

Optus Submission to
Australian Competition and Consumer Commission
on
Mobile services

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1. Overview

- 1.1 Optus welcomes the opportunity to provide a submission to the ACCC's review of mobile services. This submission addresses in detail the issues raised by the ACCC in its discussion paper.
- 1.2 Optus believes that the mobile services market is highly competitive. Market shares are evolving and new entry, particularly via third generation services, means competition at the retail and facilities level is vigorous. Competition has meant that the prices for mobile services have fallen substantially since their introduction. We note that the ACCC has supported this view and recommended to Government that mobile-to-mobile and mobile-to-fixed services be excluded from the retail price control regime.
- 1.3 Regulatory intervention in the mobile market would harm consumer welfare and would likely slow and even reverse the growth of mobile telephony penetration. Regulation of mobile termination results in significant welfare losses. Optus estimates there would be losses of around \$1 billion per annum for a 5 cent per minute reduction in mobile termination prices.¹ These losses arise because:
 - (a) Network externalities are ignored.
 - (b) Ramsey pricing rules are violated.
 - (c) Mobile penetration rates are lowered.
- 1.4 This is not in the interests of end users of mobile or fixed services. Optus believes the threat of regulation has proved unnecessary in driving prices to competitive levels and as such the declaration of mobile termination services should be revoked.
- 1.5 Market forces drive the structure of monthly mobile access, originating minute prices, mobile handset charges and mobile termination fees. Proposals to impose alternative structures will lead to a loss in welfare. There is no evidence of market power in the termination of calls to a mobile network. Such a view ignores the fact that mobile subscribers place significant value on receiving calls. In fact, the evidence suggests that termination rates have fallen substantially over the past five years. This outcome would not have occurred if carriers had market power in terminating services.
- 1.6 An important implication of the way prices are set for each of the services in the mobile bundle is that a change in the price of one element will likely require a change in the price of other services in the bundle. This is because the basic requirement of the revenue streams is to cover the long-term costs of providing mobile telephony services, including fixed, common and usage sensitive costs. Such a charging structure is not unique to mobile services. For example, newspaper companies collect revenue from customers

¹ This 5 cent reduction in termination prices from current market levels has been chosen as an example, rather than suggesting current market prices are 5 cents per minute above costs.

subscribing to their papers as well as advertising revenue from business wanting to purchase advertising space in the paper and market their products to the subscribers.²

- 1.7 In the context of the ACCC's current review, because competition is effective and monopoly margins cannot be maintained, if termination charges were to be reduced as a result of regulation, the prices set by carriers for origination and, to a lesser extent, subscription would likely increase.
- 1.8 To expand upon this argument, assume termination was regulated at a rate below existing levels. This would not allow the mobile carrier to recover the total cost of operating its mobile business. The expectation that these costs will not be recovered would prevent future investment in new mobile networks and discourage the efficient maintenance, replacement and upgrading of the current networks.
- 1.9 International developments in relation to the mobile termination service have been prolific. Optus has engaged consultants to provide a critique of these developments and an analysis of their relevance to the Australian market and regulatory regime. The consultants' report will be provided as a supplementary submission. Optus' own analysis shows that the ACCC has misrepresented some of the developments. In particular, the German regulator's decision to not impose price reductions was represented by the ACCC as being because "rates were still less expensive in Germany than in the UK" (page 39). The reality is that the German regulator concluded that "defining a network as its own market perpetuates regulation as each operator is by definition dominant for terminating calls on his network and will be so for ever, which contradicts the idea of regulation as transitory" and that "consumers buy a 'package' of mobile services and are aware of the value of availability, i.e. the costs of incoming calls, packages are substitutable as they are more or less homogeneous to the customers, which is an indication for a single national market".³
- 1.10 Similarly, the ACCC's discussion of the UK regulator's decision ignored the true basis of the decision which was to consider the distributional effects on a particular class of end-user – being fixed to mobile users who do not own a mobile service. This issue is not relevant in the Australian regulatory context given the *Trade Practices Act 1974* does not differentiate between end-users in assessing whether regulation is in their interests. Moreover, we note that the UK market has a very different structure: in particular, it does not have a single dominant integrated fixed and mobile carrier. In Australia, there is such a single dominant player, Telstra. Unlike BT in the UK, Telstra has strong incentives to reduce termination payments from its fixed customer base. This adds to the competitive termination environment of negotiation, transit and arbitrage.

² We note that the ACCC has not claimed that newspaper companies have "market power" even though they clearly control access to "the termination" of advertising to their subscribers. This contrasts with the ACCC's continued declaration of mobile termination on the belief that mobile carriers have market power because they control access for their subscribers.

³ Matthais Kurt, President, Regulator Authority for Telecommunications and Posts, Harvard University, Boston, 16.04.2002.

- 1.11 Retail fixed-to-mobile services are important to this review and are certainly of relevance because they are a downstream service of mobile termination. However, competition in the retail fixed-to-mobile market is not affected by termination rates or by ignorance on the part of the calling party. There are adequate market forces to ensure an efficient pass-through of negotiated termination rate reductions.⁴ For example, there are numerous carriers and providers competing for long distance and fixed to mobile services and the retail fixed to mobile rate is regulated in the retail price control arrangements (as recommended by the ACCC).
- 1.12 Optus believes the only potential beneficiary of a heavy-handed termination rate reduction is Telstra. In the short term Telstra would benefit from less than complete pass-through, and the benefit could endure if the lack of pass through is not competed away. In the long term, termination rate reductions would likely mean increases in origination and subscription rates – this would advantage Telstra by reducing substitution from fixed telephony to mobile telephony, thereby perpetuating the dominance of the legacy fixed incumbent network.
- 1.13 In terms of consumer ignorance of fixed to mobile rates, empirical evidence supports Optus' view that many fixed to mobile calls are repeat calls and that many callers are likely to know the price of the call and the mobile network they are calling. Around 70% of people are aware of the network used by the person they most commonly call on a fixed-to-mobile basis. Almost 30% of people know the network of their fifth most commonly called person. Since prices are set at the margin, it is highly unlikely that the price of terminating calls will lead to market failure.
- 1.14 Revoking the declaration of terminating services will likely have a positive impact on competition and lead to reductions in terminating rates and increased competition in downstream markets such as fixed to mobile telephony. Termination rates have fallen at least as fast as retail mobile-to-mobile services. They have also tracked prices for retail fixed-to-mobile services. Falls in termination rates are driven by competition for terminating services; efforts to stimulate usage; transit arrangements; and pressure from the dominant fixed carrier, Telstra. Revoking the declaration will stimulate investment by removing regulatory risks from raising capital for mobile services infrastructure. Increased investment, new entrants and new networks will increase competition across the mobile services market. Maintaining the declaration of mobile termination does not foster competition in downstream markets, in particular retail fixed-to-mobile services.
- 1.15 However, if the ACCC decides that customer ignorance is a problem it can take action to ensure that the terminating network be identified to the user of a fixed to mobile service. Telstra, as the principal fixed operator, already identifies when a fixed customer calls customers of its mobile network.⁵

⁴ Even if the ACCC believe the retail fixed to mobile market has monopoly characteristics, a rational profit maximising monopolist will pass on a reduction in marginal cost (eg. termination rates) in lower retail prices.

⁵ Carriers also already encourage the formation of closed user groups across fixed and mobile networks.

- 1.16 The ACCC has a range of information dissemination options to address consumer ignorance that are far more appropriate than price regulation. These include directing fixed carriers to increase the level of billing information provided to customers and promoting information lines and other technology based means to indicate to fixed to mobile callers the network being called and the relevant retail charges.
- 1.17 More pernicious regulatory interventions, such as retail minus and TSLRIC are inappropriate and inconsistent with a national market definition for mobile services. Such interventions would imply the ACCC has taken the narrowest market definition for the terminating service. Implementing TSLRIC for a service involving considerable demand uncertainty and technological change would involve real regulatory risks. It would also create significant structural adjustments in carriers' revenue streams, increase investment uncertainty and disrupt new entry into the mobile services market.
- 1.18 The ACCC's inclusion of third generation services in this review is overzealous, and reflects an incorrect analysis of market power being associated with termination. New investment in networks intensifies competition in all aspects of the mobile services industry. However, the ACCC has taken a perverse view on market power in the termination market based on a belief that "once an end-user is connected to a mobile network, the terminating mobile carrier has control over access to mobile termination of that end-user" (discussion paper, page 31).
- 1.19 The ACCC's view implies that individuals (for it is those individuals that choose their mobile network) have market power in the termination of calls to themselves. To see this we need to imagine that each subscriber joined a separate mobile network. Under the ACCC regulatory thinking, it would declare the terminating service for that mobile network on the basis that the terminating carrier had control over access. That would make little sense. Customers value being called and would feel the full effect of increases in termination charges – that is, no-one would call that network if it set prices too high.
- 1.20 It is therefore likely to be inappropriate to distinguish between mobile termination services on the basis of technology. All radio technologies AMPS, GSM, CDMA, WCDMA are used to provide "mobile services", just like copper and optical fibre are used in fixed networks. The entry of new technologies intensifies competition for all "mobile services" and should lead to the revoking of the declaration, not the expansion of regulation.
- 1.21 Finally we note that declaration is not required to ensure any-to-any connectivity. A mobile service is only useful if it can be used to connect to other mobile and fixed services. To provide this end-to-end service in a competitive market all operators must conclude terminating agreements with all other mobile carriers – it is not feasible to market a service that excludes calls to or from particular carriers. This creates a need to negotiate and conclude agreements with all other carriers and leads to rational competitive outcomes.
- 1.22 In this submission, Optus submits that the statutory test of promotion of the long term interests of end users is not satisfied for the ACCC to continue to

regulate or to further intervene in the mobiles sector. Furthermore, more intrusive regulation (particularly pricing) in relation to the mobile termination service is not supported by the reasonableness criteria (which the ACCC appears to have ignored).

- 1.23 Optus addresses the mobile termination service in sections 2 to 5 and addresses the LTIE and reasonableness criteria, as elaborated upon in section 6 (including market definition), as follows:
- (a) The state of competition in the mobiles sector, assessed in section 2 in terms of the structure-conduct-performance in that sector, clearly indicates that continued or further regulatory intervention in relation mobile termination services would not promote competition nor satisfy the other reasonableness criteria.
 - (b) The pricing of mobile services (including mobile termination services), as described in section 3, is an indicator of the currently competitive state of the mobile sector hence continued regulation is not likely to promote competition nor is further, more intrusive price regulation likely to be reasonable.
 - (c) More intrusive regulation of the mobile termination rate, as described in section 4, is likely to distort efficient investment decisions and hence will not encourage economically efficient use of, and economically efficient investment in infrastructure and hence is not reasonable.
 - (d) There is no market failure as suggested by the ACCC in relation to mobile termination services, as described in section 5, and hence no grounds for regulatory intervention according to the LTIE and reasonableness criteria.
- 1.24 Less intrusive (but still unnecessary having regard to the competitive state of the mobiles sector) regulatory alternatives are discussed by Optus in section 7.
- 1.25 Optus similarly believes the competitiveness of the mobiles sector does not warrant intervention in relation to domestic roaming (section 8) and international roaming (section 9) services. Neither would promote competition given the level of competition at present and to intervene would undermine infrastructure use and investment in the manner described in those sections. It would not be in the LTIE to declare those services.

2. Structure-conduct-performance assessment of mobile services

- 2.1 The purpose of this section of Optus' submission is to provide an assessment of the structure, conduct and performance of the state of the mobiles sector. This framework provides a means for identifying the factors that determine the competitiveness of the market, analysing the behaviour of firms, and assessing the success of an industry.
- 2.2 For the purposes of this submission, "structure" refers to the market structure of the industry, which is indicative of the degree of competition within a market. "Conduct" refers to the business practices adopted by firms in the

industry to implement their competitive strategies and to create competitive advantages. "Performance" refers to measurements by which the industry or firms in the industry can be judged as to whether they are operating successfully.

- 2.3 This analysis will highlight that fact that the Australian mobile services market is subject to fierce competition, both at the wholesale and retail levels, as evidenced by the industry's intrinsic demand and supply conditions, and the behaviour and performance of firms within the market.

Structure

Market players

- 2.4 Australia has four well-established mobile network carriers: Optus, Telstra, Vodafone and Hutchison. Between them, they own and operate six mobile networks. In addition, there are a number of mobile carrier service providers (CSPs). According to the ACA, in 2001-02 financial year, there were 13 CSPs.
- 2.5 In comparison with other jurisdictions, Australia appears to have a large number of mobile operators competing for a relatively small number of customers. It follows that the degree of competition in the Australian market is likely to be high relative to that in other countries.⁶
- 2.6 Telstra owns both a GSM and CDMA network; Optus and Vodafone own GSM networks; and Hutchison a CDMA and W-CDMA networks.⁷ The GSM networks of Optus, Telstra and Vodafone all have near ubiquitous population coverage, ranging from 92% from Vodafone to 95.4% from Telstra. The reach of Hutchison's network is limited to Sydney and Melbourne, although it is a reseller (via a roaming agreement) of Telstra's CDMA network that has coverage of 93.7% of the population.
- 2.7 Both Optus and Telstra are horizontally integrated in the sense that they are both mobile and fixed operators. Telstra, by virtue of its dominance in the fixed telephony market, is a net payer of termination charges. This creates a market dynamic in which Telstra is able to exert countervailing pressures when negotiating termination access charges.

Market shares

- 2.8 The mobiles market does not have a dominant player with the ability to raise prices above cost without losing market share, that is, no player has enduring market power. Whilst Telstra has the largest market share, Optus and Vodafone also have substantial market shares and can take advantage of economics of scale in operating their respective mobile networks. This negates the ability of any one operator to behave anti-competitively. The

⁶ This may go some way to explaining some of the consolidation in players that has occurred, in particular the exit of One.Tel.

⁷ Optus does not have intimate details of the infrastructure or coverage of Hutchison's 3G network.

following table displays the market shares held by each of the four network carriers.

Market share of the mobile network carriers

Carrier	Service	Share
Optus	Total	34%
	Pre-pay	35%
	Post-pay	33.3%
Telstra	Total	45.6%
	Pre-pay	40.5%
	Post-pay	48.7%
Vodafone	Total	18.5%
	Pre-pay	24.5%
	Post-pay	14.8%
Hutchison	Total	2%
	Pre-pay	0%
	Post-pay	3.2%

Customer Churn

2.9 There are few barriers to customer churn between mobile networks, which is evidenced by high churn rates. **[Start commercial in confidence]**

[End commercial in confidence]

2.10 In Optus’ view, the introduction of mobile number portability has made consumers considerably more likely to churn than was previously the case.

2.11 The threat of customer churn imposes a strong competitive discipline on mobile operators. Carriers that fail to deliver good customer service or cost effective services relative to the rest of the market run the risk of losing their customers to competing networks.

2.12 Churn can be particularly costly for mobile operators if customers churn too frequently. Carriers incur costs associated with gaining new customers, and need to retain customers for a sufficient length of time in order to recover those acquisition costs. **[Start commercial in confidence]**

[End commercial in confidence]

Barriers to market entry

- 2.13 To date, there have been relatively low barriers to entry in the Australian mobile services market. The following factors provide evidence of this:
- The large number of mobile networks in Australia relative to other countries.
 - Telstra's CDMA network was built and achieved ubiquitous nationwide coverage within 1.5 years.
 - Vodafone achieved similar ubiquitous network build within three years of its licence purchase, and achieved around 20 per cent retail market share within four years of its market entry.
- 2.14 Although the degree of market concentration is already relatively high, Optus believes that there may still be room for new mobile carriers that have existing operational structures in place to serve the market. Such examples could include utilities companies or CSPs with the ability to utilise their large customer bases, billing systems, and Australian-wide presence.
- 2.15 There is also room in the industry for new CSPs. Barriers to entering the market as a CSP are considerably lower than the barriers to entering as a carrier. As evidence of this statement, consider that B Digital, which only commenced operation as a CSP in February 1999, had achieved a customer base of 130,000 in less than 2 years.
- 2.16 Potential carriers can lessen the risk of becoming network operators by firstly testing the market as CSPs, prior to committing to any infrastructure investment.

Product differentiation

- 2.17 Mobile carriers rely on various forms of product differentiation to distinguish their services from those offered by competitors, or to target certain customer groups. For example, Optus' key differentiators comprise a range of innovative rate plans, which enable customers to choose the plan that best meets their needs. Examples of these rates plans include: 'yes' Time, 'yes' Weekend, 'yes' AnyPhone, and 'yes' Business.
- 2.18 Optus' competitors have imitated many of these offers to a greater or lesser degree, although differences do remain. According to market research, these differences are recognised by customers.
- 2.19 Another key differentiator for Optus has been a consistent focus on providing good customer service. Again, brand tracking market research reveals that consumers recognise that Optus offers superior customer service in relation to other carriers.

Existence of Substitutes

- 2.20 Mobile carriers do not compete only with other mobile carriers, but also against a range of substitutes to mobile telephony. Examples of these substitutes include fixed telephony, email, facsimile, and paging services. The existence of these substitutes provides additional pressure on prices particularly for price highly price sensitive customers.

