the proposed pricing principle is uncertain and ambiguous. Further, it appears that the Commission is acting beyond its statutory powers in attempting to set an actual price for the service. The "target price" approach apparently adopted by the Commission will interfere inappropriately with commercial negotiations and effectively pre-empt the "negotiate arbitrate" process contemplated by the *Trade Practices Act*;

- Regardless of whether the Commission has the power to set a price rather than a pricing principle, it is Vodafone's view that the benchmarks adopted by the Commission are inappropriate and insufficient. Material relating to the Sprint cost figures cannot be easily applied to the Australian market since it relates to an entirely different market structure. It is also based on a modelling technique that is inconsistent with what we understand to be the Commission's own views regarding the allocation of fixed and common costs. Similarly, the UK material cited also cannot be simply applied to the Australian situation. The Analysis model that has been used has been acknowledged to be flawed and we understand has been modified significantly since it was used by OFTEL;

- If the Commission is to employ benchmarking at all it must have regard to a wider range of data than it has currently used and ensure that it is either relevant to the Australian context or modified so that it takes that context into account. It must also use a more robust exchange rate conversion process than the one employed by the Commission. Using a two week moving average exchange rate is simply inappropriate. The use of long term average exchange rates that match the economic life of the investment more closely would help to ensure that the Commission does not understate the Australian Dollar equivalent price as it clearly has done in this case; and

- The Commission has done nothing to ensure "Pass Through" of regulated reductions of mobile terminating access rates to consumers. Given that both Telstra and AAPT have openly acknowledged in their submissions to the Commission that they do not pass reductions on to consumers this failure is difficult to understand. This is especially so in the context of Telstra's announcement today that it will be increasing the call connection fee charged to consumers for a fixed to mobile call by more than 6%. This highlights where the real problem in the price of fixed to mobile call pricing lies – the fixed network. While Vodafone's mobile terminating access rate has decreased by 45% in real terms over the last five years, fixed network operator charges have not. This will continue to be the case unless the Commission focuses on the real problem.

1 Introduction

As stated in previous correspondence, because the Commission has not dealt adequately or at all with the serious concerns that Vodafone has raised in that correspondence and because the Commission has refused to grant Vodafone, in the terms sought by Vodafone, an extension of the 30 April 2004 deadline, Vodafone is not in a position to comprehensively respond to the Draft Decision. In light of these constraints, this paper represents Vodafone's endeavour to provide the Commission with a submission that is as comprehensive as can reasonably be achieved in relation to its Draft Decision released in March 2004.

As stated in its letter of 28 April 2004, Vodafone intends to provide further responses to various components of the Draft Decision. The details of these further responses were more fully set out in that letter and which, in some respects, are foreshadowed in parts of this submission.

In summary, the Commission's Draft Decision proposed that:

- Declaration of a varied mobile terminating service would be in the long term interests of end users (LTIE);
- The declaration would be varied to include voice termination services on all "digital mobile networks" including 3G networks; and
- Pricing principles for the mobile termination service should be amended to include a new pricing principle, which ensures the price of the termination service gradually decreases towards a conservative benchmarked target of 12 cents per minute, over a staged adjustment period to 1 January 2007.

As Vodafone has outlined in numerous submissions and presentations, the mobile terminating access service should not be re-declared. Given this, Vodafone is very concerned with many aspects of the Draft Decision particularly given the significant shift in the Commission's philosophy regarding regulatory intervention in the Australian mobiles market and markets generally.

The subsequent sections of this submission provide Vodafone's views on the following:

- Section 2 considers the Commission's conclusions regarding the appropriate service description and in particular the Commission's Draft Decision to vary the declaration to include the 3G voice service;
- Section 3 considers the Commission's approach to market definition;
- Section 4 considers the Commission's analysis of the state of competition in the termination service market;
- Section 5 considers the Commission's analysis of the state of competition in the outbound mobiles market and in particular the Commission's analysis of the economic profitability of the mobiles outbound market;
- Section 6 considers the Commission's analysis of the extent to which competition would be promoted in the mobiles outbound market and the market in which F2M calls are provided if the termination service was re-declared and the suggested pricing principles implemented;
- Section 7 considers the Commission's analysis as to whether the declaration will achieve any-to-any connectivity;
- Section 8 considers briefly the Commission's analysis as to whether the declaration will encourage the economically efficient use of, and investment in infrastructure;
- Section 9 makes comment on certain aspects of the Commission's proposed pricing principle in addition to those serious concerns raised by Vodafone in the prior correspondence; and
- Section 10 considers the issue of F2M pass through.

The views contained in this submission do not in any way detract from Vodafone's views that it has previously presented to the Commission, namely that the mobile termination access service should not be re-declared.

2 Service Description

The Commission notes in its Draft Decision that the nature of voice services are essentially the same irrespective of the mobile technology that provides the service. The Commission therefore concludes that "…if the Commission finds the market for the supply of 2G voice termination services is an essential service without bottleneck characteristics, it follows that the same reasonably applies to 2.5G and 3G voice services."[1]

Vodafone acknowledges that the nature of "simple" voice services will be similar irrespective of the mobile technology employed to deliver the service. In relation to voice services, customers are unlikely to know whether they are connected to Vodafone's 3G or 2G network, once Vodafone's 3G network is deployed. Traffic will seamlessly switch from the Vodafone 3G to 2G network and vice versa so that voice services will not be interrupted.

However, Vodafone believes that this fact alone is not sufficient for the Commission to conclude that all voice termination services, irrespective of the mobile technology, should be regulated and that the same regulation should apply. The Commission's analysis in this regard fails to consider a broader array of matters that are relevant to the issue before it can conclude whether regulatory intervention is justified. The fact that the service may appear to be similar across different mobile technologies is not in itself sufficient justification to regulate all technologies. While 3G technology services are still in their infancy, the Commission, should as a matter of principle, let the market determine the appropriate commercial arrangements.

2.1 The Commission is the first regulator in the world to regulate 3G

The Commission is the first regulatory authority in the world, that we are aware of, proposing to regulate 3G voice services. This essentially means that the Commission has fundamentally shifted its regulatory approach to the mobiles market from one that was widely considered to be relatively light-handed and innovative to one of the more heavy-handed in the world.

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[1] ACCC, Draft Decision, March 2004. pg 20.

Although the Commission believes its pricing principle is "relatively light-handed", it is only light-handed in the sense that it avoids the complexities and costs associated with the adoption of a total service long run incremental cost (TSLRIC) methodology in determining prices.[2] In every other respect, this is a very heavy-handed approach to regulating prices in a market that is considered by many market observers to be highly and increasingly competitive.

Vodafone is gravely concerned about the potential impact of the Commission's decision in this regard. While Vodafone is committed to its investment in a 3G network in Australia, this decision will have an impact at the margin on investment in mobile infrastructure in Australia. This seems to be a point that the Commission has ignored.

Vodafone believes that the Commission's analysis fails to seek to understand these marginal impacts on investment in infrastructure. The Commission's methodology to analyse any impact on investment in infrastructure appears to be to quote media releases of carriers in terms of their commitment to particular investments in infrastructure and use this as evidence that investment incentives will not be dampened as a result of regulation.

The Commission, for example, notes "Vodafone's recent announcements regarding its intention to invest 'hundreds of millions of dollars over the next two years in the development of a globally compatible 3G network' that will enable customers to receive 3G-based services in Australia by mid 2005." The Commission also notes "…that despite cost-based retail price (RPI)-X based price regulation of the mobile termination service in the UK, Vodafone has recently announced that it will launch 3G data services in the UK in 2004."[3]

While Vodafone accepts that any analysis of potential impacts on investment of regulation is complex, the Commission's analysis fails to acknowledge that the impact on investment will be at the margin and to quantify this impact. While a Final Decision from the Commission that included the regulation of 3G voice services is unlikely to mean that Vodafone or other carriers will cease all plans to invest in new infrastructure and technologies, it will impact on investments at the margin by for example:

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[2] ACCC, Draft Decision, March 2004. pg xvi.
[3] ACCC, Draft Decision, March 2004, pg 147.

- altering the timeframe for investments;
- the extent of the investment; and/or
- the risk adjusted return required from the investment.

Notwithstanding problems associated with quantifying this impact, Vodafone believes that in principle the Commission must accept that if it decides to implement something similar to the Draft Decision in the Final Decision, this will negatively impact investment at the margin in the mobiles industry.

In relation to the Commission's statement about investment in the UK, Vodafone notes that 3G is not regulated in the UK. This fact alone undermines the Commission's conclusion that investment incentives in the UK have not been affected by price regulation of the mobile termination service, because regulation of mobile termination rates does not apply to 3G in the UK.

2.2 The Commission must satisfy itself that the extension of regulation to 3G voice services is in the long term interests of end-users (LTIE)

As mentioned above, the fact that voice services are similar across all types of mobile network technology is not sufficient in itself to justify the extension of regulation of voice termination across all network types. This analysis is too simple and does not take into account the key objectives under section 152AB of the Act, that the Commission must have regard to when deciding to declare or re-declare a service.

Before deciding whether to regulate 3G, the Commission must consider whether the extension of the declaration to include 3G voice termination services will promote LTIE. In determining whether the LTIE will be promoted, the Commission must have regard to the extent to which extending the declaration is likely to promote competition in the markets for listed services and any-to-any connectivity. The Commission must also consider the extent to which the economically efficient use of, and investment in, infrastructure will be promoted.

Vodafone does not believe that the declaration of 3G voice termination will promote the LTIE. Given the immaturity of 3G technology that is only now beginning to be

deployed in Australia, Vodafone does not believe the Commission has built a case to justify an extension of the regulation.

In Australia, there is currently one 3G network – that of Hutchison. Hutchison's 3G network only provides coverage in Melbourne, Sydney, Perth, Adelaide, Brisbane and the Gold Coast. Hutchison's '3' customers roam onto Vodafone's GSM network when outside Hutchison's W-CDMA coverage. Vodafone has previously publicly announced its commitment to building a 3G network with the launch of 3G services sometime in 2005. Neither Optus nor Telstra have made commitments regarding their planned investment in 3G. In deciding to declare the 3G voice termination service, the Commission is essentially regulating a service or a technology that hardly exists. At this point in time, Vodafone believes that intervention is not justified and that the market should be left to determine the appropriate commercial arrangements to apply to 3G.

Furthermore, the Commission's purported welfare gains of regulating the mobile terminating access service that would be attributable to the 3G voice termination services must be trivial. Industry reports suggest that Hutchison's '3' business has approximately 100,000 subscribers – representing approximately 0.7% of the total number of mobile subscribers in Australia. Although its customer base is slowly growing, this is a very small proportion of the total number of mobile subscribers and will remain so for a significant period of time. In addition, **[commercial in confidence].**

Even if one were to accept the Commission's welfare gain calculations, the welfare gains that would be attributable to 3G termination must be negligible at this point in time. Further, these purported welfare gains will only grow slowly as 3G networks are rolled out and 3G services are taken up by customers. Vodafone does not believe that the Commission can conclude that there are significant and measurable welfare gains as a result of declaring the 3G voice termination service. This must be compared with the risk of regulatory error and that it will not actually deliver the welfare benefits that are believed to exist.

2.3 How does the Commission know what it costs to terminate a call on 3G networks?

The Commission's 12 cents per minute 'target price' for the mobile termination access service is proposed to apply to all voice traffic terminating on all mobile technologies including 3G. In a meeting between representatives of Vodafone and the Commission, the Commission acknowledged that it had not used any 3G cost modelling or benchmarking information to construct its target price or target price range for the mobile termination service. Vodafone considers the Commission's analysis in this regard to be untenable.

Vodafone is not aware of any TSLRIC or any costing model has been built by a regulator in the world for 3G. And the reason is simple – 3G technology is very new and the companies around the globe are only now beginning to deploy 3G networks. Even if an economic model had been built elsewhere to estimate the cost of terminating a call on a 3G network, its applicability to the Australian context, given the differences in geography, population density, network performance and network deployment models would also need to be considered.[4]

In addition, Vodafone is not aware of any costing information that has been provided to the Commission by Hutchison in respect of its 3G network. Even if costing information has been provided to the Commission, given the immature nature and limited deployment of its 3G network, the analysis is unlikely to provide any useful data regarding the costs of deploying, operating and maintaining 3G networks in Australia. Given this, Vodafone does not believe it would be appropriate to base cost modelling on Hutchison's 3G network costs.

Vodafone also understands that Hutchison in the UK prices termination on its 3G network significantly higher than the prices that exist for 2G and 2.5G networks. It is understood that Hutchison actually charges 25 per cent higher than the lowest termination rate in the market for 2G mobile termination services. It may be argued that Hutchison has a higher termination price simply as it is not subject to the same RPI-X price cap that exists on 2G networks, however, Vodafone does not agree with this argument. Hutchison's pricing behaviour is consistent with views that have been

[4] This point also applies when considering benchmark cost data for 2G and 2.5G networks. This issue is examined in more detail in section 10 of this submission and will also be considered further in subsequent Vodafone submissions.

expressed by Ovum, for example, that the cost of terminating traffic on 3G networks is higher than 2G networks.[5]

For the reasons outlined above, Vodafone does not believe that the Commission is in a position to be able to conclude that the cost of terminating a voice call on a 3G network is the same or close to that of other networks. While it might be appropriate for the Commission to maintain a watching brief regarding 3G, Vodafone strongly believes that the declaration should not be amended to include 3G voice services.

Vodafone also believes that the Commission's suggested drafting of the service description in Appendix A of its Draft Decision is very broad and vague given its reference to "digital mobile telephony services". Vodafone is not entirely clear of the Commission's intent in this regard or whether there is common understanding as to what this actually means. Vodafone intends to provide further comments on the Commission's definition of the service description in Appendix A.

2.4 Mobile to mobile termination

The Commission has decided that both F2M termination and mobile to mobile termination should be included in the service description and therefore included within the declaration. As Vodafone has previously outlined, Vodafone does not believe it is necessary for the declaration to cover mobile to mobile termination. As the Commission notes, mobile to mobile termination traffic typically balances between mobile carriers unlike fixed to mobile termination traffic. Further, there is no justification for declaring mobile to mobile termination on the basis that it will promote competition or any-to-any connectivity. Vodafone will provide further information to the Commission on this matter.

2.5 Mobile data services

The Commission's preliminary view in its Draft Decision is that the declaration of mobile termination services in respect of data (SMS, MMS etc) is not in the LTIE. The Commission's main reason for this view is that it "favours a light-handed regulatory approach with respect to the regulation of immature services."[6] The

[5] Ovum note that that 3G investment costs could add around 2 Euro cents per minute to termination rates in EU countries based on modelling they have done. See report by Ovum titled Mobile Termination Rates. January 2004.
[6] ACCC, Draft Decision, March 2004. pg 21.

Commission however, does put the industry on notice that it may consider amending the declaration in the future to include these services.

While Vodafone supports the Commission's view that declaration is not justified, it is concerned that the Commission is signalling that it may be appropriate to vary the mobile termination access service declaration to include data services at some point in the future. These services are very immature and are not fully understood by the market let alone the regulator. The Commission should not, at this point in time, be contemplating, in any capacity, whether it is appropriate for these services to be declared. As mentioned above, Vodafone also believes that the Commission's "forbearance" view regarding immature data services should also apply to immature technologies like 3G voice services.

3 Market Definition

The Commission in its Draft Decision concludes that the mobile termination service is not sold as part of a bundle (or cluster) of retail mobile services. And that as a result it believes that the provision of the mobile termination service is not constrained by competition in the market for retail mobile services. Further, the Commission finds that all mobile operators – irrespective of their size – have market power when it comes to terminating calls on their networks.

The source of market power is driven by, according to the Commission, the fact that the termination services of individual mobile network operators are not substitutable for each other. That is, if a subscriber of mobile network A wishes to call a subscriber of network B, network A has no choice but to buy termination services off network B. The Commission also suggests that the substitutes for contacting a mobile phone subscriber (eg. fixed to fixed, mobile to fixed, SMS, email, VOIP) are insufficient to constrain the behaviour of providers of mobile termination services.

Vodafone disagrees with the Commission's conclusions in regard to market definition and market power. Vodafone has outlined previously, including through its own submissions and also papers by Frontier Economics, that the strong complementarities of supply and demand that exist between mobile termination, subscription, and outgoing services means that it is appropriate to define the market as a broader cluster market for mobile services. While we will be submitting a more detailed submission on market definition, Vodafone would like to address a number of broad issues regarding the Commission's approach in its Draft Decision.

Firstly, Vodafone's believes that it is obvious that the Commission's approach to market definition is flawed particularly in regard to the Commission's analysis of the state of competition in the termination service market. For example, the Commission's analysis of the barriers to entry into this market concludes that an "absolute barrier to entry into the market exists, as another operator is unable to provide termination services on any other operator's network."[7]

However, the barriers to entry into the market for termination services are the same as those for the mobile market as a whole. These barriers to entry include the availability of spectrum and the existence of sunk costs.[8] Once a carrier has acquired spectrum and built a mobile network, it is able to offer termination services on its own network. Most importantly however, once a person or business decides to enter the termination service market it also automatically enters the retail outbound market as well. This is what is witnessed in the mobiles industry – no one carrier has decided to just provide termination services and enjoy the high levels of economic profits that the Commission believe exists.

Secondly, the Commission's analysis of the economic profitability of carriers' operating in the mobile termination market does not consider the level of economic profitability – it does not even mention economic profit at all, it only considers prices relative to what the Commission believes is the underlying "cost" of providing service. Notwithstanding Vodafone's concerns with the Commission's views of the underlying cost of providing the service (these are outlined in section 9), consideration of the Commission's analysis demonstrates that analysing the economic profit of one product or service supplied by businesses that offer multiple products and services will not yield any useful information regarding market power.

This would be the same as comparing the price of one product offered by a supermarket at a point in time with the underlying cost of providing that product, and drawing conclusions regarding the economic profitability of that supermarket. Effectively competitive markets work in rough and ready ways – point in time prices of an individual product or service don't necessarily reflect the underlying costs of providing the product or service.

Finally, the Commission's conclusion that there is no possibility of supply side substitution – that each mobile network operator has control over access to calls that

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[7] ACCC, Draft Decision, March 2004. pg 56.

are made to end-users subscribing to their network – ignores the realities of the mobile services market. If a rival mobile network operator wishes to provide termination services to a customer of another operator, they can do so by successfully competing for the customer. They can do this by offering attractive subscription rates and/or outgoing call prices.