Regulatory

- 2.21 The mobile services market is currently regulated through a combination of wholesale regulation based on retail price benchmarking of termination charges, and retail price caps for fixed-to-mobile calls.
- 2.22 The pricing principles for GSM and CDMA termination rely on a “retail benchmarking methodology”. Under this approach, changes in each mobile carrier’s access prices are benchmarked against the retail price movements for the overall mobile package (access and outgoing calls). In setting the principles the ACCC indicated that the advantage of pegging changes in access prices to changes in the average retail price for the overall mobile package is that the provision of GSM and CDMA termination mirrors the increasingly competitive retail element of the mobile services market.
- 2.23 For the period in which this pricing principle has been imposed, the industry has operated well within the bounds of the retail price benchmarking approach. Termination rates have fallen faster than retail prices.
- 2.24 In relation to the retail price caps, fixed-to-mobile calls are currently part of a call services basket capped at CPI-4.5%. The basket also includes national long distance, international, and local call services. Price capping using the basket approach is seen as a more efficient means of regulating prices than enforcing price caps on services in isolation, because it enable operators to reduce prices in a way that minimise adverse demand responses.

Elasticity of demand for mobile services

- 2.25 Empirical evidence suggests that the demand for mobile services is relatively elastic. For example, the 1998 Access Economics review of literature estimated the industry own price elasticity for mobiles of 0.8, compared to 0.03 for basic access and 0.06 for local calls. It was stated that the higher order of magnitude elasticity for mobiles was:

“because of the existence of fixed services as a close substitute in many locations.”

- 2.26 The figure of 0.8 reflects an industry elasticity of demand; the demand curve for any one firm’s mobile product would be much more elastic.
- 2.27 Elasticities also vary amongst the different customer segments. For example, it appears that prepaid customers are generally more price sensitive than post-paid customers, and that customers consuming a lower number of total minutes are more price sensitive than those consuming higher volumes. This

is evidenced by the greater relative reliance on free or specially priced calls amongst the lower consumption groups than the higher ones.

Conduct

Mobile-to-mobile pricing

- 2.28 The pricing of mobile-to-mobile calls is subject to intense competition; a view that has been adopted by the ACCC in the past.⁸ Pricing is characterised by the existence of a wide range of pricing plans and special promotions, which is indicative of the dynamic and highly competitive state of the market.
- 2.29 As mentioned earlier, the ‘yes’ services are a key group of products relied upon by Optus to encourage customers to subscribe to Optus’ network. As examples of the nature of these pricing plans, ‘Yes’ Time gives post-paid customers the first 20-minute of any on-net call free where the call takes place between 8.00 pm and midnight any night of the week. The equivalent plan offered to prepaid customers is ‘express time’, where customers enjoy the first 20 minutes free to any Optus prepaid customer from 9.00 pm to midnight any night.
- 2.30 ‘Yes’ Weekend gives the first 10 minutes of a call to any mobile on any network for 20 cents from midnight Friday to midnight Sunday. ‘Yes’ Weekend is not included in many currently offered plans, but a very large proportion of the customer base receives this offer.
- 2.31 ‘Yes’ AnyPhone enables customers to call to any fixed or mobile phone for 10 cents for 30 seconds between 8.00 pm and midnight every evening.
- 2.32 Outside of these plans, post-paid customer call charges vary with a number of factors, including the cost of the plan, the length of contract and whether or not a handset is included in the package.

Fixed-to-mobile pricing

- 2.33 The market for fixed-to-mobile calls is very competitive, and the fixed-to-mobile call prices reflect this. According to the ACCC’s Division 12 reports the price of fixed-to-mobile services have fallen substantially for at least the past three years. For the three years to 2001/02, retail prices of fixed-to-mobile services have fallen by more than 15%. The change in prices varies between customer groups with the greatest price reductions being received by large business customers. These customers appear to be more sensitive to the price of fixed-to-mobile services than residential customers. It is more efficient for the greatest price reductions to be given to the most price sensitive customers.
- 2.34 Telstra’s dominance over access to the local loop does not restrict pricing in this market. Whilst most calls terminate on Telstra’s network in the fixed-to-fixed call market, the proportion of total fixed-to-mobile calls terminating on Telstra’s mobile network is much smaller, meaning that Telstra pays a relatively large proportion of fixed-to-mobile termination charges.

⁸ ACCC, July 2001, *Pricing Methodology for the GSM Termination Services: Final Report*, page 5.

- 2.35 Fixed-to-mobile calls can be “preselected” by customers in a bundle of long distance and international calls. This provides an effective avenue for CSPs and carriers to compete for these services. Optus, AAPT, Primus and other players have made substantial inroads into Telstra’s incumbent market share for these services and prices have fallen substantially for all of these services. Optus believes that competition in local call services remains the only inhibitor to full competition in those services.
- 2.36 Competition amongst fixed-to-mobile and mobile-to-mobile services appears to be increasing. In what may be an attempt to drive fixed-to-mobile calls on-net (to avoid paying these termination charges to other carriers) Telstra has recently introduced the Family Phones Bonus that provides a 50% discount to all calls between Telstra fixed-to-mobile, mobile-to-mobile, and mobile-to-fixed calls.

Subscription pricing

- 2.37 Subscription pricing is made up of two components; the monthly ongoing charges for post-paid customers and the price of the handset.
- 2.38 In relation to ongoing access charges, the vast majority of Optus plans have zero effective access charges, with the value of the monthly access fee being given to subscribers in ‘free’ call minutes. Exceptions are plans at the lowest end of each range, which are more likely to attract marginal customers. In the case of customer with very low consumption, monthly consumption charges may not cover the monthly cost to serve the customer. In these cases, a low effective access fee is charged in order to ensure that Optus at least has a chance of breaking even on the customer. An example would be a rate plan with a \$16 access fee and \$10 each month of included usage charges.
- 2.39 Mobile carriers generally offer subsidised handsets to customers, because customers have been shown to be particularly price sensitive to handsets. The exact size of the subsidy offered by Optus to its customers varies in relation to contract length and the value of the plan.
- 2.40 Carriers recover the cost of handset subsidies over time through call charges, and market research shows that customers clearly recognise this fact when they subscribe to mobile networks.
- 2.41 Optus believes that these subsidies are a valuable way of:
- Increasing mobile penetration rates.
 - Attracting customers onto Optus’ network.
 - Encouraging customers to subscribe to post-paid rather than pre-paid packages to ensure that customers recover their acquisition-related costs.
 - Encouraging customers to upgrade their handsets to those with additional capability and functionality, i.e. MMS and WAP.
- 2.42 Market research shows that there is a clear demand for zero-dollar handsets at the point of connection. Further evidence of this lies in the fact that while

other carriers have attempted to remove or reduce subsidies in the past, they have generally been unsuccessful in doing so because of the adverse demand responses from consumers. **[Start commercial in confidence]**

[End commercial-in-confidence]

- 2.43 In general, handset subsidies comprise an important component of each carrier's competitive offerings. In addition, they have been, and continue to be, an important driver of penetration particularly for new mobile services.

Fixed and mobile telephony bundling

- 2.44 Fixed and mobile telephony are increasingly being bundled in the one service offering. The ability of carriers to bundle mobile with fixed telephony enables fixed providers to drive fixed-to-mobile calls on-net while at the same time increasing market share in both markets.
- 2.45 To illustrate the extent of mobile and fixed bundling available in the market, Telstra's 'Options Rewards' scheme offers discounts to customers that bundle fixed telephony with at least one other product, such as mobile telephony. AAPT offers a 'Smartchat' packages, which enables customers to save up to 10% for bundling phone, mobile and Internet.
- 2.46 Since February 2002, Optus has offered bundled discounts to new customers. This, however, has not been marketed publicly. This discounting strategy gives Optus mobile users an extra \$5 of included calls per month when they bundle their mobile phone with pre-selected fixed services.

Changes over time in the price of mobile services

- 2.47 The total cost of mobile ownership and usage has fallen significantly over time. Competition has been a major driver of these reductions.
- 2.48 The following graph shows the monthly cost since 1998 of mobile consumption against a price index for an average user (excluding the cost of the handset). The calculations are based on the minimum amount a customer could pay to consume a particular basket of calls and minutes, given rate plans generally available at the relevant date. The basket comprises call types and minutes indicative of the consumption patterns of the average consumer.

[Start commercial in confidence]

[End commercial-in-confidence]

- 2.49 As the graph shows, the index of mobile call prices has trended downwards over time.

2.50 The basket approach to measuring price movements is more representative of price movements than the ACCC's yield approach, adopted as a retail benchmarking pricing principle for mobile termination. In Optus' view, the yield approach has several problems:

- It treats peak minutes of traffic in the same way as off peak minutes. This diminishes the incentive of operators to price in a way that encourages the efficient use of their network.
- It penalises 'on net' pricing because the yield approach shows an increase in usage due to the provision of free on net minutes as a price fall. This is inappropriate given that such pricing arrangements are predominately designed as a means to efficiently utilise existing network capacity.
- The yield approach dulls the incentive to offer capped rates on mobile networks, as again, these rates are typically used in off-peak times, and will encourage increased usage of the network.

Setting of termination charges

2.51 GSM and CDMA termination are declared services. This means that service providers *must* provide access for access seekers to these services on request. Currently, termination rates are set through commercial negotiations between Optus and other mobile network operators and fixed network operators. In the event that commercial negotiations fail, disputes can be lodged with the ACCC who will then arbitrate the disputes in accordance with the pricing principles that it has developed.

2.52 Optus observes that few disputes have been lodged with the ACCC and that no carrier has lodged undertakings. Since the ACCC has released its pricing principles for mobile termination no disputes have been lodged and parties have commercially agreed termination rates. Consistent with the outcomes that would be expected under a strongly competitive mobile industry, termination charges have been falling over time as shown in the following graph. **[Start commercial in confidence]**

[End commercial in confidence]

2.53 Optus submits that there is no evidence that termination rates are not falling fast enough. Indeed, they are falling faster than mobile-to-mobile retail prices, which have already been established to be a highly competitive market. It would appear to be difficult for the ACCC to demonstrate that a market failure exists and is consequently restricting the downward movement of termination charges.

2.54 As shown in later sections of this submission, there are many incentives for carriers to agree upon low termination charges. The effectiveness of these incentives is illustrated by the fact that termination charges are falling faster than would be required by the ACCC mobile pricing principles.

Marketing

- 2.55 Mobile market players extensively advertise their retail mobile products. Optus believes that the sheer extent of advertising is indicative of the intensity of competition inherent in the market.

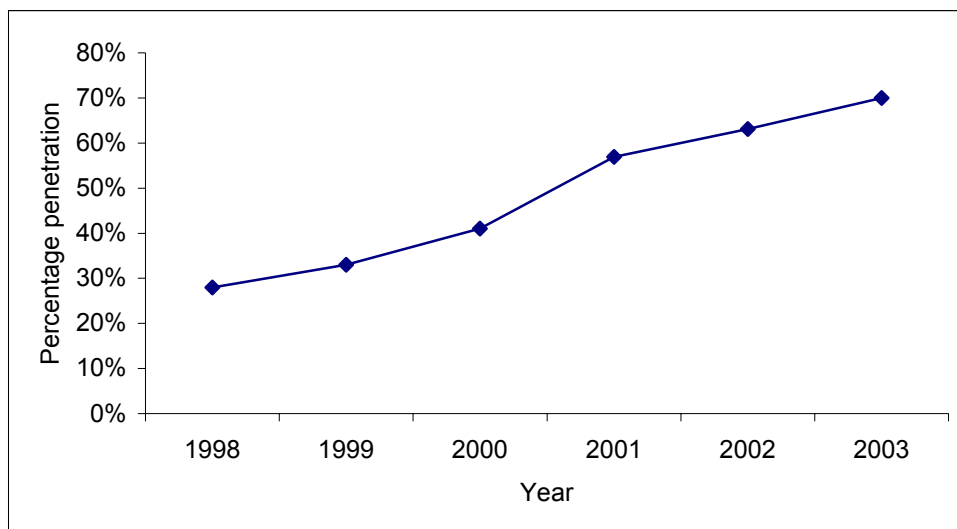
Performance

Penetration

- 2.56 The mobile services market is one of the fastest growing telecommunications markets, and continued penetration growth has been a key feature of the market. Penetration growth has been rapid, which is a clear expression of the value consumers place on the value of the services offered by the Australian mobile industry. Among the OECD countries, only the Scandinavian countries have experienced faster growth rates. However, the rate of increase is showing signs of deceleration, which is expected to continue into the future.

- 2.57 The following graph outlines penetration rates within the Australian market.

Australian mobile penetration



- 2.58 The following graph illustrates the growth of Optus' subscriber numbers.

[Start commercial in confidence]

[End commercial in confidence]

Growth of call minutes

- 2.59 There has been massive growth in call minutes originating on Optus, network, and in mobile networks generally. Most of this increase can be attributed to higher penetration rates, although some is a result of increased number of call minutes for pre-pay subscribers. Post-pay call minutes per subscriber have remained fairly steady.

2.60 The following graph shows the growth in call minutes originating of Optus' mobile network. **[Start commercial in confidence]**

[End commercial in confidence]

Growth of data traffic

2.61 SMS accounts for around 98% of all data traffic. SMS offers a low cost alternative to voice traffic over mobile networks. There has been huge growth in SMS traffic since first introduced, and the success of SMS has taken the industry by surprise.

2.62 **[Start commercial in confidence]**

[End commercial in confidence]

2.63 A significant portion of this increase in SMS messaging is economic substitution from voice calls. The youth segment of the mobile market, in particular, has embraced SMS messaging, causing an SMS peak load between 4pm and 7pm each day. The youth market is clearly substituting SMS messaging for voice call because SMS is a cheaper alternative compared to voice calls.

2.64 Optus believes that SMS traffic could double, driven by consumer applications such as SMS chat, games and competition services. Optus also sees substantial growth potential in corporate text messaging, which to date has lagged the consumer side of the business.

Average revenue per user (ARPU)

2.65 **[Start commercial in confidence]**

[End commercial in confidence]

Profitability

2.66 The Australian mobile industry as a whole is not earning excess profits. While Telstra and Optus run profitable mobile businesses in accounting terms, other players in the industry do not.

2.67 Even though Telstra and Optus are profitable, they are not earning excess returns on mobile services. Optus submits that the cost of raising capital in the mobile industry is very high due to the following factors:

- Large fixed cost base, thereby increasing the size of potential losses.
- Difficulties faced by carriers in achieving sufficient scale to run financially viable businesses.

- Risk of technological obsolescence.
- Continuing threat of new market entry and eroded market share.
- Vulnerability of mobile telephony traffic volumes to fluctuations based on business cycles.

Summary

- 2.68 The mobile services market, both at the wholesale and retail level, is fiercely competitive as evidenced by the structure, conduct and performance of the industry.
- 2.69 The market structure is characterised by the existence of multiple market players competing not only for new customers, but also for customers from other networks. The level of customer churn between networks is high, which reflects the recognition by consumers of the mature state of competition. Each carrier's market share is also threatened by the potential for new market entry, and consumer usage of substitutes to mobile telephony.
- 2.70 Market conduct is largely driven by competition for consumers, and also for customer retention. Carriers offer multiple tariff structures and pricing options, enabling consumers to pick the package that best meets their needs. Handset subsidies have played an important role for carriers in attracting consumers to their networks, and in promoting mobile penetration in general and increasingly for new services.
- 2.71 Bundling is also becoming an increasingly prevalent tool for product differentiation. Indicative of the level of competition and carrier responses to competition, prices for mobile services continue to fall, both at the wholesale and retail level.
- 2.72 The performance of the industry is also consistent with competitive outcomes. Although penetration levels continue to rise (albeit at a slowing rate), industry-wide profitability is modest.

3. Component price structures for mobile services

- 3.1 Pricing structures in the mobile telephony market have been driven by a range of factors including:⁹
- The high proportion of fixed costs in operating a mobile business.
 - The rapid growth of the industry and the continued evolution of mobile services and consumer tastes and demands.
 - Interactions between mobile and fixed telephony services.
 - Strong positive network externalities associated with mobile subscription.

⁹ The Australian mobile telephony regime is one where calling party pays (CPP) in all cases.