Putting aside the issue of market definition, as the Commission notes the extent of the competitiveness of the outbound services market will determine whether any surpluses achieved by operators in providing termination services are competed away in the outbound market. Vodafone believes that the mobile services market is effectively competitive (we analyse the Commission's analysis in this regard in section 5) and as such any surpluses that might be earned in termination services would be competed away in the outbound retail market.

Accordingly, Vodafone does not believe that the Commission should conclude that each mobile network operator has market power over the terminating service. If the outbound market is considered to be effectively competitive (which Vodafone strongly believes is the case[9]), then it cannot be true that a mobile operator is dominant in providing termination services, as any economic rents that may be earned in the termination service are competed away. Termination services cannot be viewed in isolation because there are strong interdependencies between the termination, outgoing and subscription services provided by a mobile operator. A mobile carrier's set of prices - termination and subscription/outgoing call prices - are subject to the same competitive pressures. Due to these interdependencies, it is not correct to conclude that a carrier has market power in the termination market if it does not have market power in the outbound mobiles market.

As Vodafone mentioned above, Vodafone will provide further information and analysis to the Commission in regard to market definition.

4 Level of competition in termination service markets

The Commission concludes in its Draft Decision that the state of competition in each of the wholesale mobile termination services markets is not competitive. Although Vodafone disagrees with the approach adopted by the Commission with respect to

[9] Vodafone provides some information regarding the competitiveness of the mobiles market in section 5. However, as indicated earlier, Vodafone is likely to submit further analysis in the subsequent 2-3 weeks on this matter.

market definition, Vodafone acknowledges that adopting such a narrow definition of the market is likely to lead to an assumption that there is a low level of competition in this market. Nonetheless, Vodafone has a number of comments to make in regard to the Commission's analysis of the state of competition in the termination service markets.

Firstly, the Commission analysis of the pricing conduct for the mobile termination service is very confusing. The Commission states that the "…price of mobile termination services does not appear to have decreased significantly in recent periods" yet in the same paragraph the Commission states that "…whilst the prices of mobile termination services are significantly lower than those observed in 1996, the vast bulk of this reduction appears to have occurred during the period prior to January 2001."[10]

As Vodafone has advised previously (in its previous submissions and in the public forums), Vodafone's mobile terminating price has reduced by forty-five per cent in real terms over the last five years. However, the Commission has only briefly acknowledged this very important fact in its Draft Decision (page 96). It was not acknowledged at all in section 5.3.2 of the Draft Decision where the Commission discusses the pricing conduct for the termination service.

Secondly, and as pointed out in section 3, examination of the Commission's analysis of the state of competition in the termination service market casts significant doubt on the Commission's conclusions regarding market definition. This is because the barriers to entry (i.e. the availability of spectrum and the existence of sunk costs) are the same for the so called termination service market and the mobile retail outbound market. Once a business decides to enter the termination service market it also automatically enters the retail outbound market as well. This is what has been witnessed in the mobiles industry.

5 Level of competition in outbound mobiles market

In its Draft Decision, the Commission concludes that the retail mobile services market is not effectively competitive at this point in time.

[10] ACCC, Draft Decision, March 2004. pg 57.

"While the retail mobile services market is exhibiting more encouraging market outcomes than the markets for fixed-line telecommunications services, it is unlikely to be effectively competitive as yet."[11]

The Commission's conclusion was based on a number of factors including:

- the relatively high level of market concentration;
- the high barriers to full entry into the market associated with national geographic coverage and sunk costs; and
- the high level of profitability of mobile carriers particularly those with large market shares.

According to the Commission, these factors in conjunction with the high penetration rate of mobile phones and decreasing average revenue per users (ARPUs):

"… suggest [that] the Commission should be cautious when assessing the level of effective competition in the market for retail mobile services. On balance, the Commission considers that the structural and behaviour measures of competition do not clearly indicate that the retail mobile services market is effectively competitive at this point in time."[12]

Vodafone strongly believes that the mobile retail market is effectively competitive and that the Commission's analysis is flawed. Vodafone notes that the Commission's conclusions in this regard may strengthen its case for regulatory intervention. However, if the mobiles outbound market is considered to be effectively competitive, the Commission's case for heavy handed regulatory intervention as proposed in the Draft Decision would be significantly weakened. The Commission would essentially be recommending intervention in an effectively competitive market on the basis that:

- a price for a particular service at a point in time does not reflect the Commission's view of the underlying cost and therefore correcting what it believes to be an allocatively inefficient price; and/or

[11] ACCC, Draft Decision, March 2004. pg 84.
[12] ACCC, Draft Decision, March 2004. pg 84.

- the price for this particular service which is supplied in an effectively competitive market is affecting the level of competition in a downstream market that is not effectively competitive.[13]

The case for regulatory intervention in this situation would be highly contentious and significantly weakened. It would be very difficult to justify intervention in an effectively competitive market to correct a regulator's view of an allocatively inefficient price and that the price of that service may be affecting competition in a downstream market that is not effectively competitive.

As mentioned earlier, Vodafone will provide additional submissions to demonstrate that the mobile services market is effectively competitive and also to outline the approach that needs to be adopted to determine whether a market is earning high economic profits. At this point in time, Vodafone would like to make the following comments on the Commission's analysis:

- It is inconsistent with the Commission's decision of only two and a half years ago;
- It is inconsistent with the Commission's Final Decision on transmission services; and
- The Commission's economic profitability analysis is flawed and suffers from a number of methodological issues which do not appear to have been addressed.

Vodafone would also like to submit further confidential data to the Commission on the financial performance of its business.

5.1 Inconsistent with previous Commission decisions

The Commission concluded in 2001 that the mobile services market (which was defined to include the termination access service) was becoming increasingly competitive. While the Commission believed that there were high concentration levels and barriers to entry, the Commission stated that:

[13] Vodafone does not believe that declaring the mobile termination access service and also the proposed pricing principles will promote competition in the market within which F2M calls are provided. Vodafone's views on this matter are outlined in section 6.

"…there were signs that the level of competition is intensifying with some successful (and some unsuccessful) new entry, continued growth in the market, increased product offerings and reductions in retail prices for mobile calls."[14]

In addition, Vodafone understands that the Commission's concerns regarding the effectiveness of competition in the mobiles market at that time were related to the mobile termination service not the other aspects of the market. Given that the Commission is now concluding that the termination service is part of a separately defined market, Vodafone is surprised the Commission now believes that the mobile outbound market does not appear to be effectively competitive.

Vodafone therefore concludes that the Commission must believe that the dynamics and structure of the mobiles market has fundamentally changed over the last two years such that the level of competition has reduced, or the prospect for effective competition to develop has diminished. Either that or the Commission erred in its analysis of the competitiveness of the mobiles market in 2001. Vodafone does not believe that either of these explanations is consistent with the actual operation of the mobile services market and a number of observers' views that the competitiveness of the market is intensifying.

Over the last two years, competition in the retail mobile services market has intensified. Competition is expected to further intensify over the coming years – the source of this competition is expected particularly from Vodafone and Hutchison (both its '3' business and Orange). Examples of intensifying price competition are:

- Vodafone recently launched its new customer proposition redSIM (for both post pay and pre pay customers);
- '3' has reintroduced its $99 capped calling plan in August 2003; and
- Telstra has recently announced a new pre pay offering called Pre-paid Plus aimed at increasing its pre-pay customer base.

The intensifying competitiveness of the mobiles market has been well documented in reports by many industry commentators and analyst reports.

Further, Vodafone also believes that the Commission's analysis is very static and does not adequately consider likely future developments, which all indicate that

[14] ACCC, Pricing Methodology for the GSM termination service, July 2001. pg 42.

competition in the mobiles market is intensifying. The Commission has itself previously recognised that any analysis of the competitiveness of a market need not only consider the current level of competition in the market. It must also consider the prospect of increased competitive pressures. A point in time analysis of the current level of competition only provides some feel for the likelihood of increased competition in the future in the market.

"Assessing the effectiveness of competition is not, however, a static analysis limited to a description of current conditions and behaviour. It is a dynamic analysis concerned with features affecting the supply of services in the future. Nevertheless, current conditions will, in general, provide a starting point from which to consider the future effectiveness of competition."[15]

Vodafone does not believe that the Commission has adequately considered the factors suggesting a future intensification of competitive pressures in the mobiles market. It does not, for example, adequately consider the current and likely future impact that Hutchison's '3' or Vodafone's behaviour is having on the mobiles market. By implication, Vodafone considers that the Commission's conclusions in regard to the lack of effective competition in the outbound market essentially means that it believes the current market shares of the various players are unlikely to significantly change in the future. Current observable market behaviour shows this not to be the case.

Furthermore, Vodafone believes that the Commission's conclusion in its Draft Decision on the effectiveness of competition in the retail outbound mobile market is in stark contrast to its Final Decision on the Transmission Capacity Service. In April 2004, the Commission concluded in its Final Decision in relation to the inter-capital transmission routes, that "…evidence of effective infrastructure competition and extensive resale competition on these routes suggests that they should remain excluded from declaration."

The Commission's conclusion was based on the fact that there were "…four optical fibre infrastructure competitors on the four eastern seaboard routes, and three optical fibre infrastructure competitors on the east-west routes" and also that the Commission "understood that there are a number of agreements that allow for a

[15] ACCC, Pricing Methodology for GSM termination service, July 2001. pg 32.

degree of resale competition in inter-capital markets."[16] It appears that the Commission did not have regard to any other factors – such as the level of economic profitability, the relative market shares of various players or comparing prices with underlying costs - to arrive at this conclusion. The number of competing carriers alone appears to have been sufficient for the Commission to conclude that effective competition exists in inter-capital transmission.

This analysis is in contrast to that performed by the Commission in relation to the retail mobiles outbound market. Vodafone believes that the mobile outbound market is significantly more competitive than that for inter-capital transmission. The mobiles market has four carriers who own and operate six mobile networks with a number of other parties reselling mobile services. Vodafone is also proceeding to role out a 3G network. Further, new technologies delivering wireless broadband continue to be deployed. Vodafone questions why the similar market structure and concentration of these two markets was considered sufficient for the Commission to conclude that there was effective competition for inter-capital transmission but not for the outbound mobiles market.

5.2 Profitability analysis

Vodafone also believes that the Commission's profitability analysis of the outbound mobiles market is fundamentally flawed. The Commission's analysis is based solely on industry reports and carrier media releases. Vodafone is concerned that the Commission's profitability analysis is superficial as it does not adequately consider the complexities associated with establishing whether economic profits exist. It also does not consider over what time period it is appropriate for a business to earn economic profits in a competitive market and also whether these economic profits are expected to continue given the competitive dynamics of the mobiles market.

An analysis of economic profitability is particularly complex in this instance given that Telstra and Optus operate in many markets, and offer many products and services (including mobiles, fixed, broadband etc) using shared network and service infrastructure and corporate and marketing resources. Furthermore, no business in the mobiles industry competes in just the mobiles outbound market (as defined by the Commission). All carriers necessarily compete in the mobile termination market. As such, any analysis of the economic profitability of the mobile outbound market will

[16] ACCC, Transmission Capacity Service: Review of the declaration for the domestic transmission capacity service, Final Report. April 2004. pg 24.

need to consider these complexities. It is therefore not possible to consider the economic profitability of any particular business without making adjustments for the other markets and industries that it operates in.

In particular, Vodafone believes that the Commission's economic profitability analysis is flawed for a number of reasons including:

- It is inconsistent with economic theory which says that economic profits are, in the short run, what can be expected in a competitive market;
- It has a number of methodological problems which are not considered or noted in any way by the Commission; and
- By implication, the Commission's decision in this regard means that it would also conclude many outbound services market around the world are earning economic profits and are therefore not effectively competitive.

These points are discussed further in turn.

Economic profits, in the short run, are what can be expected in the operation of a competitive market. The existence of short run economic profits attracts new entrants to that market resulting in those economic profits being competed away. Therefore the existence of economic profits in the retail outbound mobiles market – and Vodafone disputes whether they exist - at a point in time, or even over a number of years, is likely to say nothing about the effectiveness of competition in the relevant market.

For the Commission to perform such an analysis and use it to make conclusions regarding the competitiveness of the mobiles market, it needs to define the threshold period of time in which it would be appropriate for a competitor in the mobiles market to earn economic profits. Vodafone does not believe that the Commission has done this and as such its analysis of the economic profitability of the mobiles outbound market is flawed.

The Commission's economic profitability analysis has a number of methodological problems which are not addressed or considered by the Commission in its Draft Decision. These include:

- Economics says nothing about EBITDA or EBITDA margins. All quoted EBITDA or EBITDA margin figures in the Commission's Draft Decision should be disregarded altogether;

- It does not seek to apportion economic profits to the retail outbound services market or acknowledge the complexities of doing so;

- The analysis says nothing about the opportunity cost of funds of investors (or the weighted average cost of capital) in the mobiles outbound market and therefore what level of return on capital represents an economic profit;

- It only considers recent returns (since 2000) and does not consider the large losses or negative return on capital employed (ROCE) figures that mobile operators have recorded in their early years of operation. These must be taken into account when considering whether a particular business or a market as a whole has been earning economic profits; and

- It also does not consider the likely impact on the economic profitability of outbound mobiles market from the aggressive market behaviour that is currently being witnessed particularly from Vodafone and Hutchison.

Using accounting information as the basis for assessing whether economic profits exist has numerous limitations. Calculating a ROCE from accounting data will typically overestimate the company's true economic performance because the accounting data typically fails to reflect the long term value of certain types of expenditure like research and development, advertising and marketing expenditure.

Accounting policies and procedures typically require expenditure of this type to be expensed, rather than capitalised and depreciated over the useful life of the investment. This tends to understate the intangible assets of a business and therefore overstate the calculated ROCE of a business. This needs to be taken into account when drawing conclusions regarding whether a business is earning economic profits by using accounting data.

As the Commission notes, JP Morgan estimated that in 2000 while Telstra's estimated ROCE was 46 per cent, Optus' was somewhat less at a 'high teen'.[17] Vodafone does not believe that a ROCE for Optus calculated as a 'high teen' would

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[17] ACCC, Draft Decision, March 2004. pg 81.

necessarily demonstrate that Optus achieved a high economic profit in 2000 if any economic profit at all.

Due to the risky nature of this market and the large investments required, Vodafone believes it would be difficult for the Commission to conclude that a 'high teen' ROCE represents a high economic profit. Vodafone therefore notes that the analysis of the economic profitability of Telstra is critical to the Commission's conclusion that the retail outbound mobiles market is earning economic profits.

However, the analysis of the economic profitability of the mobile retail outbound market is a complex exercise. Firstly, Telstra and Optus are large integrated businesses that offer many products and services and compete in many different markets including the retail outbound services market. Therefore to assess the economic profitability of Telstra's and Optus' mobiles business (and only in so far as it operates in the mobile retail outbound market as opposed to its entire mobiles business) would require a detailed cost allocation exercise to ensure that the appropriate costs and revenues are included for analysis.

Finally, Vodafone does not believe that the Australian mobiles industry is earning substantially higher accounting profits than other mobile markets around the world. According to Merrill Lynch, the EBITDA margins of the Australian mobile industry as a whole is 39 per cent as of third quarter 2003. This is marginally lower than the weighted average of 41 per cent for the other 46 countries included in their analysis.[18] Appendix 1 and 2 includes a copy of a table and chart from the Merrill Lynch report demonstrating this.

5.3 Vodafone return on capital employed (ROCE)

[subsection 5.3 is commercial-in-confidence information]

[18] Merrill Lynch, Global Wireless Matrix 3Q03, 15 December 2003. pg 2 & 31. Weighted average is calculated using number of subscribers.

6 The extent to which competition would be promoted by declaration

This section outlines Vodafone's preliminary views on the Commission's conclusions in its Draft Decision regarding the extent to which competition will be promoted by the declaration of the mobile terminating access service. The focus of these comments is on the potential promotion of competition in two downstream markets: the mobile outbound services market as defined by the Commission and the market within which

F2M calls are provided. As Vodafone has noted previously, it intends to provide additional material to the Commission on this matter.

6.1 Mobile outbound services market

As Vodafone has previously submitted, Vodafone does not believe that competition will be promoted in the mobiles market (or the mobiles outbound market as defined by the Commission) as a result of re-declaring the mobile terminating access service. In fact, Vodafone believes that competitive pressures will be dampened if the Commission were to release a Final Decision along similar lines to that of the Draft Decision.

The Commission in its Draft Decision concluded that continued declaration of the terminating service – combined with its suggested pricing principle – will have a limited impact on the level of competition in the market within which retail mobile services are provided. From the Draft Decision, it appears the Commission's conclusions in this regard are primarily based on its view that it is uncertain whether or not mobile only operators will suffer a proportionately larger reduction in revenues as a result of the declaration and pricing principle, relative to vertically integrated fixed and mobile carriers.

The Commission's conclusion that the impact of the declaration and draft pricing principle is uncertain is based on the following:

- That mobile only operators may, in the short-term, experience a relatively larger proportional reduction in revenues from mobile termination services than vertically integrated carriers particularly if F2M 'pass through' is incomplete;

- That the declaration and proposed pricing principle should in fact improve the state of competition in the market within which F2M calls are provided and therefore help to ensure the level of F2M 'pass through' increases over time; and

- As competition in the market within which F2M calls are provided improves, it is possible that reductions in the price of the mobile termination service could lead to even greater absolute reductions in the price of F2M call minutes.

Vodafone does not agree with the Commission's analysis. In particular, the Commission's analysis is entirely dependent on substantially increased levels of competition in the market within which F2M calls are provided and that this will lead to greater absolute reductions in F2M prices relative to the price of the mobile terminating access service.

More importantly, however, Vodafone does not believe that the declaration of the mobile terminating access service and the pricing principle will promote competition in the downstream F2M market. Vodafone's views on this matter are outlined in the subsequent section. Further, given the inelastic nature of F2M calls, Vodafone believes that the relative size of the absolute reductions in F2M call prices would have to be *substantially* greater than the reduction in the terminating prices for Vodafone to be no worse off.