- The interdependency between subscription, termination and origination revenues.
- 3.2 Mobile telephony is supplied as a bundled package to consumers with three primary, related services provided by the mobile carrier. These are:
- (a) Mobile subscription - including connection to the network, the supply of handsets and ongoing access to the network termed '*subscription*'.
 - (b) Mobile call origination - when subscribers to the network make calls to other telephone services (either fixed or mobile), termed '*usage*'.
 - (c) Mobile termination services when other mobile carriers, fixed telephony carriers or resellers have customers who want to terminate calls to the mobile subscriber, termed '*wholesale termination*'.¹⁰
- 3.3 Because mobile telephony services must be sold as a bundle consisting of subscription, usage and wholesale termination, then the prices for each component of the bundle are highly and unavoidably interdependent. That is, a mobile call to a customer on another network cannot take place without the ability to terminate the call on that network. The revenue streams, whilst identified separately in this discussion, are strongly interrelated and can only be viewed in aggregate.
- 3.4 In a competitive market the price charged for the 'mobile telephony bundle' should at least cover the total cost of providing mobile telephony services (originating, carrying and terminating each call), including the common and fixed network and non-network costs of the mobile business.
- 3.5 With effective competition in the provision of mobile telephony services, a change in one of the bundled revenue stream will be associated with an offsetting change in another revenue streams. For example, if there is an increase in termination charges, then the value to a mobile telephony provider of attracting additional subscribers increases.¹¹ The ensuing aggressive competition for subscribers will result in a reduction in subscription charges. In the long-term, the increase in the revenue from termination (on a per subscriber basis) will be offset by a reduction in revenue from subscription charges (on a per subscriber basis). The balance of charges will be set by the nature of demand for the bundle.
- 3.6 Dr Julian Wright¹² refers to this concept as the "*competition for termination revenue effect*" which highlights this interdependency whereby mobile firms compete aggressively for customers in order to gain additional termination revenue. Thus, an important consequence of higher termination charges is the more aggressive pricing in mobile services to capture greater market share. This results in lower mobile subscription charges. This concept is discussed in greater detail later in this section.

¹⁰ Wholesale interconnection charges are an important source of revenue for carriers (particularly for smaller mobile carriers). They are negotiated between mobile carriers and access seekers. The dynamics of these commercial negotiations and resulting prices are influenced by an array of commercial factors beyond regulatory issues.

¹¹ Mobile subscribers bring wholesale termination revenue to the carrier when other people call them.

¹² Dr Julian Wright, *Competition and Termination in Cellular Networks*, University of Auckland, 23 December 1999.

- 3.7 The ACCC is concerned that termination charges set by mobile operators may be inefficiently high, to the detriment of end-users. Optus disputes this view, and submits that the current costs associated with the total mobile package (subscription, termination and origination) are more efficient than regulated pricing and:
- are more consistent with Ramsey efficient pricing would be likely with regulated prices.
 - are structured in a way that maximise mobile and fixed network externalities.
 - promote increased penetration of mobile services to the benefit of end-users.
- 3.8 This section discusses efficient mobile pricing structures and each of the abovementioned points in more detail.

Competitive prices are likely to tend towards Ramsey efficiency

- 3.9 As discussed by Dr Jerry Hausman in his expert economic affidavit prepared for Optus:

“Terminating price set equal to marginal termination cost, which Prof. Gans assumes would be the outcome of an “integrated monopolist” is incorrect. Mobile networks have large amounts of fixed costs compared to variable costs and much of these fixed costs become common costs with respect to originating and terminating traffic. In the presence of fixed and common costs economists recognize that a competitive firm will price services above the marginal cost to recover fixed and common costs.¹³ Otherwise, the firm will not earn its cost of capital. Hence, the firm sets its retail prices for services according to the different elasticities of demand for the various services, and the contribution each service makes to the recovery of fixed and common costs is efficiently determined by end-user demand elasticities ...

Optimal regulation leads to a similar outcome of markups inversely proportional to demand elasticities, which is known as Ramsey pricing.¹⁴ Thus, the cost recovery for the fixed and common costs places a higher markup (burden) over marginal cost on those services with relatively inelastic demands. The result of no markup, i.e. price set at marginal cost, would only occur if demand were almost infinitely elastic, which is not the case for cellular termination demand.”

- 3.10 Competitive forces have shaped the current price structures of the components of the mobile package (i.e. origination, subscription and termination) both in Australia and internationally. These structures are such that mobile operators offer discounted handsets to encourage subscription, with the bulk of the fixed and common costs being allocated to termination and origination.

¹³ Optimal regulation also faces this problem of allowing the regulated firm to cover its fixed and common costs. Note that common costs are sometimes referred to as “joint and common” costs.

¹⁴ Actually, “superelasticities” are used that take account of complements and substitutes.

- 3.11 Given retail market prices for fixed to mobile calls in 1999, the elasticity of demand for fixed to mobile is estimated by Access Economics at 0.08.¹⁵ This is consistent with Optus market data that has shows the non-responsiveness of consumer demand to changes in the price of fixed-to-mobile calls. In other words, fixed to mobile calling is very price inelastic.
- 3.12 In terms of the efficient recoupment of the costs of mobile networks, fixed to mobile calling should bear a proportionally high amount of the fixed, common and joint costs of running a mobile business. This is because fixed-to-mobile calling is more price inelastic than other mobile services such as mobile subscription and mobile call origination. Economic efficiency, in terms of the recoupment of the fixed costs of mobile networks, is promoted by a charging structure where inelastically demanded services bear proportionally more of the recovery of these fixed network costs. This is because such a structure minimizes the distortion to consumption decisions.¹⁶
- 3.13 Optus believes it is likely that the current market prices broadly reflect Ramsey pricing principles.

Network externalities

- 3.14 There are internal and external benefits associated specifically with mobile subscription. These include:
- (a) Private internal benefits to the mobile subscriber, such as convenience, mobility and consumption choice.
 - (b) External benefits to other mobile subscribers on other networks, as they can now contact this person and vice versa more easily.¹⁷
 - (c) External benefits to fixed telephony users, as they can now contact this person and vice versa more easily.
- 3.15 A mobile subscriber, in considering how much the subscription is worth to them, will factor in their internal benefit (a) above, and possibly some factor of (b) above (particularly if entering into a closed user group arrangement or attempting to make use of cheaper rates)¹⁸. In most cases, however, the potential subscriber will have little or no consideration for the external benefits of their decision to subscribe to a mobile network; these are the “positive network externalities”.
- 3.16 A positive network externality is a situation where the benefits arising to society from the consumption of a service or product are greater than the benefits accruing to the private consumer. These positive externalities are appropriately analysed as a type of public good, where the connecting mobile subscriber confers wider benefits on other members of society (calling parties) that are non-rivalrous in consumption. Often, private markets fail to encourage the provision of such public goods. However, the private market

¹⁵ See Access Economic “Review of Price Controls on Telstra” August 1998, page 99.

¹⁶ It should be noted that putting fixed-to-mobile calls in the pre-selection basket would not have a material effect on the industry elasticity of demand.

¹⁷ This increases the value of the subscription to the other users.

¹⁸ Similarly, a business may internalise the benefits of other members of the business being contactable.

for mobile telephony has evolved in a way that has allowed this market failure to be largely avoided. The reason is that the external social benefits of connection can be, at least partially, priced in the market (internalised) through the charges for subscription, usage and access.

- 3.17 The benefits that fixed-to-mobile calling parties obtain from being able to call mobile subscribers can be priced in the market according to the willingness of such callers to pay for their calls to mobile subscribers.

The market internalises the positive externalities

- 3.18 The market might attempt to “internalise” these externalities by using an implicit pricing structure that encourages a higher uptake of mobile subscription. This approach may be necessary because a large number of potential mobile subscribers are marginal according to Australian market data. They will only buy mobile services if they are not required to meet, in full, the fixed costs of the mobile network. Hence a charging structure which utilises some of the calling parties’ surplus (which Optus believes is substantially larger than that of the receiving party), generated by other peoples’ decisions to subscribe to a mobile service, to partially fund the fixed costs of mobile networks, will produce a Pareto improvement for all parties and society.
- 3.19 Although it might be considered to be efficient in the short term to price mobile subscription at (or possibly below) the marginal cost of connection and to price calls at the marginal cost of calls, pricing in this way will not allow the mobile telephony provider to recover the capital and installation costs of the network or the costs of running and maintaining the network.¹⁹ The expectation that these costs will not be recovered would prevent future investment in new mobile telephony networks and discourage the efficient maintenance, replacement and upgrading of the current networks.
- 3.20 There are therefore a number of options available to the mobile operator to internalise the positive externality:
- Increase mobile call usage charges above the marginal cost of providing calls (an allocation of costs to retail mobile calls).
 - Increase mobile termination charges above the marginal cost of terminating calls (an allocation of costs to the wholesale termination of calls).
- 3.21 All options will result in unavoidable economic distortions because of the initial market failure of under-subscription (less than the socially efficient levels). The challenge for operators is therefore to apply the pricing structure which results in the lowest level of distortions and therefore lowest level of deadweight welfare loss to society. Such a structure will also maximise profits to the mobile operator, so all parties’ interests are aligned.
- 3.22 It is irrelevant that some consumers who make fixed-to-mobile calls do not own mobile phones. They are choosing to purchase a product that does not

¹⁹ See Brown, S. J. and D. S. Sibley (1986) *The Theory of Public Utility Pricing*, Cambridge University Press of Train, K. (1997) *Optimal Regulation*, MIT Press for a discussion of efficient utility pricing with and without a ‘break even’ constraint.

necessitate mobile subscription. Those consumers get some of the benefits of mobile uptake without having to pay subscription charges.

Mobile market undergoing dynamic growth and an evolving structure

3.23 A range of factors impact on pricing structures in the mobile telephony market. Further, it is a market which is still maturing, has not yet achieved full penetration, and faces continuing dynamic technological change. In these circumstances, there are considerable regulatory risks associated with any exogenous regulation of the mobile industry.

Less than full market participation

3.24 Based on Optus' internal data, it is estimated that market penetration rates for the Australian mobile industry are in the order of 70%.²⁰ The fact that there is only partial market participation suggests that the level of demand for mobile telephony has not stabilised. This can be thought of as shift in the demand curve due to non-price factors (change in consumer tastes, the population becoming more mobile and spending less time at home). Essentially, the intrinsic nature of the good is changing and the impact of this is unpredictable. This has important implications for mobile pricing structures and the way in which they might be regulated by the ACCC.

3.25 The size of the positive network externalities discussed above is therefore changing over time (as the demand curve shifts). If there is some implicit subsidisation between wholesale termination rates and subscription through the allocation of costs, then the required subsidy is also changing to reflect the changes in consumer demand for existing and new mobile services.²¹

3.26 The size of the externality and the level of cross-subsidisation required are not constant because the size of the externality itself changes as market participation changes. Mobile users value their subscription more with the extra subscribers that they can now contact, so as market penetration increases mobile subscribers are willing to pay more for their subscription.²² This shift will oscillate throughout the mobile data usage (3G) revolution.

Discounting strategies and consumer preferences

3.27 Discounting strategies adopted by operators involve a vast array of choices for consumers based on their preferences and usage types. Operators are still in the process of establishing appropriate discounting strategies, and these continue to evolve at a fast pace. Mobile operators have attempted to provide

²⁰ Examination of data on participation/penetration rates can be misleading because some people have more than one mobile telephone (or SIM card). For example, a penetration rate of 100% does not necessarily mean that there is full market participation; in fact if every person in the population had at least one mobile phone, the penetration rate would be greater than 100%.

²¹ This is mirrored by changes to the supply side of the market. As the production function for mobile services change we would expect mobile operators to seek economies of scale. This will affect their incentive to subsidise subscription.

²² This also increases the value placed on fixed line subscriptions.

for a variety of consumer preferences and calling patterns by successfully using such things as on-net and off-net discounting.

- 3.28 Mobile operators use on-net discounting to increase the number of subscribers on their mobile network through the formation of closed user groups or to improve network utilisation. An increase in the number of subscribers allows firms to not only achieve economies of scale and earn more retail revenue from call usage, but it has other indirect benefits associated with the potential change in traffic on mobile networks, including:
- The potential to earn wholesale termination revenue that is collected from other mobile operators.
 - Allowing firms to avoid the incremental cash outlays associated with paying termination charges to other mobile operators.
- 3.29 These indirect benefits of increased subscription, and their effect on a mobile operator's incentives to provide on-net discounting, add a further dimension to the complexity of mobile pricing structures.
- 3.30 Other discounting strategies, such as the removal of handset subsidies by Telstra, have proven to be unsuccessful in influencing or guiding consumption decisions. Because consumers' preferences for mobile services continue to evolve, and there is no apparent consensus on what consumers' utility curves look like or the direction in which they are headed, the risk of regulatory error is particularly high in today's market.

The current price structures are not inequitable

- 3.31 The UK Competition Commission's report on termination charges concluded that regulation was appropriate because, among other factors, the prevailing price structures were "unfair" to certain groups of customers:

*"...we reject the argument that high termination charges used to subsidise customer acquisition costs and the price of outbound mobile phone calls do not produce adverse distributional effects. In our view, this is not only a distortion that particularly disadvantages certain groups of fixed-line only and payphone customers but also operates as a detriment to all customers who use fixed-line telephones more than mobile phones when making calls to mobiles, or who make more off-net calls to mobile than they receive."*²³

- 3.32 Optus recommends that the ACCC disregard this view when making decisions on the appropriate treatment of mobile termination charges. Optus believes that the current pricing structures, and the price of termination charges within them, is efficient because even consumers who do not have mobile phones are still beneficiaries of the mobile subscription. It is therefore not unreasonable that these customers pay a portion of the fixed and common costs of the mobile business.

²³ Competition Commission. *Reports on references under section 13 of the Telecommunications Act 1984 on the charges made by Vodafone, O2, Orange and T-Mobile for terminating calls from fixed and mobile networks*. Page 93. January 2003.

- 3.33 Every time a consumer makes a call to a mobile phone from a fixed line, the caller is benefiting from the fact that the mobile infrastructure exists, and that the person they are calling has chosen to subscribe to a mobile network they can call anywhere and at anytime. These consumers are able to reap the benefits of the mobile infrastructure without necessarily having to pay subscription charges. It is therefore reasonable that these customers pay a portion of the costs through call termination charges.
- 3.34 There is substantial evidence to suggest that consumers are not uncomfortable about paying the current level of charges for fixed-to-mobile calls. This evidence includes:
- Optus performed some research to identify reasons for customers churning away from Optus. The research results revealed that only 6% of off-net telephony churners did so because of the cost of fixed- to-mobile calls.
 - It has been shown that the demand for fixed-to-mobile calls is relatively inelastic.
- 3.35 To the extent that consumers do not feel that they are paying too much for these calls, it is difficult to identify the basis for any equity concerns. Further, Optus believes that decisions on whether or not to regulate based on issues of “fairness” does not lie within the scope of the ACCC’s mandate.
- 3.36 The UK Competition Commission’s decision to regulate mobile termination prices was driven by the public interest provisions pursuant to section 3 of the *Communications Act 2002*. This section of the Act is very specific with respect to the public interest and levels of service provided for end-users. More importantly, the public interest test has a particular focus on equity issues amongst different types of consumers.
- 3.37 For example, s.3(1)(b) discusses telecommunications services availability from the perspective of any person being able to finance the provision of those services. Further, s.3(2)(a) makes specific reference to the promotion of the interests of consumers, purchasers and other users and particularly those who are disabled or of pensionable age in respect of prices and quality and variety of telecommunications services.
- 3.38 This suggests that the decision to regulate fixed to mobile termination rate was most likely driven by equity objectives (provision) for different types of consumers and the likely anticipation that certain consumer groups might make more use of certain types of calling methods. In contrast, the ACCC’s application of the LTIE objectives is appropriately centred on efficiency and the promotion of competition, any-to-any connectivity, and efficient use of and investment in infrastructure.

4. Economic impacts of regulating mobile wholesale termination rates

- 4.1 This section shows that socially optimal termination rates are not necessarily set at cost, and any regulation that attempts to force such rates being set at cost will lead to economic distortions and significant net welfare losses.
- 4.2 Regulation of mobile termination is likely to lead to price increases in retail subscription and mobile usage, and a subsequent loss of economic welfare for end-users through the distortion of a currently competitive mobile market. In addition, there will be a reduction in productive efficiencies, through distorted investment incentives and decisions due the financial disincentives of lower returns on capital for mobile carriers.
- 4.3 This section demonstrates and estimates the welfare loss to Australia associated with regulation that requires mobile operators to set termination rates at cost. This section finds that if regulation were to result in an exogenous 5 cent per minute decrease in termination charges²⁴, then the mobile penetration rates would decline by 10 per cent and there would be an overall welfare loss of at least \$1 billion per annum, the majority of which would occur in the fixed-to-mobile market.²⁵
- 4.4 In practice, whilst an increase in subscription charges may not immediately lead to a full 10 per cent decline in penetration levels, it is likely that this would lead to a significant slowing in the growth in penetration of mobile devices. However, we would expect marginal consumers to give up usage at the end of their existing contracts.
- 4.5 Whilst this section presents a static model of welfare losses we would expect similar results from a dynamic model that estimates the loss in welfare from a slowing in penetration rates over time. We note that in countries such as Japan penetration rates are already in excess of 100%, suggesting that Australia's penetration rates are by no means near saturation point.
- 4.6 In any case, it is worth noting here that regulation is always a second-best solution for a market externality and it can never mimic a perfectly competitive market, it is best applied to only elicit information and operate automatically with little day-to-day interference.²⁶
- 4.7 The economic welfare consequences of regulation would be detrimental because:
- (a) The incentive and ability for firms to aggressively compete for customers by use of low retail subscription and usage prices would be distorted.