The Commission also notes that a mobile carrier may, depending on the state of competition in the market, seek to rebalance prices for other services it provides to recoup these lost revenues.[19] The Commission notes that market enquiries reveal this has not been the case in the UK. Vodafone would like to make the following comments on this:

- Firstly, it is very difficult to demonstrate conclusively whether the UK operators have increased or not increased prices as a result of the first regulated reduction in the mobile termination prices. This is because to do so it would be necessary to define the counterfactual – that is, what would have happened if the mobile termination prices had not reduced. For example, the mobile operators may have, if mobile termination prices had not been reduced, been planning to reduce their outgoing call and subscription prices. And instead, due to the regulated reductions in the terminating prices, decided to keep their prices relatively stable;

- Secondly, Vodafone does believe that the UK mobiles market is effectively competitive (as does OFCOM) and therefore there will be an increase (or less of a decrease) in outgoing and subscription prices; and

- Finally, there has only been one regulated reduction in the UK mobile termination prices. Any rebalancing of outgoing and subscription prices may not occur until further regulated reductions are implemented.

[19] ACCC, Draft Decision, March 2004. footnote 238.

In relation to the Australian mobiles markets, Vodafone believes it is difficult to conclude whether the same rebalancing in prices will occur in Australia that is expected in the UK. And the reason for this is not because the mobiles outbound market is not effectively competitive in Australia. The reason, as Vodafone has outlined in its previous submissions, is that the markets are substantially different because the Australian market has vertically integrated carriers offering both fixed and mobile services.

This difference in market structures means that the impact of regulating mobile termination prices will be imbalanced between those businesses that are mobile only and those that are vertically integrated. The vertically integrated carriers will not be subject to the same commercial and financial pressures to increase their mobile outgoing and subscription prices to ensure they are able to earn an adequate return for their capital providers.

Further, given that these vertically integrated carriers account for approximately 80 per cent of the mobiles market, it is unlikely that the market prices for mobile services are going to trend upwards. Vodafone believes that this, coupled with the fact that there is unlikely to be greater competition in the market within which F2M calls are provided and therefore incomplete 'pass through' as a result of this decision, means that the remaining 20 per cent of the market, which is the primary source of competitive pressures, will be substantially worse off as a result. This imbalanced impact will in turn reduce competition in the mobile outbound market which is clearly not in the LTIE. If, however, the mobiles market in Australia was similarly structured to that in the UK, Vodafone would be less concerned with the impact of the proposed regulation on competition in the mobiles outbound market.

6.2 Fixed to mobile

The Commission's Draft Decision concludes that declaration of the mobile termination service will promote competition in the market within which F2M services are provided. Further, the Commission believes that because mobile operators have the ability to set the price of the mobile termination service well in excess of cost, this will inhibit the competitive market outcomes in the market in which F2M calls are provided.

According to the Commission, this happens in two ways:

- It ensures the price of an essential input into the provision of F2M calls is set at a level in excess of its attributable cost. As a result, fixed-line only operators must set the price of F2M calls above their underlying cost if they are to recover *their* costs of producing F2M calls; and

- The vertically-integrated nature of the two providers of F2M calls with the greatest market share gives them the ability to raise rival costs in a way that might inhibit the ability of fixed-line only operators to compete effectively in the provision of F2M (and possibly the bundle of F2M, STD and IDD calls) to end-users.[20]

As Vodafone has outlined previously, the declaration of the mobile terminating access service will not promote competition in the market within which F2M calls are provided. To the extent that competition in F2M services has not intensified, it is not because mobile terminating prices are supposedly set at a level above cost; but because of the existence of integrated carriers and the structure of the market. If high mobile termination prices were the problem behind ineffective competition in F2M services, this means by definition there should have been greater reductions in F2M prices, as there has been significant reductions in the prices for the mobile termination service. This has not occurred.

Another way to consider this is to think about what would happen if integrated carriers did not exist in the Australian telecommunications market. The declaration of the mobile terminating access service and the proposed pricing principle in this situation would not promote competition in F2M services. Therefore, what the Commission is proposing is to interfere in one market – the mobiles market which is effectively competitive – to seek to promote competition in a downstream market because the two markets are related only by the existence of integrated carriers. Competition would not be promoted if integrated carriers did not exist.

In any case, Vodafone does not believe that competition in F2M services will be promoted as a result of the declaration or the proposed pricing principle. Promotion of competition says nothing about altering the input costs of a business. Rather the promotion of competition and or the extent to which businesses compete is more in relation to market structure. Market structure is more to do with the following:

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[20] ACCC, Draft Decision, March 2004. pg 98-99.

- the number, size and structure of active buyers and sellers and potential new entrants;

- degrees of product differentiation;

- the amount and the cost of information about price and quality of the products and services; and

- the conditions of entry and exit.

This is also confirmed by a quote from the Australian Competition Tribunal (which is also quoted in the Commission's Draft Decision):

"In our view effective competition requires both that prices should be flexible, reflecting the forces of demand and supply, and that there should be independent rivalry in all dimensions of the price-product-service packages offered to consumers and customers.

Competition is a process rather than a situation. Nevertheless, the degree to which firms compete is very much a matter of structure of the market or markets in which they operate."[21]

This says nothing about reducing input costs to a business as a way of promoting competition in a market. Vodafone therefore does not believe that this declaration or the proposed pricing principle will promote competition in the market within which F2M services are provided.

The Commission also notes in its Draft Decision that the revenue Telstra earns from data and other valued-added services is now substantially greater than that which it earns from the mobile termination and origination services. While the Commission does not have access to similar information regarding Vodafone, the Commission believes that it is likely that a similar pattern of revenue change could have occurred for Vodafone. The implication of this statement, although not stated, is that the Commission's proposed pricing principle is likely to have a small and reducing impact on the mobile carriers given that they are less (and are becoming increasingly less) reliant on mobile termination revenues.

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[21] Australian Competition Tribunal, Queensland Co-operate Milling Association Ltd; Re Defiance Holdings Ltd (1976) ATPR 40-012, 17,245. Also see Commission Draft Decision pg 10.

Vodafone would like to make the following comments on this:

- While Vodafone does not have access to Telstra's RAF data, Vodafone would be surprised that the data revenue it earns from its mobiles business is greater than the mobile termination revenue implied by the termination rates it charges other carriers for the service;

- It may be that Telstra's revenue from all data related activities (including mobiles) is greater than its revenue from mobile termination. This analysis however is not appropriate given that only data revenue from its mobiles business should be considered; and

- For Vodafone, mobile termination revenues account for a significant portion of its total revenue line and are smaller than the revenue it obtains from data services.

7 Will declaration achieve any-to-any connectivity

The Commission's view in its Draft Decision is that declaration of the mobile termination access service will promote the achievement of any-to-any connectivity. According to the Commission, declaration is required to protect new entrants and small operators from being refused access to the mobile termination service of the established operators.

Vodafone believes this is not the case. The fact that transit arrangements exist means the new entrants and smaller mobile operators will be able to access termination services of all carriers in the mobiles market. Given the number of players in the Australian mobiles market, Vodafone could not envisage a situation where all carriers refuse to transit mobile traffic for a new entrant or a smaller carrier. Vodafone therefore believes that the declaration is not necessary to achieve any-to-any connectivity.

8 Will declaration encourage the economically efficient use of, and investment in infrastructure

Vodafone has a number of concerns to submit regarding the Commission's analysis of the extent to which the declaration and the proposed pricing principle will encourage the economic efficient use of, and investment in, infrastructure. However,

due to the short timeframe to respond, Vodafone is not in a position to further elaborate these concerns in this submission. Vodafone will however provide further information to the Commission regarding its analysis in the coming 2-3 weeks.

9 Pricing principle

In the Prior Correspondence, Vodafone has raised serious concerns with the Commission about the so called pricing principle the Commission articulates in the Draft Decision. The comments which follow in this section are in addition to those concerns and are not taken to constitute in any way an admission by Vodafone that the Commission has the power to formulate a pricing principle in a way that it purports to do so in the Draft Decision. Further, and in any event, the timeframe imposed by the Commission has meant that Vodafone has not had sufficient time to fully consider the suggested pricing principle and is not in a position at this point in time to elaborate further on what it believes is the appropriate pricing principle.

However, consistent with its attempt to do all it can reasonably do to provide a response within the timeframe imposed by the Commission, Vodafone submits the following comments on the Commission's suggested pricing principle:

- First, the basis of, and analysis underpinning, the Commission's 'target price' and 'target price range' concepts are weak; and

- Secondly, the Commission has not publicly released (or has only recently released) significant information and/or data that underpins its target price range. On 28 April the Commission sent Vodafone an email outlining the basis for some its international benchmarking costing analysis. However, two other pieces of information and analysis that are used by the Commission to establish its target price range are not yet available to Vodafone to comment on including the analysis of the Telstra RAF information (including the data and the methodology) and the costing analysis submitted to the Commission on a confidential basis by an unnamed carrier.

9.1 The basis of the Commission's 'target price'

The Commission uses a number of sources of information to establish its target price range for the mobile termination service of between 6 and 12 cents per minute. According to the Commission, these included four sources of information:[22]

- TSLRIC estimates for mobile termination services have been derived in overseas jurisdictions (three states of the United States, namely, New York, California, and Florida and also the United Kingdom). This benchmarking suggested a price range of between 8 and 12 cents per minute;
- Cost data collected from carriers as part of the Regulatory Accounting Framework (RAF). It is understood that the Commission has calculated a cost proxy from Telstra's RAF data;
- Estimates from PowerTel and AAPT that the cost is in the region of 5-6 cents per minute. These cost estimates were based on a methodology of calculating the implied cost of termination from on net mobile to mobile retail prices; and
- A range of other information sources of GSM and CDMA termination. This included modelling done by an Australian carrier and supplied to the Commission on a commercial in confidence basis.

Vodafone will discuss the first (overseas benchmarking data) and the third (using on net mobile to mobile retail prices) sources of information used by the Commission in the subsequent two sections.

In relation to the use of RAF data and the confidential costing analysis by an unnamed carrier, no information or analysis is contained in the Draft Decision nor has any further information been provided by the Commission in this regard. Vodafone therefore has very little it can comment on at this time. Vodafone is extremely concerned that two key pieces of information that inform the Commission's target price range are confidential and not available for stakeholders to understand and critique. It is not acceptable that a regulatory decision of such importance to Vodafone's business be based on substantive data and analysis submitted on a confidential basis.

[22] ACCC, Draft Decision, March 2004. pg 166.

Vodafone has formally requested that the Commission publicly releases the underlying data and the analysis and methodology the Commission has used to estimate the cost of the terminating access service from Telstra's RAF data. Vodafone understands that the Commission has sought the endorsement of Telstra for this data to be publicly released. At the time this submission was lodged with the Commission, Vodafone had not been provided with this data or the analysis. Vodafone is therefore unable to provide any substantive and detailed comments on this issue at this point in time.

However, Vodafone believes that it is not appropriate for the Commission to base its target price on Telstra's costs. Notwithstanding the difficulties associated with using the RAF data to calculate a cost proxy, Telstra is an integrated carrier and the largest mobile carrier and therefore has the greatest economies of scale and scope. Therefore, all other things being equal, it could be expected that the costs of terminating a call on Telstra's network would be lower than the cost of terminating calls on all other mobile networks in Australia. In a competitive market, the price of the termination service will be set at the level reflective of the mobile operator that has the least economies of scale and scope.

Vodafone also notes that the results of the Commission's international benchmarking analysis are inconsistent with other benchmarking studies that Vodafone is aware of. For example, a report by Ovum indicates that the mobile termination costs are around 8 euro cents per minute. Further, the Ovum study appears to be more robust than that performed by the Commission.[23] While Vodafone does not necessarily agree with this benchmarking study, and also it intends to perform some of its own benchmarking of international costs, it does demonstrate that there may be inconsistencies between the Commission's analysis and benchmarking studies conducted by others.

9.2 Overseas benchmarking data

Firstly, Vodafone believes the Draft Decision is confusing in terms of the reliance the Commission places on the MCI data to derive its target price range of between 5-6 cents and 12 cents per minute. For example, in section 5.3.2 of the Draft Decision (page 58-59), the Commission appears to refer to all MCI benchmark data including data from Belgium (Proximus), the United States (Sprint – Florida, New York, and

[23] Ovum, Mobile Termination Rates, January 2004.

California), Spain (average on net mobile to mobile retail prices) and various data points from the United Kingdom (including Analysis's LRIC + EPMU number, average on net mobile to mobile retail prices and MCI's MVPN with Vodafone).

This is, however, in contrast to section 8.3 (page 166), where the Commission states that benchmarking against the costs derived for the three states of the United States and the United Kingdom suggest a price for the mobile termination service of between 8 and 12 cents per minute. In subsequent discussions with staff of the Commission, the Commission has confirmed that it has only had regard to the MCI benchmark data sourced from the United States and United Kingdom.

Further, the Commission has more recently acknowledged in telephone conversations with Vodafone that it does not have the modelling or analysis underpinning the costing figures for the US state of California. According to the Commission, it had thought it not necessary to obtain and understand the analysis underpinning the Californian cost figure as the figure is within the two other cost figures for the US. While this may be the case, Vodafone considers that this is an insufficient reason for the Commission not to obtain and analyse the basis for the California cost number. Analysis of the cost modelling may well point to reasons why the cost figure is not appropriate to the Australian context or may demonstrate that either of the other cost figures are inappropriate.

Secondly, Vodafone notes that the currency conversion methodology used by the Commission to convert these overseas benchmarks into Australian currency is not transparent in the Draft Decision. The only mention of a conversion methodology is in footnote 331 which states that the Commission has adjusted these rates to account for "current" exchange rates. There is no mention of the value of the exchange rates used.

Following a number of requests by Vodafone of the currency conversion methodology used by the Commission, the Commission informed Vodafone via email on 28 April 2004 that it had used a 2 week moving average exchange rate for the first 2 weeks of March in 2004. This moving average was used to convert the UK and the US (three states) benchmark cost data into Australian cents per minute.

Vodafone notes that such a methodology is not a sound nor highly regarded approach to performing currency conversions. The major problem with the use of a short term moving average is that they tend to be highly volatile. This has particularly

been the case in Australia in recent times. It is important that when performing a currency conversion for regulatory purposes that the methodology used reflects as closely as possible the relative value of the currencies over the life of the relevant investment. To overcome these problems, long term average exchange rates are typically used (say for 10 years) as this matches more closely with the economic life of the investment.

Given the recent appreciation of the Australian dollar against most currencies (and in particular the US dollar), Vodafone considers this to be a significant issue that requires further consideration. However, due to the short timeframe to respond to the Draft Decision, Vodafone has not been able to consider this issue thoroughly. Vodafone will submit further information in relation to this point in a benchmarking study it is undertaking.

Thirdly, and as a general point, Vodafone has concerns regarding the use of overseas cost benchmarks *per se* and that the benchmarks used are relevant or appropriately adjusted to ensure they take account of any differences in the Australian mobiles market. Other than the currency conversion (which itself has its problems), Vodafone notes that the Commission has not adjusted the US and UK benchmarks to account for any differences between these markets and the Australian mobiles market.

The Commission appears to have been very selective in its use of overseas benchmark cost data. However, according to the Commission it has "conservatively selected its benchmarks from the top of the observed range of international data".[24] Vodafone believes this is not the case. For example, Vodafone understands that none of the US – Sprint cost figures have been approved by a regulatory authority. This therefore means that Sprint's cost figures have no more credibility or validity than for example the cost figures proposed by Vodafone in the UK or any of the other UK mobile operators. In fact, the estimates of cost provided by the mobile carriers in the UK would have greater relevance to Australia given that the UK market is premised on a Calling Party Pays (CPP) charging model.

If the Commission is to use international cost data as the basis for establishing indicative prices under the pricing principle, it must do it correctly and thoroughly and use all available cost data points in the benchmarking analysis. Given the short

[24] Letter from the ACCC to Vodafone, 22 April 2004. pg 2.

timeframe to respond to the Commission's Draft Decision, Vodafone has not been able to capture all international cost data points. Vodafone will provide this information as part of a detailed benchmarking study.

Vodafone also notes that the mobiles markets in the United Kingdom and United States are substantially different to that in Australia and that these differences may need to be considered in the pricing principle and the indicative prices. However, according to the Commission "it has [by conservatively selecting international benchmark data] taken into consideration points of difference that may exist between conditions that exist in Australian and overseas markets."[25] Vodafone considers this not to be the case.

Vodafone believes that it is necessary to ensure that the international cost benchmark data that was used in establishing indicative prices are reflective of the likely costs of terminating calls on a mobile network in Australia. This would be in addition to the Commission's approach of conservatively selecting international benchmark data which in any case Vodafone does not believe has been done. Failure to consider the differences between the respective mobiles markets may result in the Commission establishing indicative prices that are likely to be less than the true cost of terminating calls on Vodafone's mobile network in Australia. This is not in the LTIE nor would it be taking account of Vodafone's legitimate commercial interests.

In particular, Vodafone notes the following differences between the Australian, UK and US mobiles markets:

- In the United States the Receiving Party Pay (RPP) approach is adopted whereas in Australia and the United Kingdom the Calling Party Pays (CPP) approach has been adopted;
- In the United States, the relative prices of interconnection are substantially lower for both fixed and mobile compared to both Australia and the United Kingdom. It is understood for example that Verizon's termination price for its fixed network is approximately one seventh of the Commission's calculation

[25] Letter from the ACCC to Vodafone, 22 April 2004. pg 2.

of Telstra's PSTN interconnection cost (0.10 US cents per minute compared to 0.7 Aus cents per minute);[26]

⇒ Therefore performing a simple ratio calculation and taking Sprint's New York estimate of the cost of mobile termination of 3.9 cents per minute (US dollars), this implies that the cost of mobile termination in Australia is 27.3 cents per minute (Australian dollars)[27];

- There are significant differences in population density and geography between Australia, the United Kingdom and the United States (particularly the three states of Florida, New York and California[28]); and

- The size of the markets mean economies of scale and scope are likely to be much greater in the US and UK compared to Australia.

This list is not exhaustive and there may be additional differences between the markets not included above. However, due to the short timeframe to respond to the Commission's Draft Decision, Vodafone has not been able to consider fully all of the differences between the markets.