²⁴ Note that we have arbitrarily chosen 5 cents to demonstrate the size of the welfare impacts. The figure does not purport to represent an actual cost calculation.

²⁵ It is interesting to note that the ACCC's main motivation for regulation is the termination price being paid by fixed to mobile callers, when ironically, these are the group of callers that potentially suffer the greatest loss in consumer welfare.

²⁶ King S P, *Incentive Regulation in Australia – a hybrid approach*

- (b) Inefficient pricing structures imposed on the market by regulation would be likely to distort an efficient competitive market by their distortionary effect on efficient consumption decisions.
- 4.8 There will be two sets of distinct welfare losses arising from a rule that sets mobile termination equal to marginal cost.²⁷
- Violation of Ramsey recovery rules: The mobile operator will be artificially constrained to recover its fixed and common costs from a narrower set of components of mobile service (call origination and monthly subscription). Hence recovery of the fixed and common costs will be less efficient.
 - The externality benefits other network users obtain from mobile adoption will not be efficiently reflected in, and internalised through socially efficient, end-user pricing.
- 4.9 The decrease in mobile take-up will be determined by the responsiveness of mobile subscribers to an increase in mobile subscription prices. This chapter estimates this responsiveness and quantifies the welfare loss from different decreases in termination charges accompanied by offsetting increases in mobile subscription charges. The “network externality” benefits of mobile subscription are also explicitly accounted for in the analysis.

The take-up of mobile services is a marginal decision for consumers

- 4.10 The take-up of mobile services by a mobile subscriber involves the purchase of a mobile handset and access to a mobile network. This is potentially a relatively costly exercise for the potential subscriber, involving the purchase of a mobile handset which, depending on functionality, costs between \$200 and \$1200 to produce. In addition, mobile subscribers require the provision of a mobile customer access network (allowing the mobile handset to make and receive calls). This is currently priced to subscribers at between \$0 and \$250 per month for Optus customers (depending on selection of mobile calling plan). Subscribers also require connection to the network.²⁸ The average minimum duration of these mobile contracts that customers sign up to is presently 1 to 24 months.²⁹
- 4.11 Optus data suggest that the elasticity of demand for mobile subscription is highly price elastic and probably greater than one.³⁰ That is, for every 10 per cent increase in the upfront costs of mobile subscription there will be a greater than 10 per cent per cent decrease in mobile penetration. Hence consumer demand for mobile subscription is price sensitive (price elastic) to the upfront costs associated with the decision to subscribe. The analysis in this section

²⁷ These are the first round (short run) losses. Second round losses include a lower level of economic investment, entry and competition in the mobile industry.

²⁸ This involves connecting the handset to the network so it can make, receive and be billed for calls using the network.

²⁹ Optus offers mobile contracts generally with minimum periods of between 12 to 24 months, with the majority of contracts lasting for 24 months.

³⁰ This is defined as the percentage change in demand for mobile subscription given a percentage change in the upfront costs of mobile subscription (other things remaining equal).

conservatively sets the mobile subscription elasticity at 1 when estimating the impact on penetration.³¹

The benefits from mobile subscription

4.12 The take-up of mobile service allows the mobile subscriber to make and receive calls on their mobile handset. Hence this purchase decision provides two sets of benefits to society:

- Internal benefit - the mobile subscriber gains utility from being able to make and receive calls on the mobile handset.
- External benefit - other (fixed and mobile) consumers benefit from being able to call the subscriber on their mobile phone at specified prices.

4.13 Society's demand (or the socially efficient level of demand) for mobile subscription will not be reached unless the mobile charging structure allows callers to mobile subscribers to, in part, assist in funding the take-up and continuing costs of mobile subscription. This is achieved by a mark-up above 'pure' marginal cost³² on the price of calls to mobile subscribers: the price of terminating access on the mobile network.

4.14 As discussed by Dr Jerry Hausman in his expert economic affidavit:

“Efficient pricing principles demonstrate that the markup on terminating calls should exceed the markup on originating calls. Remember, the callers also receive value that is based on other peoples’ decisions to purchase mobile service, so the callers should also help to pay the fixed and common costs of the mobile networks. The value they receive from placing calls (the consumers surplus) is taken into account in optimal prices, and callers should not get a “free ride” by not paying part of the fixed and common costs of mobile networks or the resulting prices will not be efficient.”

4.15 Hence, a second-best solution is achieved in the market through a mark-up on marginal cost on calling mobile subscribers. Dr Julian Wright states unambiguously that the internal and external benefits to mobile customers (and to society) of lower rentals outweigh the loss in consumer surplus of fixed-to-mobile callers.³³

4.16 Dr Julian Wright has made the following comments in this regard:³⁴

³¹ International data shows estimates of elasticities for mobile subscription range from 0.8 to 1.6.

³² Given substantial fixed costs, producers need recover more than marginal cost from the prices of their services if they are to remain solvent. The mark-up above marginal cost for the various components of service will need to at least, in aggregate, recover the totality of fixed costs for the firm to continue long-run supply.

³³ Dr Julian Wright, *Competition and Termination in Cellular Networks*, University of Auckland, 23 December 1999.

³⁴ Dr Julian Wright, *Access Pricing under Competition: An Application to Cellular Networks*, University of Auckland, 29 December 2000

- Above-cost termination prices are largely competed away and so represent essentially transfers from one set of customers to another.
 - Where such transfers allow externalities to be better internalised, welfare can be improved.
 - Socially optimal termination charges are not necessarily at (or below) cost.
 - Efficiency can be enhanced by allowing firms to be integrated, because of the internalised benefits of increasing the firm's fixed-to-mobile market. This also solves any double marginalisation problems.
- 4.17 Dr Julian Wright makes a pertinent contribution to the question of how much of the burden of a fixed-to-mobile call should be paid by the fixed telephony user making the call:

Because fixed-line callers generally get more of the benefit of a fixed-to-cellular call and because they tend to be less price-sensitive compared to cellular subscribers welfare maximisation dictates that the fixed-to-cellular caller bear most of the burden for enabling a fixed-to-cellular service.

Welfare effects of a regulated decrease in wholesale termination rates

- 4.18 Consumers are unambiguously worse off from an imposed reduction in the mobile termination rate. Whilst there is some transfer of consumer surplus away from mobile subscribers toward fixed-to mobile callers due to the restructuring of prices, this is significantly outweighed by overall welfare losses in the fixed-to-mobile market and the mobile calling market from higher subscription charges and the subsequent decline in mobile penetration rates.
- 4.19 The group of mobile or fixed callers who make a lot of mobile terminating calls will simply be encouraged to use their phones more with the lower than efficient price of termination, however they will have less people to call because of the removal of the subscription subsidy and the higher subscription prices. This can only lead to future penetration levels not growing to their full extent.
- 4.20 A lower than efficient level of mobile penetration and the inefficient recovery of the fixed and common costs of mobile networks resulting from regulation results in a lower level of consumer welfare and a lower level of profits for mobile networks.
- 4.21 A number of methods can be used to estimate the decrease in mobile penetration resulting from regulation. That is, a decrease in the price of mobile call termination rates, accompanied by a corresponding increase in the price of 'mobile subscription' that leaves the mobile operator with approximately the same level of revenue per mobile subscriber to recover total costs.³⁵

³⁵ In practice, the mobile operator will require more revenue per customer to recover total costs when penetration is decreased because mobile networks have economies of scale.

Overall welfare loss in the retail fixed-to-mobile market

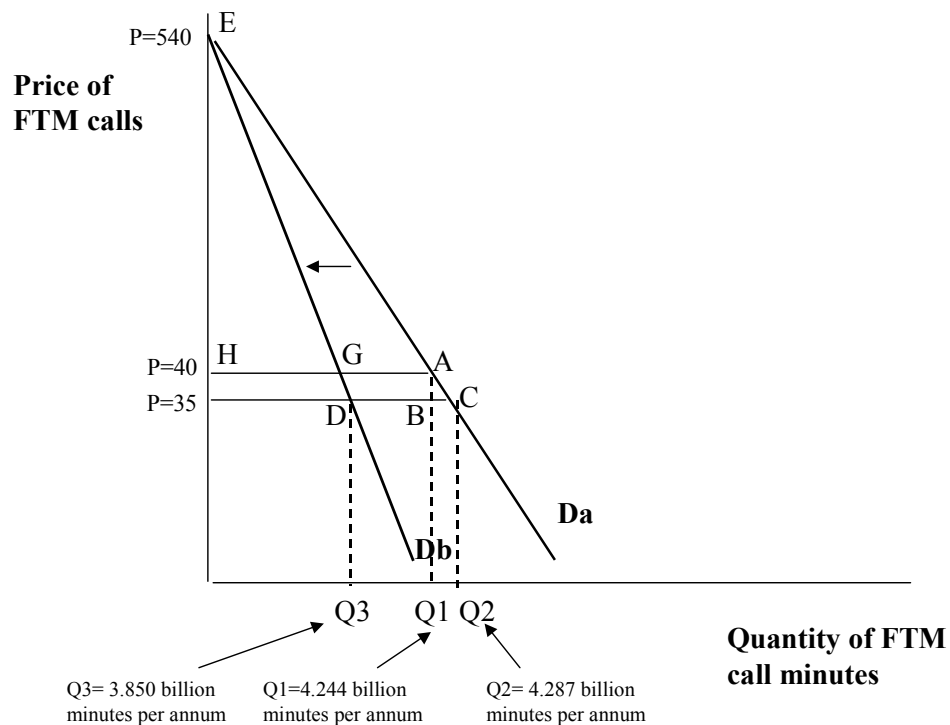
- 4.22 Optus market data shows there is a loss of a certain amount per annum in mobile revenue for every 1 cent per minute reduction in the call termination price (assuming full pass through to retail prices). Optus' estimates show the current industry-wide GSM mobile subscriber base is approximately 13.9 million customers, representing a 70% penetration rate.³⁶
- 4.23 If the retail price of fixed to mobile calling was reduced from current average market levels of 40 cents per minute to, say, 35 cents per minute (caused by a 12.5 per cent reduction in the mobile termination price)³⁷, this would produce an increase in upfront costs of mobile subscription of \$30 per 24 month mobile contract (which is equivalent to a \$15 per annum increase in mobile subscription fees).³⁸ This would reduce market take-up of mobile services by approximately 10 per cent, according to Optus' empirical market data. We have conservatively set the long-run subscription elasticity at 1 for the purposes of this analysis.
- 4.24 Hence a \$30 increase in the upfront fees for mobile subscribers per 24 months will produce a long-run decrease in mobile penetration of 10 per cent of total penetration. For example, in Australia, the current 70 per cent mobile penetration rate would fall to 63 per cent (from 13.9 million subscribers to 12.5 million subscribers). This assumes average upfront costs of subscription of approximately \$290 per mobile contract on average (which usually last 24 months).
- 4.25 The welfare loss in the fixed to mobile calling market from such a policy (a reduction in the fixed to mobile calling price caused by a lowering of terminating charges) is shown in Figure 4.1. Assuming a pro-rata decrease in the number of fixed to mobile calls per disconnecting mobile subscriber, the decrease in the fixed to mobile price from 40 cents per minute to 35 cents per minute (and corresponding increase in mobile subscription price) leads to a 10 per cent reduction in mobile subscription, and therefore a 10 per cent reduction in the number of fixed to mobile calls (caused directly by the lower mobile subscription numbers). This is slightly offset by an increase in fixed to mobile calling per mobile subscriber of an extra 1 per cent (caused by the decrease in the fixed-to-mobile call price). Hence the total volume of fixed to mobile calling is reduced in total by 9 per cent.

³⁶ Optus estimate as at March 2003.

³⁷ This 5 cents reduction in termination prices from current market levels has been chosen as an example, rather than suggesting current market prices are 5 cents per minute above costs. The 5 cents reduction has been chosen for illustrative purposes only.

³⁸ This will leave mobile operators with approximately the same level of revenue per mobile subscriber.

Figure 4.1: Welfare loss in FTM retail market from a termination rate reduction



- 4.26 The welfare loss in fixed to mobile calling is given by the triangle (EGA) less the smaller triangle of allocational gain (ABC) in Figure 4.1. Area (GDBA) is, given a reduction in FTM retail prices, a transfer of consumer surplus from mobile subscribers to fixed to mobile callers. This transfer, in part, causes the reduction in mobile take-up, and reduction in the demand for fixed to mobile calling from D_a to D_b .
- 4.27 The fixed-to-mobile calling market presently generates industry-wide revenues of approximately \$1.751 billion per annum, and the weighted average calling price is 40 cents per minute. Approximately 4.244 billion minutes of fixed-to-mobile calls are presently sold per annum at current market equilibrium levels. The area of the triangle (EGA) equals the area of triangle (EAH) less triangle (EGH). Given a linear demand curve for fixed-to-mobile calling, triangle (EAH) equals a consumer surplus area of \$10.610 billion.³⁹ Triangle (EGH) equals \$9.625 billion. Therefore, the welfare loss is \$985 million per annum less triangle (ABC). The area of triangle (ABC) equals \$1.1 million per annum.⁴⁰ Hence the total welfare loss from the regulation is \$984 million per annum.

³⁹ Given an elasticity of demand of 0.08 at the equilibrium price of 40 cents per minute with 4.223 billion minutes sold per annum, the dimensions of the triangle (EAH) are a base of 4.223 billion minutes and a height of \$5.00. Point E on the demand curve in Figure 4.1 = \$5.40 per minute at which there would be no fixed to mobile calling.

⁴⁰ The dimensions of this triangle are 5 cents (height) x 42 million minutes (base).

- 4.28 The above analysis indicates that for every 1 cent per minute reduction in the mobile termination price from current market levels there will be a \$2.93 per annum increase in the mobile subscription price. This will result in a long-run reduction in penetration of 281,000 mobile subscribers (representing a 2 per cent reduction in penetration). This causes a loss of \$193 million per annum in welfare in the fixed to mobile fixed-to-mobile market from reduced fixed-to-mobile calling.
- 4.29 It is also noted that similar welfare losses would result if, instead of an increase in mobile subscription prices, mobile operators raised the price of the mobile originating calls. Such a price increase reduces demand for mobile services and penetration - because the effective costs of being a mobile subscriber are higher. In addition, mobile originating calls are more price elastic (0.8)⁴¹ than fixed-to-mobile calls (0.08), hence a higher mark-up on mobile originating calls will inefficiently recover the mobile operator's fixed network costs.
- 4.30 It can be shown in a more comprehensive general equilibrium analysis that these welfare losses — whilst sensitive to the assumed elasticity estimates of fixed-to-mobile, mobile-to-mobile calling, mobile subscription and the cost of supplying mobile minutes — are robust to a range of differing assumptions concerning these demand elasticities. In particular, highly peculiar demand elasticities need to be assumed before any welfare gains arise from a government policy that reduces mobile termination charges.
- 4.31 Given these elasticities and modelling work, Optus believes it is difficult for the ACCC to demonstrate an increase in consumer welfare from a decrease in mobile termination prices - an observation that strongly supports Optus' advocacy of no regulation.
- 4.32 The above economic analysis suggests there are substantial welfare losses from a pricing intervention that reduces mobile termination charges below those levels as currently set by unfettered market processes. In particular, welfare losses caused by decreased mobile penetration, lower network investment and reduced mobile-to-mobile and fixed-to-mobile calling arise; and such losses are robust to a number of assumptions on the demand elasticity for mobile subscription and fixed-to-mobile calling.

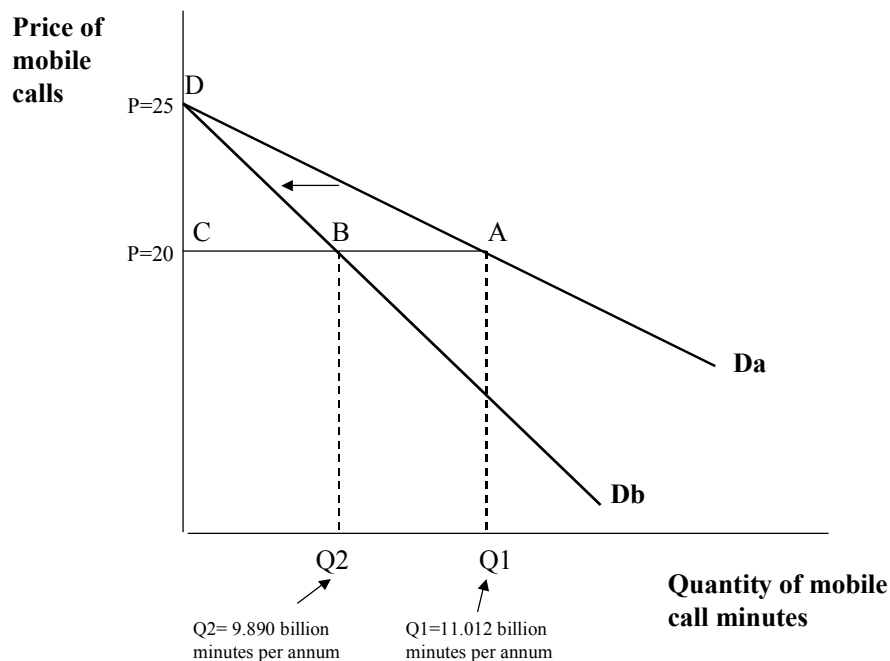
Overall welfare loss in the retail mobile market

- 4.33 The welfare loss in fixed-to-mobile calling is a subset of the total loss caused by the implementation of a reduction in the termination rate. These are now discussed.
- 4.34 In particular, the reduction in mobile penetration will reduce welfare from making mobile calls. This is because mobile subscribers will have fewer other mobile subscribers they are able to contact, and will, in addition, receive fewer calls from other mobile subscribers (given the lower level of mobile penetration). In addition, it is likely that mobile usage charges will increase further with the reduction in penetration levels.