9.3 United States – Sprint cost figures

Vodafone has the following concerns with using the US-Sprint cost figures to establish indicative prices under the pricing principle:

- They have not been approved by a regulatory authority and therefore have no greater credibility than cost figures submitted by other mobile carriers in other jurisdictions;

- The US market is premised on a charging system of Receiving Party Pays (RPP) charging system for calls to mobiles as opposed to Calling Party Pays (CPP);

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[26] Public Service Commission, Petition of Sprint Spectrum L.P. d/b/a Sprint PCS, Pursuant to Section 252(b) of the Telecommunications Act of 1996, for Arbitration to establish an Intercarrier Agreement with Verizon New York, Inc. pg 2.

[27] No adjustments for exchanges rates occurred in this calculation. Given this, Vodafone recognises that there may be difficulties in comparing prices in this manner. However, it demonstrates the risks of relying on dissimilar costing techniques.

[28] Further, Vodafone is not sure at this time whether the Sprint's licences actually cover the whole of these three states. This would also need to be considered when considering the appropriateness of the US cost figures for informing appropriate prices for the mobile termination service in Australia. There may also be differences in the quality and performance of the networks which may also need to be considered.

- The model to derive the US-Sprint cost figures is a TELRIC model and has been used to calculate the costs of terminating calls on fixed networks in the US;

- The geography and population density of the three states of the US (Florida, New York and California) are substantially different to Australia; and

- Terminating rates in the US (for both fixed and mobile networks) are significantly lower relative to other jurisdictions.

As mentioned above, the US mobile market is significantly different to that of Australia in that it is based on RPP not CPP. The key markets operating under RPP are North America (US and Canada), China, Hong Kong and Singapore. A RPP charging system essentially means that subscribers would pay not just for subscription and for outgoing calls but also for receiving calls. This is significant when considering the set of welfare maximising prices that would exist in a RPP environment.

The set of efficient prices that a mobile operator would seek to establish in a market premised on RPP would be substantially different to that in a CPP market. This is based on evidence strongly suggesting that the value (and therefore the willingness to pay) that mobile users place on receiving calls is significantly lower than the value they place on making calls. This makes sense intuitively as the person making the call is typically calling for a specific reason. The receiving party would derive value from the call but it would be lower than the value received from making a call. Otherwise, one would expect the receiving party to actually initiate the call in the first instance.

This is also supported by evidence from countries that have adopted a RPP charging system. There is evidence for example that mobile users keep their phones switched off for significant periods of time and some users only turn their phones on to make outgoing calls. This strategy is adopted by users to avoid receiving and therefore paying for unwanted calls. It is therefore reasonable to assume that users place significantly less value on receiving calls versus making calls in a market where RPP has been adopted.

Considering what the optimal prices in a RPP market in this context means it is incorrect to assume that optimal RPP call charges mean that the caller pays the “cost

of origination" and receiving party pays the "cost of termination". In the context of Ramsey pricing, the optimal allocation of fixed and common costs will depend on their respective price elasticities for making and receiving calls. This therefore means that the optimal price of termination in a market premised on RPP cannot be compared with the price of termination in a market premised on CPP.

Further, Vodafone also understands that the TELRIC model is the same model as that used to determine termination prices for fixed carriers in the US. While Vodafone does not have access to the TELRIC model[29], as a general point Vodafone does not believe it is appropriate that a cost model that has been developed for fixed termination be used for mobile termination as well, given the vast differences in the technologies.

Also, Vodafone understands that the rules of the Federal Communications Commission (FCC) requires that only "traffic sensitive" costs of termination be included in the TELRIC model. Therefore all non-traffic sensitive costs (or fixed costs) must be excluded from the modelling. This is in contrast to decisions by other regulators, including OFTEL, which despite all Vodafone's concerns with their analysis, accepted in principle that an allocation of fixed and common costs to the mobile termination price is appropriate. From the Commission's views in the Draft Decision, Vodafone believes that while the Commission appears to share this view, it has not made adjustments to the Sprint costing information to reflect this.

Therefore, in summary Vodafone is seriously concerned with the use of US cost data as a proxy for establishing the Commission's target price for the mobile termination service. As a general rule, benchmarking of international prices provides more accurate results if the comparators are very similar to the country and/or the mobile operator that is being considered. Clearly the US market is substantially different to that of Australia.

9.4 UK- Analysis LRIC numbers

The Commission also uses the UK-Analysis LRIC cost figure to establish its target price for the mobile terminating access service.

[29] Vodafone notes that the Commission has undertaken to provide a "hard copy" of the US Sprint models for the states of New York and Florida (but not California) however these had not been provided at the time this submission was lodged with the Commission.

Vodafone in the UK has made many submissions to OFCOM (formerly OFTEL) and the Competition Commission regarding the serious deficiencies of the Analysis LRIC model. Vodafone has also submitted a lengthy critique of the Analysis model. These submissions can be provided to the Commission.

Vodafone submits the following key points on the use of the UK LRIC figures:

- Since OFTEL's initial decision where it used the Analysis model to calculate the LRIC prices for mobile termination, there has been a lot of movement in the cost figures proposed by OFCOM and the Competition Commission;

- There has been considerable movement in the thinking of regulators including the Competition Commission and OFCOM since the initial OFTEL decision;

- There is common agreement between Vodafone, the Competition Commission and OFCOM that the Analysis model has serious deficiencies. In particular, the Analysis model significantly under-predicted gross book values and asset values. The credibility of the initial Analysis model has therefore been seriously questioned by a number of stakeholders including the Competition Commission and Vodafone;

- Analysis subsequently realised their model contained serious errors and made significant changes to its model in particular it adjusted upwards the fixed and common costs. The revised Analysis model is now being used in regulatory proceedings in Sweden[30];

[30] Vodafone understands there have been significant changes to the original Analysis model. Some of the key changes include:

⇒ The model now includes full business costs not just network costs;

⇒ The model includes all voice services along with SMS and GPRS whereas the final UK model included voice services only;

⇒ The model appears to allocate the HLR and MSC location costs to terminating services (although there is still some debate about this) unlike the UK model which treated them as a cost of subscription. It should also be noted that the Competition Commission disagreed with the original allocation by Analysis and believed that it should be allocated to termination;

⇒ Common network costs are an input to the model rather than being calculated by the model. In the UK, the common costs were determined with reference to minimum coverage presence, in the sense that the model itself calculated the costs of the minimum network. The new approach adopts a different view of fixed and common costs, which are now material in the new approach whilst in the UK model they amounted to approximately 3% of network costs; and

⇒ The new model has more detailed reconciliations to top down data to ensure all costs actually incurred are recovered, whereas the UK model had no such reconciliation (and suffered significant challenge from the mobile operators as a consequence).

- Given the widely recognised deficiencies in the initial Analysis model, it is not appropriate for the Commission to simply remove the externality adjustment; and

- The target LRIC price in the UK is still subject to further debate and consultation. OFCOM has not announced its view on the cost of mobile termination.

Vodafone will provide further information to the Commission regarding the deficiencies of the Analysis LRIC model.

9.5 'On net' mobile to mobile prices as a proxy

The Commission also uses estimates of the cost of the mobile terminating access service provided to it based on on-net mobile to mobile retail prices. According to PowerTel and AAPT, these on net prices indicates that the price of termination is somewhere between 5-6 cents per minute. Vodafone does not believe that the Commission should use these cost estimates to inform its target price range.

As Vodafone has pointed out in previous submissions, mobile carriers who compete in a competitive market may seek to allocate different proportions of their fixed and common costs to the different services that they provide – outgoing, subscription and incoming. It is possible that carriers operating in this competitive market decide not to allocate fixed and common costs to on net mobile to mobile retail prices.

Therefore, on net retail prices may be set at somewhere near the short run marginal cost of providing the call. The approach of halving on net prices to calculate a cost of mobile termination may provide some feel for the marginal cost of providing the termination service. However, and as the Commission acknowledges, establishing regulated prices for the mobile termination service based on short run marginal cost is not appropriate as it will lead to businesses making losses. This is also supported by the European Independent Regulators Group, who stated that:

"It was noted that, in principle, regulation may not remove all ability to cross subsidize because cross-subsidy can occur at any MT (mobile voice call termination market) charge above marginal cost. Regulatory price controls usually do not set charges at

marginal cost, but instead aim at long run incremental cost plus a mark-up, or average cost."[31]

Vodafone also believes that some of the offers in the market today demonstrate that it is not appropriate to use on net retail prices as a way of calculating an implied cost of mobile termination. For example, Orange currently has an offer in the market involving zero cost for on net mobile calls. Vodafone too has very low on net prices in its redSIM customer proposition. This fact demonstrates that this methodology is not appropriate. Vodafone therefore believes that this methodology and resulting prices should not be used to inform the Commission's target price range.

10 Pass through

The Commission's Draft Decision does not propose any proactive regulatory measures to address the issue of 'pass through' of reduced mobile terminating access prices into F2M call prices. The Commission's key reasons for this are:

- That it believes competition for F2M calls will be promoted as a result of the declaration and suggested pricing principle to apply to the mobile terminating access service;
- There are considerable complexities involved in tying the availability of lower termination charges to access seekers' setting lower retail F2M prices.

The Commission discusses a proposal by Hutchison whereby the Commission would set a range of prices for the mobile termination access service depending on the retail prices being set by access seekers for F2M prices. This means that access seekers would pay less for the mobile termination services only where they demonstrate that they would be charging lower retail prices for F2M prices.

Given the short timeframe allowed to respond to the Draft Decision, Vodafone has not had sufficient time to consider this issue in detail. We intend to provide further information to the Commission in the coming 2-3 weeks on this matter. Vodafone however does strongly believe that an explicit regulatory measure is required to address the issue of 'pass through'. This is necessary because the market within which F2M calls are provided is far from effectively competitive and therefore the

[31] Independent Regulators Group, Principles of Implementation and Best practice on the application of remedies in the mobile voice call termination market, 1 April 2004. footnote 35, pg 23.

market, left to its own devices, will not ensure the reductions in mobile termination prices (past and future) are passed through into lower F2M call prices. The Commission itself has noted this throughout the Draft Decision.

Further, and as Vodafone outlined in section 6.2 of this report, Vodafone does not believe that the re-declaration and the Commission's proposed pricing principle to apply to the mobile termination service will promote competition for F2M calls. This is because promoting competition is more about creating the conditions and the environment by which businesses are encouraged and able to compete. Without an explicit regulatory mechanism to address pass through, any regulated price reductions for the termination service will not result in lower F2M call prices for end-users. Vodafone does not believe this is in the LTIE.

Vodafone therefore believes that the Commission should include in the final pricing principle that access seekers will only obtain the reduction in the mobile terminating access price if they are able to demonstrate that they have passed through past reductions in mobile termination prices to end-users in the form of lower F2M prices. As mentioned above, Vodafone intends to outline more detailed views on the pricing principle including the appropriate mechanism to address the issue of pass through and also the appropriate period of time to glide prices down towards cost in a subsequent submission to the Commission.

Appendix 1 – Extract from Merrill Lynch report – Global Wireless Matrix 3Q03

Table 18: EBITDA Margins

	4Q98	1Q99	2Q99	3Q99	4Q99	1Q00	2Q00	3Q00	4Q00	1Q01	2Q01	3Q01	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
Argentina	32%	48%	40%	37%	41%	36%	23%	19%	31%	27%	29%	32%	33%	39%	35%	42%	43%	44%	45%	44%
Australia	38%	37%	36%	35%	35%	34%	35%	37%	38%	37%	38%	38%	39%	38%	39%	39%	38%	38%	39%	39%
Austria	N.A.	24%	22%	15%	11%	16%	12%	21%	18%	27%	24%	27%	26%	36%	35%	29%	26%	37%	34%	32%
Belgium	N.A.	17%	20%	21%	2%	12%	15%	16%	17%	27%	28%	30%	28%	38%	37%	39%	38%	42%	43%	42%
Brazil	N.A.	35%	25%	25%	23%	27%	27%	27%	24%	36%	33%	34%	34%	39%	38%	35%	27%	33%	28%	32%
Canada	14%	21%	21%	23%	17%	21%	22%	22%	14%	21%	24%	26%	21%	27%	29%	32%	23%	33%	34%	36%
Chile	N.A.	41%	32%	25%	17%	32%	30%	28%	24%	32%	29%	37%	35%	34%	36%	35%	33%	35%	35%	33%
China	N.A.	N.A.	N.A.	N.A.	51%	52%	54%	53%	54%	55%	55%	54%	54%	55%	57%	57%	57%	53%	51%	51%
Colombia	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	17%	19%	18%	27%	13%	18%	31%	33%	37%	33%	36%	37%
Czech	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	25%	N.A.	33%	N.A.	31%	34%	38%	39%	42%	47%	46%	44%
Denmark	N.A.	N.A.	N.A.	N.A.	N.A.	24%	27%	20%	23%	16%	22%	23%	18%	13%	18%	23%	25%	22%	21%	25%
Egypt	N.A.	19%	32%	40%	34%	35%	44%	44%	41%	46%	48%	42%	47%	50%	48%	51%	52%	53%	51%	54%
Finland	N.A.	42%	42%	46%	41%	40%	38%	34%	37%	38%	39%	40%	39%	38%	39%	42%	36%	37%	39%	41%
France	N.A.	N.A.	N.A.	N.A.	N.A.	25%	26%	17%	14%	28%	34%	32%	32%	35%	36%	39%	36%	41%	41%	42%
Germany	35%	34%	33%	33%	30%	21%	19%	17%	23%	25%	34%	37%	37%	37%	39%	39%	36%	36%	37%	40%
Greece	N.A.	N.A.	N.A.	N.A.	N.A.	34%	27%	35%	36%	39%	39%	40%	40%	39%	39%	39%	36%	36%	37%	38%
Hong Kong	N.A.	30%	30%	20%	15%	10%	10%	5%	5%	5%	5%	10%	10%	10%	10%	15%	17%	16%	15%	15%
Hungary	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	43%	39%	33%	43%	46%	35%	36%	37%	41%	37%	42%	38%	37%
India	N.A.	20%	22%	24%	26%	29%	28%	28%	27%	27%	29%	31%	33%	35%	37%	21%	28%	24%	27%	32%
Indonesia	N.A.	N.A.	49%	54%	59%	61%	62%	64%	66%	66%	66%	65%	71%	66%	65%	63%	61%	67%	66%	65%
Ireland	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	35%	36%	36%	36%	40%	42%	42%	42%	42%	42%
Israel	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	1%	2%	14%	26%	26%	26%	30%	29%	30%	26%	28%	34%	34%
Italy	46%	44%	43%	40%	40%	41%	40%	37%	38%	41%	39%	40%	37%	41%	42%	46%	43%	46%	46%	50%
Japan	23%	23%	27%	27%	24%	24%	26%	26%	24%	24%	26%	26%	28%	28%	33%	33%	31%	30%	33%	33%
Korea	N.A.	N.A.	N.A.	N.A.	N.A.	20%	22%	33%	34%	42%	35%	44%	35%	41%	41%	37%	34%	35%	35%	35%
Malaysia	23%	27%	29%	32%	34%	33%	32%	31%	30%	31%	31%	33%	33%	37%	36%	35%	22%	40%	41%	45%
Mexico	N.A.	N.A.	N.A.	N.A.	N.A.	29%	34%	24%	29%	31%	30%	31%	28%	31%	35%	35%	31%	35%	37%	34%
Netherlands	N.A.	25%	25%	26%	28%	31%	28%	19%	19%	13%	13%	11%	21%	27%	26%	26%	27%	28%	32%	31%
New Zealand	34%	34%	34%	34%	34%	35%	36%	36%	37%	38%	39%	39%	39%	41%	44%	41%	42%	42%	42%	40%
Nigeria	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	-73%	-12%	5%	20%	36%	38%	42%	42%	47%
Norway	N.A.	N.A.	N.A.	N.A.	N.A.	32%	31%	37%	32%	35%	35%	39%	33%	39%	41%	44%	36%	42%	39%	41%
Philippines	N.A.	N.A.	N.A.	N.A.	N.A.	24%	19%	41%	48%	46%	48%	44%	46%	51%	50%	50%	53%	59%	58%	58%
Poland	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	34%	36%	35%	32%	33%	35%	40%
Portugal	31%	34%	35%	30%	31%	34%	34%	31%	24%	29%	29%	31%	30%	32%	31%	35%	33%	33%	35%	36%
Russia	N.A.	N.A.	N.A.	N.A.	N.A.	35%	33%	31%	28%	43%	39%	47%	44%	47%	46%	49%	41%	47%	49%	51%
Singapore	31%	32%	33%	34%	34%	35%	34%	33%	34%	35%	35%	36%	36%	38%	41%	41%	42%	42%	41%	43%
South Africa	31%	30%	31%	32%	33%	35%	34%	33%	34%	34%	34%	34%	33%	33%	31%	30%	29%	29%	28%	28%
Spain	N.A.	28%	27%	28%	21%	20%	23%	27%	24%	34%	38%	43%	40%	43%	44%	44%	42%	45%	44%	45%
Sweden	5%	5%	7%	8%	42%	28%	22%	28%	44%	47%	46%	50%	47%	47%	47%	50%	48%	45%	48%	46%
Switzerland	N.A.	N.A.	N.A.	N.A.	N.A.	37%	27%	31%	28%	36%	34%	31%	30%	33%	34%	35%	32%	40%	42%	38%
Taiwan	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	28%	35%	38%	48%	49%	44%	44%	41%	38%	41%	43%	43%
Thailand	42%	42%	38%	40%	44%	41%	48%	62%	51%	30%	43%	39%	42%	39%	44%	38%	46%	49%	48%	51%
Turkey	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	19%	10%	29%	25%	20%	28%	25%	30%	29%	32%	24%	30%
UK	N.A.	9%	12%	18%	19%	22%	19%	21%	19%	22%	24%	24%	27%	29%	30%	29%	29%	33%	33%	31%
US	N.A.	20%	24%	25%	17%	24%	26%	25%	19%	24%	28%	26%	23%	27%	30%	29%	28%	30%	32%	31%
Venezuela	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	13%	16%	15%	15%	39%	26%	32%
Weighted AVG *	N.A.	26%	27%	28%	28%	29%	30%	30%	28%	32%	35%	36%	35%	38%	39%	40%	38%	40%	40%	41%

Source: Merrill Lynch Telecom Research Estimates. * Weighted by subscribers due to incomplete historical revenue figures for certain countries.

Appendix 2 – Extract from Merrill Lynch report – Global Wireless Matrix 3Q03