⁴¹ See Access Economics 1998 at pg. 99.

- 4.35 The welfare loss shown above deals with the overall loss in consumer surplus for fixed-to-mobile callers, however the 10% decrease in penetration rates (from 70% to 63%) will impact on the overall economic welfare levels in the retail mobile market itself. At the outset mobile subscribers will have to pay more for their subscription (as discussed above), hence the 10% decline in mobile penetration, which is shown in the Figure 4.2 below.
- 4.36 Figure 4.2 presents the impact on mobile users calling patterns as a result of the imposed reduction in termination charges. The 10% decrease in industry penetration levels causes the demand curve to rotate left by 10%. Based on Optus' empirical data, the industry demand for mobile-to-mobile call minutes decreases from 11 billion minutes to 9.9 billion minutes as a direct result of the reduced penetration rates.

Figure 4.2: Welfare loss in mobile calling market from reduced penetration



- 4.37 This results in an overall loss in consumer surplus of the area represented by the triangle (BDA). The area CDA is equal to a consumer surplus of \$275 million per annum and the area CDB is equal to a consumer surplus of \$247 million per annum. Therefore the loss in consumer welfare from a 10% decrease in mobile subscription is \$28 million per annum.⁴²

⁴² Given an elasticity of demand of 0.8 at the equilibrium price of 20 cents per minute with 11 billion minutes sold per annum, the dimensions of the triangle (ADC) are a base of 11 billion minutes and a height of \$0.25.

The financial impact of regulation on mobile operators and resellers

- 4.38 As demonstrated above and consistent with the response to mobile termination regulation in the UK, Optus believes that mobile carriers will simply increase origination and subscription charges in order to make up for the resulting decline in termination wholesale revenue. The lost wholesale termination revenues will be recouped through higher retail subscription and usage charges. However, the method of pricing will be distorted so that overall allocative efficiency will decrease through an inefficient pricing regime.
- 4.39 The decrease in mobile participation and penetration will lead to lower revenues for mobile operators, which because of the high level of sunk fixed costs will lead to considerable declines in margins. Productive efficiencies will therefore be distorted.
- 4.40 Imposed lower wholesale termination charges will mean that mobile operators - already operating in a competitive market and therefore not earning supra-normal profits - will not achieve required minimum returns on their invested network capital.
- 4.41 Resellers of mobile telephony face lower risks than mobile operators, as they have invested less capital (sunk costs) and can therefore exit the market more easily. Mobile network providers, however, are not in a position to do this.
- 4.42 The outcomes noted above are not in the legitimate business interests of mobile operators nor are they in the long-term interests of end-users. If mobile operators cannot recover their economic costs associated with termination, then mobile operators are likely to reduce their investment in further network infrastructure. Those firms that remain in the market will have no incentive to invest in developing any further expansion in infrastructure and because wholesale termination rates will be set exogenously at below efficient levels, resellers will look to be a more profitable option to supply mobile telephony.
- 4.43 Mobile operators' prime incentive or objective is to attract more users to their network. This is consistent with the interests of end-users as it keeps subscription and origination charges low. These charges are what the consumer will base their choices on – they are highly price elastic.
- 4.44 A good regulator will regulate in a manner that incents mobile network providers to maintain a high quality network and to continue to increase coverage in underserved areas such as rural areas.
- 4.45 If the mobile termination rate is set below efficient levels, then where opportunities for efficient investment do exist, low prices will discourage resellers from becoming network providers. There will be an inefficient distortion to the build/buy decision, as it will be more economically efficient for resellers to remain as resellers. This will be detrimental to dynamic efficiencies in the market in the long-term due to below efficient levels of infrastructure investment.

5. There is no market failure in the mobile market

- 5.1 In the ACCC's September 2002 paper "Pricing Methodology for the GSM and CDMA Termination Services", the ACCC claims that the following two forms of failure exist in the mobiles market:
- Once an end-user is connected to a mobile network, the mobile carrier has control over access to the termination revenues for that end-user.
 - A lack of consumer awareness allows the mobile carrier to increase access prices for termination services without feeling the full effect of the increase. This removes incentives for mobile carriers to reduce termination charges.
- 5.2 This section presents the case that in reality, neither of these market failures exist, and that there is consequently no justification for regulation.

Carriers do not have market power in termination

- 5.3 As mentioned above, the ACCC has previously espoused the view that once an end-user is connected to a mobile network, the mobile carrier has control over access to the termination revenues for that end-user. Optus disagrees with this position and the following section presents evidence of a range of factors that prevent mobile operators from exercising market power.

Control over access

- 5.4 The ACCC argues that "once an end-user is connected to a mobile network, the terminating mobile carrier has *control over access* to mobile termination of that end-user" (page 31).
- 5.5 However, such control over access is not a sufficient condition to demonstrate market power. For example, newspaper companies collect revenue from customers subscribing to their papers as well as advertising revenue from business wanting to purchase advertising space in the paper and market their products to the subscribers. We note that the ACCC has not claimed that newspaper companies have "market power" even though they clearly control access to "the termination" of advertising to their subscribers. This contrasts with the ACCC's continued declaration of mobile termination on the belief that mobile carriers have market power because they control access for their subscribers.
- 5.6 The ACCC's view implies that individuals (for it is those individuals that choose their mobile network) have market power in the termination of calls to themselves. To see this we can use a simple case study. Imagine that each subscriber joined a separate mobile network.⁴³ Under the ACCC regulatory thinking, it would declare the terminating service for each and every mobile network on the basis that the terminating carrier had control over access. That would make little sense. Customers value being called and in this case study would feel the full effect of increases in termination charges – that is, no-one would call that network if it set prices too high.

⁴³ In this fictitious case study there would be 14 million mobile networks.

- 5.7 Clearly, in this imagined case study of a mobile network for every subscriber it is the subscriber who has control over access to his or her own mobile termination. Now consider a market in which there are many networks that customers can choose. In this extension, it is again the customer who controls access and does so in making their choice of which network to join. In the competition for subscribers (or competition for the market) mobile carriers relinquish their control over access.
- 5.8 According to the ACCC, all mobile operators, regardless of their size, have market power over access to consumers once they have signed those consumers up. This seems to be referenced to some notion of “bottleneck” control. However, a mobile termination service provided by a non-dominant operator could not, by definition, be regarded as a bottleneck or a central facility. The non-dominant mobile operator has built infrastructure that duplicates the mobile facilities of its mobile competitors.
- 5.9 The temporal association between one telephone number and a particular network does not render the network connection a bottleneck.
- 5.10 As discussed by Dr Jerry Hausman:
- “Customers when making a choice are often “locked-in” for a period, but this situation does not mean the market outcome is inefficient since marginal consumers normally take account of future costs. So long as there is sufficient competition at the point where customers exercise choice, the market outcome will be reasonably efficient.*
- Trucks and automobiles provide two examples where replacement parts in the future are an important part of life cycle costs. Marginal consumers will take into account the price of spare parts when making the initial purchase decision. As with the Woolworths example, the customer will take into account Woolies expected prices when deciding to go to Woolies or other supermarkets. Hence so long as marginal customers exercise choice, then prices of goods consumed arising from such choice will be constrained by competition.”*
- 5.11 The ACCC seems to argue that market power over access to customers exists because the party who chooses the network for receiving its calls is different from the party paying for the termination of such calls. This confuses the payer/chooser dichotomy, which may give rise to externalities, and the issue of captive customers, which might give rise to market power. The situation is exactly the situation that arises in normal competitive markets where the choice of a hardware platform creates an after-market for software with captive customers.

Operation of transit arrangements

- 5.12 Transit and refile arrangements are an aspect of the market that removes the ability of mobile operators to exercise market power in the setting of termination charges. If Carrier A seeks interconnection with Carrier B, if Carrier B offers poor terms and conditions Carrier A could refile traffic through Carrier C, who may have a better interconnection agreement with Carrier B. That is, if say, Vodafone refused or offered poor terms to

interconnect with Telstra's network, Telstra could refile its traffic through Optus interconnect agreement with Vodafone.

- 5.13 The availability of refile means that the lowest termination rate offered by a carrier in a market is available to all other carriers (with the addition of refile mark up). So, if carrier A terminates calls from carrier B at 20 cents, but insists on charging carrier C termination at 23 cents, then carrier B can terminate calls from carrier C at, say, 21 cents and send them on to carrier A at 20 cents.
- 5.14 The existence of multiple paths to termination is a significant element contributing to the competitive of the market. It means carriers will compete with each other to provide call termination services to other carriers. The carrier that offers the best call termination rate will get more traffic on its network.
- 5.15 The transit effect has been well established in the international telecommunications pricing context. For example the Productivity Commission's report *International Telecommunications Market Regulation* noted that a major effect of transit is to place pressure on terminating providers to lower settlement rates.
- 5.16 **[Start commercial in confidence]**

[End commercial in confidence]

Effect of substitutes

- 5.17 The existence of a wide range of retail level demand side substitutes for terminating calls on mobile networks severely constrains the ability of mobile operators to set termination charges in excess of efficient levels. When wishing to communicate with others, consumers have the option of using the following methods:
- Fixed to fixed calling.
 - Mobile to mobile calling.
 - Shorter duration calls.
 - Email.
 - Mobile to fixed callback.
 - SMS to the mobile from a mobile.
 - Web based SMS to mobile.
 - Faxstream and paging services.
- 5.18 The results of the Consumer Awareness survey confirm the fact that consumers do use these methods of contact as substitutes for fixed-to-mobile calls. In particular, 81% of respondents indicated that they used home-to-home calls as alternatives, 56% use mobile-to-mobile, 36% use mobile-to-home, 32% use email, 28% use SMS, and 9% use fax.

- 5.19 As discussed earlier, the demand for fixed-to-mobile calls is relatively inelastic. Optus believes that the relatively inelastic demand for fixed-to-mobile calls at the current price levels indicates that consumers view these call types as a valuable service, to the extent that they are generally unresponsive to small price movements.

Consumers value incoming calls which exerts downwards pressure on termination charges

- 5.20 The argument that mobile operators have monopoly power over termination revenues relies on the assumption that customers do not care about how much fixed line customers have to pay to call them. This argument contends that mobile carriers can raise their termination charges without backlash from mobile subscribers, because subscribers do not pay the termination charges incurred when calls are received.
- 5.21 However, evidence sourced from a variety of areas suggests that the assumption that customers do not care how much it costs to call them does not hold in reality.
- 5.22 When consumers subscribe to a mobile network, they are effectively purchasing the ability to call people from their mobile phone, and the ability to be called on their mobile phone. Utility is maximised when consumers can make outbound calls from their phone whenever the marginal private benefit of doing so is greater than the marginal cost, and when inbound calls are maximised (because subscribers do not pay for these calls, the value of the benefit of this call does not need to exceed the marginal cost of the call). High termination charges will reduce the number of calls made to mobile phones. This will have the effect of reducing the utility of mobile phone subscribers.
- 5.23 Such a reduction in consumer utility has the potential to erode mobile carrier profitability through two channels. Firstly, if the cost of terminating calls to one network was high compared to the cost of terminating calls on other networks, then the more expensive network will become unattractive to consumers when choosing which network to subscribe to. Secondly, if all carriers set similarly high termination charges, consumers could be discouraged from purchasing mobile phones *per se*.
- 5.24 Consequently, to the extent that subscribers do value receiving calls, mobile operators cannot set excessive termination rates. If, however, for some reason monopoly level termination charges did arise, they would ultimately be competed away as mobile operators identified the competitive benefits associated with reducing termination charges.
- 5.25 As illustrative evidence that customers do place a value on incoming calls (and implicitly on termination charges), in the United States mobile subscribers pay for incoming calls. The fact that mobile subscribers give out their mobile phone number to other people, and answer incoming calls, proves that subscribers receive utility from incoming calls in excess of the marginal cost of these calls.
- 5.26 Closed user groups also play an important role in incentivising carriers to offer competitive termination charges. The term ‘closed user groups’ describes

groups of users that care about the charges paid by other members of the group. There are two types of closed user groups. The first is a narrow group, such as a family unit or business, where the mobile phone owner is also the person that pays for the calls to their mobile, and therefore have a direct interest in the cost of incoming calls.

- 5.27 The second type is broader in scope. It describes a wider circle of people with a mutual financial interest in keeping call costs down, and largely consists of loose collections of friends and families. Individuals might be members of more than one such group.
- 5.28 The recent Consumer Awareness survey revealed that 46% of respondents consciously decided to join the same network as at least one person they contact through mobile-to-mobile calls. Optus believes that this evidence strongly suggests that a sufficient number of consumers are sensitive to termination charges to force carriers to factor this sensitivity into their pricing decisions.

Termination rates are not negotiated in isolation

- 5.30 Proponents of mobile termination regulation have argued that if a mobile carrier could unilaterally raise its own termination charges, this would not only increase its own revenue but also raise the costs of other network operators. This may force other operators to pass on the increased costs to their customers in the shape of increased retail prices. They would be placed at a competitive disadvantage. At the same time, however, the customers of the operator that had raised its termination charges would not suffer any increase in their retail prices. Hence, if one carrier unilaterally raised its termination charges, this would, all other things being equal, improve its competitive position vis-à-vis its rivals.
- 5.31 The commercial reality, however, is such that a number of competitive and institutional constraints operate in the market that have the effect of ensuring that such an outcome would be highly improbable.
- 5.32 Carriers set termination rates through a process of bilateral negotiations with interconnecting parties. Because carriers selling termination services are also usually buyers of termination and other services from the carriers with which they negotiate, a commercial dynamic between carriers is created which is more likely to produce a commercially acceptable and reasonably efficient outcome on termination.
- 5.33 For example, Optus sells mobile termination services, competitive transmission services, Internet backbone, satellite capacity and many other services. Its ability to leverage any perceived market power in one of these services would constrain its ability to sell these other services.

Countervailing power of Telstra

- 5.34 Telstra is a net payer of termination charges by virtue of its substantial market share in the fixed network market. Therefore, it is in Telstra's interest to seek to obtain termination charges that are as low as possible.

- 5.35 Telstra's dominance in the fixed line access market enables Telstra to exercise a high degree of countervailing power when negotiating mobile termination access. Any attempts by a mobile carrier to set termination rates that are "too high" will be offset by Telstra's ability to use its dominance in the fixed line access market to negotiate termination charges at more reasonable levels.
[Start commercial in confidence]

[End commercial in confidence]

Price caps

- 5.36 Fixed-to-mobile calls are currently part of a call services basket capped at CPI-4.5%. This basket also includes STD, IDD and local calls. Therefore, the ability of fixed operators to increase fixed-to-mobile call prices will be severely limited. While it would be possible for Telstra to increase fixed-to-mobile prices and still comply with the price caps, it would necessitate a relatively large reduction in the call price of at least one of the other call types; an outcome that is unlikely to be desirable for Telstra.
- 5.37 The fact that the margins fixed operators are able to extract from fixed-to-mobile calls are constrained by the price caps provides clear incentives for fixed operators, in particular Telstra, to negotiate reduced termination rates to increase margins for fixed line services.
- 5.38 As demonstrated later in this submission, fixed-to-mobile prices have tracked movements in mobile termination prices.

Market failure in terms of consumer ignorance does not exist

- 5.39 In the ACCC's September 2002 paper '*Final GSM and CDMA Pricing Principles*', the ACCC indicates a concern over the impact of lack of consumer awareness of the mobile network that callers terminate calls on:

"It remains the Commission's view that control over access to GSM and CDMA termination, and to an extent a lack of consumer awareness, results in mobile carriers sustaining above-cost access prices for GSM and CDMA termination."

- 5.40 The concern with the perceived lack of consumer awareness is that if consumers do not know the mobile network they terminate calls on, they will not know the price of the call. Carriers consequently have no incentives to set low termination charges in an attempt to attract more calls, since callers will be generally unresponsive to the price reduction by making more or longer calls.
- 5.41 Further, callers may be aware of the average level of prices to call mobile phones, but not the specific rate for each call made (because of the lack of knowledge of the network being called). A reduction in the price of calling one network could lead to a perception amongst callers to mobile phones that the average price of calling mobile phones has fallen. Callers would therefore be likely to respond by making longer or more calls; a move that would benefit all mobile carriers, regardless of whether or not they had reduced their

termination rates. According to the ACCC, the combination of these two effects has the effect of limiting incentives to reduce termination charges.

- 5.42 Optus has long held the belief that consumer ignorance does not exist. It has now sought to empirically test its belief.
- 5.43 In order to provide evidence of this form of consumer awareness, Optus, in collaboration with Telstra, Hutchison and Vodafone, commissioned market research to assess the extent of consumer awareness. The results of the research clearly indicated that consumers, in general, do know the mobile networks that they terminate the majority of fixed to mobile calls on.
- 5.44 In addition, Optus' internal data highlights consumption patterns that can be attributed to consumer awareness, and anecdotal evidence of consumer behaviour indicates that consumers are informed of the networks that they terminate calls on.

Evidence shows that consumers are aware

Results of market research

- 5.45 Fixed phone users were asked whether they know the mobile network of the top five people they call when making fixed-to-mobile calls from their home phone.
- 5.46 The results of the Consumer Awareness research revealed that 74% of consumers were aware of the network that the person they most commonly called on their mobile phone from their fixed line subscribed to. This figure fell to 67% for the second most commonly called person, 52% for the third most commonly calls, 36% of the fourth most commonly called person, and 29% for the 5th most commonly called person.
- 5.47 For consumers that did not own mobile phones, while awareness rates were slightly lower, they were still nevertheless very high. In order of the most commonly called person down to the fifth most commonly called person, the awareness rates were as follows: 66%, 60%, 35%, 19% and 17%.
- 5.48 Optus is investigating its internal data regarding the most commonly called mobile numbers that a typical customer calls from the their fixed line. It is anticipated that the results will show that the top five numbers are likely to represent a significant proportion of all fixed-to-mobile calls made by that customer.

Mobile phone usage patterns

5.49 **[Start Commercial-in-confidence]**

[End Commercial-in-confidence]

Anecdotal evidence

- 5.50 Anecdotal evidence shows that customers are utilising their awareness of the mobile networks they call in order to minimise the costs of mobile phone usage. Specific measures used include purchasing extra SIM cards for pre-pay mobile phones to enable them to take advantage of ‘yes’ AnyTime when making on-net calls, and ‘yes’ AnyPhone when making off-net calls.

Many consumers have incentives to become informed

- 5.51 Many callers have incentives to become informed in relation to the networks that they call. For mobile subscribers in particular, there are clear incentives to become informed if they are offered discounted on-net calls. Indeed, as shown above, customers do respond to these incentives.
- 5.52 When mobile subscribers respond to these incentives to become informed, awareness amongst fixed phone users also increases. This is because, to a relatively large extent, consumers in the mobile market are the same consumers that in the fixed-line market. In this sense, mobile awareness arising from on-net discounting drives awareness in the fixed-line market.
- 5.53 Optus believes that as the market matures, consumer awareness in the mobile-to-mobile calling market will further increase as consumers act upon their incentives to learn which networks the people they regularly call subscribe to. This, in turn, will drive awareness in the fixed-to-mobile calling market. The feed-through of this consumer awareness to the fixed-line market will increase over time as mobile penetration rates rise, due to the increasing degree of over-lap of consumers in each market.
- 5.54 Further, Optus believes that as the market matures and contracts expire, customers will churn onto the same networks as the people they regularly call. This will enable these consumers to reap the on-net call discounts, which will, in turn, again drive consumer awareness in the fixed-line market.

There are few barriers to consumers becoming informed

- 5.55 The fact that a large proportion of total fixed-to-mobile calls made by consumers are repeat calls facilitates the development of consumer awareness. For callers in repeat calling relationships, there are very few barriers to becoming informed on the mobile networks they call, with the most obvious and cost-effective way being for consumers to simply ask the people they call which network they subscribe to.
- 5.56 In addition, there are few barriers to becoming informed on the prices associated making fixed-to-mobile calls, with the following sources of pricing information being available to consumers:
- Phone usage bills, which specify the costs of each individual call for each number called.
 - Telstra’s Internet site, which allows customers to see the per-minute price of calling a particular number.
 - Customer service representatives from customers’ fixed telephony providers.

- 5.57 Indeed, the results of the Consumer Awareness survey show that consumers' perceptions of the costs of making fixed-to-mobile calls conform closely to the actual costs.

Consumers will become more informed if there are incentives to do so

- 5.58 At present, termination charge differentials do not feed through into retail fixed-to-mobile prices. However, should differentials become sufficiently large, carriers may decide to pass the differentials through to retail prices, so that calls terminating on networks with higher termination charges will have higher retail prices. It is not hard to imagine differential pricing for calls to different networks, given that we already have differential prices for calls from Optus mobiles to other Optus mobiles at different times.
- 5.59 If this were to occur, incentives for callers to mobile phones to become informed on the networks they call would increase. We could therefore expect the current consumer awareness levels to increase further. The amount of the increase would lie in direct proportion to the extent of the arising price differentials of calling the various networks.

6. Market definition and the application of the LTIE to mobile termination

- 6.1 The assessment of whether declaration or revocation of a service will meet the LTIE criteria firstly requires the scope of the relevant markets to be defined. That is, whether the LTIE will be served in the actual market for the carriage service that is to be declared or revoked; or the downstream markets which will be affected by the declaration or revocation.

Market definition

- 6.2 Optus notes that in various parts of the Discussion Paper, the ACCC refers to a "market" or "markets" for the five services which are the subject of its inquiry. It also refers to various markets in which the different services are supplied. For example, in respect of the mobile termination service, the ACCC states:

"The level of efficiency in the wholesale termination market/s also affects the level of efficiency at the downstream level..."⁴⁴

- 6.3 Optus submits that the ACCC's market analysis does not adequately define the scope of the market in which the five services are supplied, nor delineate between the functional levels of that market. Optus notes that the approach in the Discussion Paper is to focus on each of the five services in turn, separately raising for each service the opportunity to comment on the market in which at least three of those services (the mobile originating and terminating services, and the domestic inter-carrier roaming service) are supplied.
- 6.4 Optus' view is that this approach distorts the analysis of the market for mobile services. The ACCC has previously analysed the mobile market in Australia

⁴⁴ Discussion Paper, p 44.

on several occasions and has reached a critical conclusion that is not reflected in the Discussion Paper. That is, there are two relevant markets for mobile services in Australia, namely the “mobile services market” and the “fixed to mobile services market”. However, there are no separate markets within these two markets “mobile services market” or a “fixed to mobile services market”. There are four services that are integral to each mobile call, which include the mobile origination and termination services. Each of these services do not exist independently in separate markets. This means that there is no market for the “terminating access service” or the “originating access service”. These services are more properly described as “elements” of a mobile call.⁴⁵ The call itself – whether made from or to a mobile phone - is the relevant “product” to be analysed as one of the dimensions of the market.

6.5 Without accurately identifying the dimensions of the market, it is not possible to identify the substitutes for the relevant product and an assessment of the LTIE test. In this section, Optus examines:

- The reasons why separate markets do not exist for each of the elements which comprise “the mobile services market”.
- The dimensions of the mobile services market at the product, functional, geographic and temporal levels.
- The available substitutes within the product dimension of mobile services.
- The discrediting of the “single operator” market definition.

6.6 The ACCC recently reaffirmed its identification of these two markets in its inquiry into making the GSM service declarations technology-neutral:

“The Commission remains of the view that the mobile services and fixed-to-mobile services markets are the relevant markets for the purpose of considering the impact of the proposed variation of the GSM service declarations on competition.”⁴⁶

6.7 This conclusion also enabled the ACCC to assess the interaction of these markets, including the identification of the mobile services market as a relevant downstream market for the fixed-to-mobile services market.⁴⁷ Turning to the mobile services market, the ACCC noted that a mobile call could not be provided without the interaction of four elements:

- The mobile origination service.
- The mobile termination service.
- The mobile access (subscription) service, which includes connection, handset and monthly access.

⁴⁵ ACCC, *Proposed variation to make the GSM service declarations technology-neutral*, September 2001 at p 49.

⁴⁶ ACCC, *Variation to make the GSM service declarations technology neutral*, March 2002 at p 28.

⁴⁷ ACCC, *Variation to make the GSM service declarations technology neutral*, March 2002 at p 29.

- Outgoing call services (which use a combination of mobile origination and termination or PSTN termination services, depending on whether the call is made to another mobile phone or to a fixed line).⁴⁸
- 6.8 The ACCC's identification of these elements also reflects the revenue sources of mobile operators, which are derived from three separate sources: mobile subscription charges, mobile call charges, and mobile termination charges.
- 6.9 These revenue streams are associated with distinct end-user mobile services: consumer access to the mobile network, call origination, and call termination. However, integral to the analysis of mobile call charges is the fact that each of these services would be worthless if offered in isolation. Consumers rely on this package of mobile services to be offered as one product. In this sense, subscription, origination and termination services are interdependent and complementary. For these reasons, the ACCC concluded that:
- “...to define these elements as separate markets might ignore the fact that the pricing decision of one element affects the pricing decision of other elements”.*⁴⁹
- 6.10 Any element of a mobile call in relation to either the mobile services market or the fixed-to-mobile services market cannot be considered in isolation. Mobile operators compete for customers by offering a service bundle that includes, as a minimum, the ability to originate and receive voice calls and SMS. Optus therefore recommends that in considering mobile pricing, the ACCC focus on the pricing and associated efficiency of the entire package of interdependent services. This requires the ACCC to dispense with an analysis of the five mobile services that are the subject of this inquiry, and an examination of these as services as comprising separate markets.
- 6.11 This is because due to the large base of common costs, any attempts to measure the profitability of an individual service, such as termination, would necessitate the ACCC making an arbitrary and artificial allocation of the common costs between services. Optus believes that the market is much better equipped than the ACCC to set the appropriate allocations.

Product dimension

- 6.12 In relation to the mobile services market, the relevant product is a mobile call. The identification of possible substitutes for a mobile call is critical to determining the impact on competition under the LTIE test. It determines how effectively mobile operators are constrained in setting charges for the revenue sources of a mobile call. The following substitutes for mobile calls include:

GSM, CDMA and 3G services

- 6.13 Use of different technologies are close substitutes for one another. Whilst they utilise distinct network elements, the ACCC has previously recognised their capacity to enable the provision of a mobile call. The ACCC has also

⁴⁸ ACCC, *Proposed variation to make the GSM service declarations technology-neutral*, September 2001 at p 49.

⁴⁹ ACCC, *Proposed variation to make the GSM service declarations technology-neutral*, September 2001 at p 51.

acknowledged the potential for 3G applications to become a substitute for established mobile services in future.

SMS and MMS

- 6.14 SMS, in particular, provides a low cost alternative path for consumers. Since SMS has been available across all mobile networks, there has been an explosion in SMS messaging. The development of MMS, whilst still relatively in its infancy with inter-carrier arrangements still to be finalised between the mobile operators in Australia, is now being heavily promoted and its uptake is anticipated to increase in the immediate future.

New and developing technologies

- 6.15 The ACCC has previously noted that other possible substitutes for mobile calls include email, facsimile and paging. Whereas previously it was noted that the substitutability of these factors was limited due to the absence of mobility, it is now apparent that email and facsimile services in particular are rapidly developing in mobility. As noted above in respect of 3G technology, new applications now enable email and Internet access to be provided in a mobile context.
- 6.16 The increasing scope of substitution possibilities with the development of new technologies has also been noted by the EC:

*“...product substitutability between different electronic communications services will arise increasingly through the convergence of various technologies. Use of digital systems leads to an increasing similarity in the performance and characteristics of network services using distinct technologies”.*⁵⁰

Functional dimension

- 6.17 Optus submits that there are wholesale and retail functional levels within the mobile services market and the fixed-to-mobile services market. It is important to identify the vertical stages of production and/or distribution that comprise the relevant arena of competition. This involves consideration of both the efficiencies of vertical integration, commercial reality and substitution possibilities at adjacent vertical stages.⁵¹
- 6.18 For the mobile services market, the wholesale level is characterised by the operation of transit arrangements. Transit arrangements are an aspect of the market that removes the ability of mobile operators to exercise market power in the setting of termination charges.
- 6.19 The transit effect has been well established in the international telecommunications pricing context. For example the Productivity

⁵⁰ Commission guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services, 11 July 2002 at para 47.

⁵¹ ACCC, *Merger Guidelines*, June 1999, p 38.

Commission's report International Telecommunications Market Regulation noted that a major effect of transit is to place pressure on terminating providers to lower settlement rates.

- 6.20 Within the retail dimension, the mobile services market is now characterised by switching possibilities made available by mobile number portability. The ACA has reported that MNP has become a permanent feature of the mobile services market since its implementation in September 2001. Over 623,000 mobile numbers have been ported since that time.⁵²
- 6.21 For the fixed-to-mobile market, the ACCC has previously concluded that the only relevant functional level was the retail level.⁵³ However, Optus highlights that a number of options are available at the wholesale level for fixed telephony operators if a mobile operator charges a relatively high price for elements such as terminating access. With carrier pre-selection, the fixed operator has the option of routing calls through to another fixed line operator. That second fixed operator will be chosen by the pre-selected carrier on the basis that it has negotiated a better terminating access charge with the relevant mobile operator. In a way similar to the transit arrangements outlined above, a fixed line operator who has negotiated a comparatively lower terminating access price will attract traffic from other fixed line operators.

Geographic dimension

- 6.22 The ACCC has previously taken the view that the geographic dimension of the market in which mobile calls are supplied is a national one. That is, the wholesale and retail elements of a mobile call are currently supplied nationally by mobile carriers to other carriers, service providers, and to end-users.
- 6.23 Optus' believes that this view that there is a single geographic market must be maintained. Optus notes that the Productivity Commission did not endorse submissions that called for the recognition of "regional" markets. This informed the Productivity Commission's view that:
- "...there is unlikely to be a strong case for the declaration of mobile roaming in regional areas."*⁵⁴
- 6.24 Although it was argued before the Productivity Commission that the state of competition in mobile services should be defined according to distinct regional markets, the Productivity Commission noted the developments in establishing new CDMA mobile networks, Government funding for regional mobile telephony projects, and 100 per cent satellite coverage by Telstra, Optus and Vodafone. The Productivity Commission therefore declined to endorse amendments to Part XIC to explicitly recognise regional markets.⁵⁵

⁵² ACA, *ACA Connections*, June 2003 at p 5.

⁵³ ACCC, *Proposed variation to make the GSM service declarations technology-neutral*, September 2001 at p 53.

⁵⁴ Productivity Commission, *Telecommunications Competition Regulation*, December 2001 at p 507.

⁵⁵ Productivity Commission, *Telecommunications Competition Regulation*, December 2001 at pp 506, 507.

- 6.25 This rationale is reinforced by the geographic test employed by the EC, which has rejected the requirement for perfect homogeneity as a basis for determining the relevant geographic market:

“The definition of the geographic market does not require the conditions of competition between traders or providers of services to be perfectly homogenous...”⁵⁶

Temporal dimension

- 6.26 Optus submits that the temporal dimensions of both the mobile market and the fixed-to-mobile market demonstrate increasing substitutability in the product and functional dimensions. The development and uptake of new technologies therefore has a strong bearing on potential substitutes in the content of convergence. As the OECD has noted:

“The convergence of various technologies increases the level of service substitution in the telecommunications market. Internet is used to transmit digitised voice signals competing with voice telephone services. It has been argued that mobile telephone services and/or high speed broadband services are close and effective substitutes for traditional fixed telephone services.”⁵⁷

- 6.27 Optus therefore submits that time will continue to play a pivotal role as new technologies develop and their uptake becomes more widespread within the mobile market and fixed-to-mobile market.

Application of market definition to the services in question

- 6.28 The ACCC seeks comment on the need for regulation “of a range of mobile services markets”.⁵⁸ As noted above, the ACCC has consistently defined the relevant markets in terms of the mobile market and the fixed-to-mobile market. Optus submits that this delineation should be maintained. In considering the five services that are the subject of this inquiry, Optus further submits that the international intercarrier roaming service insofar as “outbound roaming” is concerned is not provided within a market that satisfies the geographic boundaries of the mobile market. It does not satisfy the essential element of the “market” definition under Section 4E of the Trade Practices Act, which means:

“a market in Australia and, when used in relation to any goods or services, includes a market for those goods or services and other goods or services that are substitutes for, or otherwise competitive with, the first-mentioned goods or services”.

⁵⁶ Commission guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services, 11 July 2002 at para 56.

⁵⁷ OECD, Working Party on Telecommunications and Information Services Policies, *Indicators for the assessment of telecommunications competition*, 2003 at p 12.

⁵⁸ Discussion Paper, p 28.

- 6.29 To this end, Optus submits that outbound roaming services are beyond the scope of the ACCC's inquiry.

The "single operator market"

- 6.30 The ACCC has invited comment on the "single operator" market definition that has been applied in the UK in relation to mobile termination. Optus submits that this proposition is without merit and should not be applied by the ACCC in this inquiry.

- 6.31 The concept of "market power over access to a customer" has been advocated by Gans, who has asserted that:

"Once a person has decided to join a specific mobile network, that network has a degree of monopoly power over the price it charges to any party wishing to call that specific person".⁵⁹

- 6.32 Firstly, Optus notes that the ACCC has not previously been persuaded by the concept of a mobile operator possessing bottleneck market power in relation to every mobile service number that is issued to an end-user. Acceptance of the "single market" theory would mean that over 12 million markets exist in Australia for mobile termination, each of which is a monopoly. The ACCC has to date adopted the rational analysis that termination is only one element of a mobile call, not a market in itself and certainly not a monopoly market.
- 6.33 Secondly, the single market theory is far removed from the ACCC's analysis of interdependent revenue streams from the provision of mobile services. The scale of competition between mobile operators in terms of handsets and equipment, for example, plays directly into establishing a bundle of goods and services. Mobile operators each compete to offer customers mobile services as a bundle comprising each of the essential elements of a call, and from which each of the revenue streams are derived.
- 6.34 Thirdly, an assertion of monopoly power does not account for the customer's switching right. MNP now means that this occurs as of right for mobile users. One of the most significant factors in MNP being mandated was to address the incidence of switching costs. MNP has also heightened competition among mobile providers when faced with the prospect of customer choice with reduced switching costs. One of the essential bottleneck criteria, namely the inability to purchase the service from another supplier at a reasonable economic cost, is directly contradicted by MNP. It is highly unlikely that operators will not be constrained in their pricing decisions, and thus will be incapable of demanding and extracting monopoly prices, in the face of intense competition at the retail level.
- 6.35 In the absence of an analysis of bottleneck power, as employed by competition authorities in Australia and the ACCC in particular for determining whether the declaration criteria are satisfied, Optus submits that the UK proposition of a single operator market must be disregarded. Furthermore, consideration of the question of single operator monopoly power in separate markets has been

⁵⁹ Gans, J, *An Evaluation of Regulatory Pricing Options for Mobile Terminating Services*, 1999 at p 3.

discredited in other jurisdictions and contexts as being devoid of commercial reality.

- 6.36 The New Zealand Courts, for example, rejected the single operator market theory on a number of levels. It noted previous contentions that a single music album (record, cassette or disc) might constitute a relevant market. In the case of *Tru Tone Ltd v Festival Records Marketing Ltd*, it was said that:

*“Viewed in relation to product and time the single album definition of market ignores commercial realities. It focuses on short run phenomena. It presents a snapshot rather than a moving picture of commercial reality...in reality, no distributor or retailer could run a business on the basis of a market confined to one unique album”.*⁶⁰

- 6.37 The New Zealand High Court has similarly rejected the single market theory for other utilities industries. It noted that if a merger analysis were applied using the single operator test, there could not possibly be any impact on competition in a merger. It would mean a firm which would obviously increase in size and scope after a merger would never actually increase its market power in any circumstances: the number of markets before and after the merger would remain unchanged. In the case of electricity distribution, it would mean that:

*“...for the local distribution function. each customer connection (eg a house) is a market, and the Mercury and PNZ distribution area would consist of hundreds of local monopolies...Hence, he [Professor Teece] said, ‘If there were ‘n’ markets before merger, there are ‘n’ markets afterwards, and dominance has not increased one iota”.*⁶¹

- 6.38 Optus’ view is that there is no support in Australia or internationally for the single operator market theory advanced in the UK. In addition, we note that the ACCC has not expressed a view with respect to its own perception of the theory. It is noted however that the theory directly contradicts the definitions of the two markets the ACCC has sustained over a number of years in its various inquiries into mobile services. Accordingly, Optus submits that the theory should be dismissed outright as not reflective of either any commercial realities, or the competition tests established in Australia for bottleneck analysis.

Termination cannot be considered in isolation from the rest of the market

- 6.39 As noted, mobile operators compete for customers by offering a service bundle that includes the ability to originate and receive voice calls and a range of other services.
- 6.40 Mobile carriers are tasked with designing a tariff package that encourages customers to subscribe to their network while at the same time enabling recovery of fixed, common and usage sensitive network costs. Because demand is not perfectly inelastic, the ability of carriers to recover these costs is

⁶⁰ [1988] 2 NZLR 352 at 359, 360.

⁶¹ *Power New Zealand Ltd v Mercury Energy Ltd and Commence Commission* [1996] 1 NZLR 686 at 708.

constrained by responsiveness to consumer demand to different price levels, and to the structure of tariff packages.

- 6.41 Because of the interdependencies of the mobile revenue streams, Optus believes it would be inappropriate for the ACCC to consider that termination operates in its own market, in isolation from the two mobile markets. Failure to consider the interdependencies will result in the inefficient pricing of mobile services generally. The market does not operate in a way that would allow the ACCC to take a single service, such as terminating access, isolate it, work out a socially optimal price for it, and then expect carriers to take those prices on board without any adjustments to the prices of other revenue streams in the mobiles package. Furthermore, the value customers receive from mobile telephony cannot be assessed against the prices charged for the individual services.
- 6.42 The difficulties in doing so can be attributed to the existence of a large base of common and fixed network costs. Any attempts to measure the profitability of an individual service, such as termination, would necessitate the ACCC making an arbitrary and artificial allocation of the common costs between services. Optus believes that the market is much better equipped than the ACCC to determine the appropriate allocations. This is because the market has the advantage of being able to incentivise market players to introduce innovative tariff packages that best meet consumer demand by responding to consumer price sensitivities.
- 6.43 Optus therefore recommends that in considering mobile pricing, the ACCC focus on the pricing and associated efficiency of the entire package of interdependent services.
- 6.44 Optus notes that the ACCC has in the past accepted the view that termination cannot be viewed in isolation from the rest of the market, and that nothing has happened since this time that would warrant a change in this view.

A reduction in termination charges will have to be offset through an increase in origination and subscription charges

- 6.45 An important implication of the way prices are set for each of the services in the mobile bundle is that a change in the price of one element will necessarily require a change in the price of other services in the bundle. This is because the basic requirement of the revenue streams is to cover the long-term costs of providing mobile telephony services, including fixed, common and usage sensitive costs.
- 6.46 In the context of the ACCC's current review, because competition is effective and monopoly margins cannot be maintained, if termination charges were to be reduced as a result of regulation, the prices set by carriers for origination and, to a lesser extent, subscription would increase.
- 6.47 To expand upon this argument, assume termination was regulated below existing levels. This would not allow the mobile carrier to recover the capital costs of the network or the running and maintenance of the network. The expectation that these costs will not be recovered would prevent future

investment in new mobile networks and discourage the efficient maintenance, replacement and upgrading of the current networks.

- 6.48 In response to this, the carrier would need to recover the relevant costs through alternative revenue streams. It therefore has the option of enabling recovery through higher subscription charges, higher origination charges, or a combination of both. However, the higher elasticity of origination relative to subscription means that it would make greater economic sense to recover the majority of the reallocated costs through origination.
- 6.49 We note that in the UK mobile operators are raising phone charges by as much as a third as they seek to recoup revenues they stand to lose following the recent ruling by the UK Competition Commission to cut termination rates. In response to the ruling, Orange has increased its pre-pay charges for calls to other Orange users from 15p to 20p a minute. Calls to other networks have increased from 35p to 40p a minute. Orange has also introduced a new minimum 5p charge for all calls on the same tariff scheme.⁶²

Application to the LTIE test

- 6.50 In order for the ACCC to make a declaration, variation or revocation under Part XIC of the TPA, the ACCC must be satisfied that such a declaration, variation or revocation is in the long term interests of end users (“LTIE”). In the context of mobile termination, the ACCC must consider whether a variation or revocation of the current declaration is in the LTIE.
- 6.51 The LTIE test imposes a discipline on the ACCC in regulating mobile termination. The meaning of the term “long term interests of end-users” is defined in Part XIC of the TPA in terms of three primary objectives and secondary objectives through which the primary objectives may be interpreted.
- 6.52 The three primary objectives set out in section 152AB(2) of the TPA to which regard must be had in assessing LTIE are:
- The promotion of competition in the relevant markets.
 - Achieving any-to-any connectivity in relation to services that involve communication between end-users.
 - Encouraging the economically efficient use of and investment in infrastructure.
- 6.53 Each of these primary objectives is dealt with in greater depth below. It is important however, to realise that these primary objectives do not operate in isolation and may in some circumstances overlap or even be in conflict. In the event of conflict between the primary objectives in applying the LTIE test the ACCC should be guided by the objective of the telecommunications regime, that is, to constrain the abuse of market power. Accordingly, the correct balance to the LTIE will be achieved when a market participant with substantial market power is constrained from reducing output and increasing the price of the relevant services.

⁶² Financial Times; May 10, 2003

Promotion of Competition

- 6.54 As the ACCC has noted previously, the notion of promoting competition involves creating the conditions or environment for improving competition from what it would be otherwise. In order to achieve this, the variation or revocation would have to put in place better conditions for competition to occur than are currently in place. Optus considers when it comes to mobile termination, the best way to achieve this is to revoke the declaration of mobile termination.
- 6.55 The ACCC makes two allegations of market failure in relation to the provision of mobile termination:
- (a) That mobile network operators have control over access to mobile termination in the context of fixed to mobile calls.
 - (b) That there is a lack of consumer awareness in relation to mobile termination access prices and this lack of awareness increases the price elasticity of demand for the terminating service in fixed to mobile calls, so that prices may be set an inefficiently high level.
- 6.56 On the basis of these assumptions, the ACCC has concluded that mobile network operators have market power with respect to mobile termination, sufficient to justify regulatory action through declaration. However, the analysis provided by Optus in this submission makes it clear that the ACCC's competition concerns in relation to mobile termination are not founded because:
- Competition for subscribers fully constrains the mobile network operators in setting the price of mobile terminating access.
 - End-users have a high level of awareness in relation to the cost of mobile terminating access.
- 6.57 This pricing constraint makes a conclusion that mobile operators possess market power unsustainable. Accordingly, the notion of market power possessed by mobile network operators required to justify declaration simply does not exist.
- 6.58 The absence of market power on the part of mobile network operators is consistent with the fact that mobile terminating access at a wholesale and retail level is priced efficiently, a result that has been achieved without actual price regulation being imposed by the ACCC. This is because the optimal environment for setting efficient prices is a market environment.
- 6.59 The concept of a separate market for termination services for each individual network and the ACCC's derived "control over access" (page 31) position for each mobile operator is misguided. The appropriate market determination for "mobile termination" relates to the more general question to identify market power. The concept of a "market" examines whether there are players in the market who can behave independently of their environment. It is for this purpose that one seeks to identify the players whose behaviour is to be considered for economic choices by a possibly dominant firm.

- 6.60 In the case at hand, constraints on firms' behaviour comes from the substitution effects of all other available mobile networks. But even more importantly it is inappropriate to define the market after the consumer has made their self-binding choice among alternative mobile networks. Exploitation of this "monopoly position" is also constrained by the feasibility of an individual concluding additional agreements at the same time (eg. to subscribe to a second mobile operator) or to switch to a different mobile operator.
- 6.61 Market forces drive the structure of monthly mobile access, originating minute prices, mobile handset charges and mobile termination fees. As previously noted, the sum of these revenue streams is set to cover the long-term costs of providing mobile telephony services, including fixed, common and usage sensitive costs.
- 6.62 It appears that the motivation for the ACCC's current focus on mobile termination rates is driven by concerns over retail fixed to mobile charges. It is argued that as a wholesale input, declaration of mobile termination is required to promote the interest of end users. Surprisingly, the ACCC argue that it "does not require that the declaration of itself actually causes increased competition or efficiency" (page 42). This position is predicated on a misunderstanding of the mechanism of competition in the mobile services market and the retail pricing of fixed-to-mobile services.
- 6.63 Competition in the retail fixed-to-mobile market is robust. The perceived problems raised by some interested parties resolve around issues of fairness, which is not a relevant consideration for the ACCC in the context of a declaration inquiry. An examination of the market and the factors influencing competition in the market indicates that these problems simply do not exist.
- 6.64 There are many carriers and service providers that currently compete in the long distance market through the use of pre-selection services. The current pre-selection arrangements include fixed to mobile prices within a bundle of services that also include long distance and international calls. The significant competitive pressures on the preselectable bundle acts to eliminate any scope for any single carrier, including the vertically integrated carriers, to artificially raise prices for fixed to mobile services.
- 6.65 Whilst amendments to the current preselection arrangements have been examined, such as mandating multi-carrier preselection, these have been dismissed on the basis that they are unlikely to add to the current level of competition. In reality, there is little if no consumer demand for services within the long distance bundle to be provided separately.
- 6.66 Further, pricing for fixed to mobile services reflects two important market realities. Firstly, customers highly value this service, to the extent that the own price demand for fixed-to-mobile services is inelastic. The most basic economics tells us that a monopolist cannot extract monopoly power in the area of the demand curve that is inelastic – simply because the marginal revenue from the service is negative.
- 6.67 Secondly, fixed to mobile prices are captured within the scope of the government's price control arrangements. Under the current arrangements the price for services within the call basket are required to reduce by CPI minus

4.5% annually. This has a significant impact on fixed to mobile prices, notwithstanding the inelasticity of this service.

- 6.68 In advising the government on the price control arrangements the ACCC made no specific comment on the nature of fixed to mobile prices and was satisfied that this should be regulated through a general call basket. That is to say, the ACCC did not recommend the creation of a separate sub-cap for fixed-to-mobile services.
- 6.69 The use of a basket was supported because it is likely to lead to efficient reductions in prices. Telstra retains an incentive to maximise its revenue – it does this by reducing prices on services with elastic demand. This is efficient. It also means that price reductions for the less elastic services in the basket, such as fixed-to-mobile services, are likely to be lower or at least be delayed whilst initial price reductions occur on the more elastic services. This mimics a competitive market and is evidenced by recent price movements in long distance, international and fixed-to-mobile services.
- 6.70 There is also no evidence that termination prices are a constraint to competition in fixed-to-mobile services. The figure below shows that termination rates have fallen in line with fixed-to-mobile prices, as expected in competitive markets. This means that termination rates has driven the reductions and largely made Telstra indifferent to the fixed-to-mobile price reductions.

[Start commercial in confidence]

[End commercial in confidence]

- 6.71 In summary, Optus submits that the conditions for improving competition would be created by the revocation of the declaration with respect to mobile termination. The allegations of market failure made by the ACCC cannot be established. There is no case for the existence of market power on the part of mobile network operators or the need for declaration to address that market power. As regulatory intervention is not justified, competition would be promoted by the revocation of the declaration with respect to mobile termination access.

Any to any competition is achieved

- 6.72 The achievement of any-to-any connectivity has been included in the criteria to be taken into account by the ACCC, because any-to-any connectivity is the likely outcome in competitive markets. In assessing whether a particular thing promotes any-to-any connectivity, the only matters relevant are whether any-to-any connectivity has or could be achieved and not the terms upon which it is achieved.
- 6.73 Declaration is not required to ensure any-to-any connectivity. A mobile service is only useful if it can be used to connect to other mobile and fixed services. To provide this end-to-end service in a competitive market all operators must conclude terminating agreements with all other mobile carriers – it is not feasible to market a service that excludes calls to or from particular carriers. This creates a need to negotiate and conclude agreements with all other carriers and leads to rational competitive outcomes.

- 6.74 Evidence of this is provided by the fact that mobile carriers implemented interconnect arrangements for SMS services without the need for any intervention on the part of the regulators. This included the development of interconnect arrangements for SMS between GSM and CDMA networks in spite of the fact that there are a number of technical impediments to the efficient inter-working of these networks for SMS. The implementation of SMS interconnection saw a dramatic increase in the take up of SMS at a retail level. This demonstrates the strong commercial incentives for mobile operators to ensure that there is any to any connectivity for mobile services.
- 6.75 This point is further made by the current efforts of mobile operators to implement MMS interconnection. Optus and Telstra are continuing to work through a series of technical issues to provide interconnection for these services. Interconnection of these services across networks is considered vital to the success and viability of the MMS service.
- 6.76 The reality is that mobile operators need access to other networks, both fixed and mobile to make their services viable. If a mobile carrier were to try to foreclose effective access by trying to levy a high termination charge, then it would be possible for other carriers (both fixed and mobile) to introduce differential pricing and charge a premium for calls terminating to that carrier. This would very clearly and quickly impact the viability of that carrier's services.
- 6.77 To the extent that a particular mobile operator's behaviour could be considered to be anti-competitive, then that behaviour could be addressed under Part XIB. This would be preferable to the use of the heavy-handed approach of declaration and price regulation of competitive services.

Efficient use of and investment in infrastructure

- 6.78 An assessment of whether the making of an exemption order encourages the efficient use of infrastructure is closely linked to the promotion of competition. This is because factors affecting competition, such as the terms and conditions of access to infrastructure, will determine the extent to which the infrastructure is utilised efficiently. In relation to encouraging investment in infrastructure, it is important that consideration not only be given to the extent to which making the proposed declaration will encourage investment in new infrastructure but also the extent to which continued investment in existing infrastructure will be encouraged.
- 6.79 Optus firmly believes that a decision to revoke the declaration is likely to stimulate further investment by removing the regulatory risk that currently overhangs the mobile services market. The continued threat of regulatory intervention in this market raises the WACC/hurdle rate required by investors because of the high degree of uncertainty it creates. The ACCC's views with respect to the regulation of a service can shift dramatically, as is demonstrated by the thrust of this current review. Whilst regulation is in place there exists the scope for regulatory gaming by market players that also adds to the uncertainty of investors.
- 6.80 Increased investment, new entrants and new networks are likely to be encouraged by a more certain environment, free of the overhang of regulatory

intervention. This in turn is likely to increase competition across the mobile services market. Competition in downstream markets, in particular retail fixed to mobile services, is not fostered by maintaining the declaration of mobile termination.

- 6.81 As noted elsewhere in this submission, the current structure of charges – with relatively low subscription charges - promotes penetration and the rapid take-up of services by consumers. This encourages existing operators to invest in mobile towers and capacity so driving further penetration. This is virtuous circle of continued investment and penetration that is in the mutual interests of both carriers and end-users. The former pursue scale to drive efficient use of the infrastructure and reduce costs to serve; the latter benefit from reduced costs and the external benefits of higher mobile penetration. Continued regulation is a threat to this virtuous circle because it acts to reduce incentives for investment.
- 6.82 Whilst in the abstract it may be argued that the current level of handset subsidies may lead to high turnover of handsets and inefficient investment, in reality this is not the case. Handset changes are largely driven to support new services, with associated incremental revenue streams. For example, in recent times new handsets have been released to provide SMS, data, and MMS capability. Further, these handsets cannot be rolled out without customer demand. It is customers' high propensity to take up new services and improved features that drives the turnover of handsets.

The ACCC should not implement regulation on the basis of equity concerns

- 6.83 In order for the ACCC to make a declaration, variation or revocation under Part XIC of the Trade Practices Act, the ACCC must be satisfied that it is in the long-term interests of end users (LTIE).
- 6.84 Section 152AB of the Act defines the objectives that the ACCC must have regard to when testing whether a declaration, variation or revocation is in the LTIE. The Act does not differentiate between any classes of end-user; it seeks to promote competition, connectivity and efficiency in resource use for all end-users.
- 6.85 The recent decision by the UK Competition Commission on mobile termination differentiated classes of end-users depending on their use of fixed or mobile telephony. Optus does not believe that distinguishing between classes of end-users is relevant under Australian law.

Application of the LTIE test to 3G

- 6.86 The ACCC has also requested submissions in relation to whether a declaration of 3G mobile services would be in the LTIE. As to whether 3G services are provided within one of the identified markets, Optus considers that the ACCC has identified some difficulties in defining the eligible service to be declared. However, Optus believes that the current 3G services (voice, SMS and MMS) can be characterised as direct substitutes for existing mobile services.

- 6.87 Optus submits that the nascent character of 3G services means that it is only the yet to be developed unique 3G services which could be regarded as being in a market of their own. The Australian market is several years away from reaching a point at which a meaningful definition of the market for these uniquely 3G services could be attempted. In the case of mobile banking, for example, it is impossible to predict without some practical experience, the extent to which it will constitute a competitive substitute for Internet or telephone banking services. It could also mean that various 3G services are more properly categorised as services outside a mobile market, such as a banking or transactional market. Notwithstanding these points, as previously argued by Optus in respect of the declaration inquiry into CDMA services, to the extent that 3G services are used for voice telephony and basic data services (that is, basic data services that can be made available on GSM technology), it is inappropriate to distinguish between mobile termination services on the basis of technology. In reality 3G or wide band CDMA is simply a new bearer of existing voice, SMS and MMS services.
- 6.88 All radio technologies AMPS, GSM, CDMA, W-CDMA are used to provide "mobile services", just like copper and optical fibre are used to provide services over fixed line networks. The entry of new technologies intensifies competition for all "mobile services". As such the emergence of 3G services, strengthens the case that the mobile services declaration should be revoked.

7. Regulatory options

- 7.1 Optus maintains that the mobile market as a whole is competitive and therefore necessarily that the wholesale termination service is also competitive. There is no evidence of market power in the termination of calls to a mobile network. As discussed in detail in this submission, such a view implies that individuals (for it is those individuals that choose their mobile network) have market power in the termination of calls to themselves. There is no support for such a view.
- 7.2 However, the ACCC has in the past maintained a view that it believes some form of regulation is appropriate. The reasons for such a view are that:
- (a) For the period an end-user is connected to a mobile network, the terminating carrier has some market power over terminating calls to that service.
 - (b) A lack of consumer awareness allows the mobile carriers to increase termination rates for that service without feeling the full effect of the increase.
- 7.3 We note that that the ACCC has to date, not accepted a view that mobile termination is a separate market.
- 7.4 Whilst Optus opposes any form of regulation, if the ACCC determines that some level of regulation is to be imposed we believe the ACCC should consider the following hierarchy of regulatory measures.

- 7.5 The regulatory options considered in this submission include:
- Measures to address consumer ignorance.
 - Continuation of the retail benchmarking.
 - Implementing some form of price regulation - retail minus, TSLRIC or a global price cap.
 - Regulate retail fixed to mobile to the extent necessary to ensure the pass-through of any reduction in termination rates.
- 7.6 The choice of which regulatory option (if any) is appropriate should be based on which measure addresses directly the key concern or market failure the ACCC believes is occurring with the least distortionary impact.
- 7.7 Alternative payment models such as “called party pays” or “called party shares payment” have not been considered as a regulatory option. The fact that the ACCC is unlikely to have the legislative means to introduce such models (but even if it did), Optus believes such models are entirely inappropriate for a competition regulator to consider. Optus believes that such measures would dramatically reduce penetration rates in Australia and lead to significant price distortions, massive compliance costs, and losses in consumer welfare.

Address consumer ignorance

- 7.8 As demonstrated earlier in this submission, there is empirical evidence of reasonable and growing levels of consumer awareness of mobile termination issues. As making calls is a marginal decision, the levels demonstrated are sufficient to remove any concern that mobile carriers could take advantage of customers’ ignorance in setting termination rates.⁶³
- 7.9 As also demonstrated, the circumstances do not exist for carriers to exploit market power in pricing termination services. The evidence also shows that mobile carriers are not exploiting that power as termination rates have fallen significantly. This suggests that other competitive forces impact on termination prices rather than regulation.
- 7.10 Notwithstanding this analysis, if the ACCC continues to persist with its belief that there is a material concern surrounding customer awareness (a market failure) it is not clear that price regulation is the most appropriate solution. As demonstrated in this submission, price regulation involves substantial regulatory risk and is likely to lead to a significant loss in consumer welfare.
- 7.11 Optus considers that there are much less distortionary interventions to address concerns around consumer awareness – as compared with price regulation. .
- 7.12 Optus believes that ACCC should advocate a period of monitoring whilst it investigates and encourages carriers to increase consumer awareness of fixed to mobile charges. As a first step, the ACCC should conduct its own survey to establish whether or to what extent the problem exists. It could then promote

⁶³ End users are therefore capable of taking care of their own interests and it is not in their interests to have the service regulated.

initiatives with the mobile operators to address any noted concerns. At the end of a defined period, if the ACCC is satisfied that the level of consumer awareness has reached pre-determined levels then the declaration could be revoked. This period would be associated with a continuation of the existing retail benchmarking.

- 7.13 Increasing consumer awareness would involve:
- (a) More transparency of retail fixed-to-mobile charges.
 - (b) Measures to indicate which network a fixed-to-mobile caller is calling and the applicable retail charge.
 - (c) Information for mobile subscribers to indicate that mobile carriers levy wholesale termination charges when people call them on their mobile and the applicable retail fixed-to-mobile charge.
- 7.14 This level of information would be sufficient for mobile subscribers (who value incoming calls) to assess the full cost of subscription and for fixed-to-mobile callers to differentiate their calls. Mobile carriers and providers would have sufficient information in the market to make high or low termination rates a competitive strategy.
- 7.15 When customers receive their fixed line bill they can observe the cost of making the call. They need not see the wholesale cost – as they do not in most other markets – for them to realise whether mobile operators are pursuing a high or low termination fee strategy.⁶⁴ Indeed, the wholesale cost is irrelevant to them. What matters is the retail fixed to mobile price that they pay.
- 7.16 There is a range of options to increase customers awareness of fixed to mobile charges, including:
- Increasing the level of billing information on fixed line bills. It may be feasible to ensure carriers disclose details on each fixed-to-mobile call to indicate the network being called and the per minute retail rate.⁶⁵
 - Beeps, advisory notices, billing, info-lines, or network display.
 - Marketing information for mobile subscribers to outline the relationship between subscription, origination and termination charges.
- 7.17 Optus strongly believes that termination rates should not be disclosed and that fixed carriers should not be compelled to pass-through all differences in termination rates. Such disclosure is likely to interfere with the competitive processes, marketing messages and business strategies.
- 7.18 If significant differentials in termination rates eventuate and there is sufficient information in the marketplace, differential rates will be a profitable strategy

⁶⁴ Clearly, it is at the fixed operators' discretion as to whether they pass on termination fee differentials. There may be many factors influencing this decision including marketing effects, but clearly if there are significant differences in termination fees, fixed operators would find it necessary to pass through differentials.

⁶⁵ It would be unprecedented and would not appear to serve any purpose to disclose the wholesale termination rate. This may undermine fixed operator's marketing strategies and commercial incentives to negotiate termination rates.

for fixed carriers. This is because they can shift the pattern of fixed-to-mobile calls at the margin and increase profits. Optus believes the market should be allowed to effect these processes. Regulatory intervention should facilitate the market and it should be transitory.

Continued retail benchmarking

7.19 The ACCC has recommended that mobile termination prices should be linked with a weighted average (a yield) measure of individual carriers retail prices, in the belief that competition at the retail level is fully effective, whilst competition at the termination level is not as effective. Linking the two prices is seen as a way to ensure that fixed to mobile consumers benefit from mobile competition at the retail level. However, this pricing approach will have the effect of distorting competition at the retail level in a number of ways:

- Pricing decisions at the retail level are likely to be distorted by the pricing approach, hampering pricing innovations, and potentially leading to less efficient and flexible pricing of the components of mobile service.
- The approach may cause mobile operators to channel effective price reductions to consumers through non-price terms and conditions.
- Mobile operators' ability to respond to changes in consumers' elasticities of demand over time and changes in cost balances between mobile subscription and airtime minutes will be diminished.

7.20 The pricing approach effectively freezes the current ratio of retail and wholesale prices. This may not be an economically efficient ratio of prices if cost structures or consumer demand patterns change.

7.21 Such influences and apparent increases in retail prices for mobile services have led to a perception that the retail benchmarking has failed. However, the reality is that whilst the level of retail discounting has slowed somewhat the market remains highly competitive. A short period of constant or rising prices is insufficient to make a determination on the level of competition in the market.

7.22 It is also worth noting that during the period that retail prices (based on a yield approach) appear to have risen, termination rates have fallen. This relationship is consistent with the interdependency of component prices within the mobile services market. The claim that the approach provides incentive to "keep retail prices high" ignores the dynamic optimisation problem presented to mobile operators. Mobile operators must solve a complex component-pricing problem related to their customers' demand characteristics, their own production function and the market influences. The ACCC's pricing principle is one added constraint in resolving this complex problem – one that is likely to inefficiently distort relative prices.

7.23 Optus has on-going concerns with the way in which the ACCC has implemented its retail benchmarking approach. In particular, it has concerns with gaming with respect to the choice of starting access price and with the quantification of retail price movements.

- 7.24 In terms of the starting access price, the ACCC has indicated that it would use “the most recent agreed rate that did not take the retail benchmarking approach into account in commercial negotiations”.⁶⁶ This price will be difficult to determine in practice. Optus’ suggestion of using the access price in the period just prior to the pricing period is still likely to be the most logical rate.
- 7.25 In terms of the quantification of retail price movements, using a yield approach exacerbates the distortions outlined above. The yield approach distorts retail prices; rather the ACCC should elect a constant range of access and usage charges for a defined period of time.
- 7.26 It is not clear whether the retail benchmarking approach will be more distorting than alternative measures to regulate termination rates. Clearly, in the recent period the pricing approach has not influenced movements in termination rates (retail yields have risen whilst termination rates have fallen). In the future however, with the potential growth in 3G and data services this outcome may change, and the retail benchmarking approach could have pernicious effects on the dynamic relationship between component prices within the mobile services market.

Alternative measures to regulate termination rates

- 7.27 The regulation of termination rates should be a last resort for the ACCC, and only implemented if it considers there to be endemic market failure. This is clearly not appropriate for mobile services. If however, it is not convinced of this view it should consider the following methodologies: TSLRIC, retail minus or price caps. Optus believes that if regulation is to be imposed, a global price cap for mobile services should be preferred. Alternatively, the retail minus methodology appears to be more appropriate than TSLRIC, the latter being entirely inappropriate for mobile services.

TSLRIC

- 7.28 TSLRIC is the ACCC methodology of choice for established services and is applied to PSTN OTA and unconditioned local loop services. TSLRIC is not likely to be useful in the context of the mobile market for the following reasons:
- TSLRIC is designed as a surrogate for effective competition.
 - The benefits of using TSLRIC are the greatest where there is no effective competition in the provision of the service.⁶⁷
 - TSLRIC bottom-up modelling is only useful when there is no observable ‘market based’ price of constructing a network. In mobiles there are several players, and several new entrants constructing networks — hence these players actual costs are certainly superior to regulatory simulated cost modelling in determining true economic costs of interconnection; and

⁶⁶ ACCC, *GSM Final Pricing Principles*, Appendix E, page 2.

⁶⁷ An example of this is access to the fixed line local loop where competition or the threat of competition provides no pressure on the provider in many areas in Australia.

- TSLRIC does not solve the problem of how to ‘allocate’ fixed costs. The efficient allocation of these network costs is difficult to determine precisely. In a competitive market, the most efficient way to recover these costs is determined by the market players in catering for the needs of consumers.
- TSLRIC does not address the value of network externalities in the mobile services market.
- TSLRIC will change the price structure of mobile telephony services in a way that is unlikely to be in long-term interests of end-users.

7.29 Professor Jerry Hausman has also provided detailed analysis as to the problems associated with applying TSLRIC to mobile networks (in response to a paper prepared by Professor Gans on behalf of the ACCC):

“Prof. Gans goes on to argue that marginal costs of termination are equivalent to TSLRIC because common costs “should be allocated to the intra-network component rather than the termination service for fixed line calls.” (p. 20) He makes two mistakes here. First, economists have long realized that common cost allocations are arbitrary and certainly equation (1) demonstrates that the particular allocation chosen by Prof. Gans is not optimal or economically efficient. That is why Ramsey pricing determines the “allocations”; accountants do not have any guide to how “allocations” should be done. Economists, on the other hand, point out that if the recovery of common costs is consistent with Ramsey type pricing, this outcome will be more economically efficient than arbitrary “allocations” of common costs performed by regulators.

Second, it is now recognized in the U.S. among economists that cost based regulated pricing is not appropriate in the presence of considerable demand uncertainty and rapid technological change. This understanding is because under such regulated outcomes investments which succeed, at best, earn back their cost, while investments which do not succeed earn back less than costs. Hence cost based regulation of only those investments of a firm that ex-post turn out to be successful will lower the firm’s overall ex-ante expected returns. Investment levels will decrease below economically efficient levels.

It is also well understood that where barriers to entry are low such as in the mobile industry, private sector markets will better price the capital costs of mobile entry, or other risky and innovative areas of investments — rather than the artificial regulatory imposition of rate of return regulation. I gave the analytical background to this point at an Commission seminar in March 1997.⁶⁸ Thus, TSLRIC pricing will be inappropriate for regulating mobile networks. TSLRIC is above marginal cost here and TSLRIC is too low, because it does not correctly

68 My 1997 paper is J. Hausman, "Valuation and the Effect of Regulation on New Services in Telecommunications," Brookings Papers on Economic Activity: Microeconomics, 1997. Further analysis is contained in J. Hausman, "The Effect of Sunk Costs in Telecommunication Regulation," in J. Alleman and E. Noam, eds, The New Investment Theory of Real Options and its Implications for Telecommunications Economics, 1999.

recognize demand uncertainty, or sunk and irreversible investment costs. Assoc. Prof. Gans cannot rely on TSLRIC to justify his proposal.”

- 7.30 TSLRIC is also likely to have problems because demand is uncertain and technological change is pervasive. If the ACCC were to reduce termination rates, origination and subscription rates would necessarily rise to cover the cost of the mobile business. This will affect the demand and the size of the network. Carriers are continually developing new technologies and providers are designing new services. These are complex issues which market forces should be left to resolve by trial and error.

Retail minus

- 7.31 Another approach to pricing fixed to mobile termination is to base the price on the retail prices of fixed-to-mobile services less avoided cost. This approach has a number of advantages to TSLRIC but Optus would still consider it significant and unwarranted regulatory intervention. It should however be preferred to TSLRIC because:

- It would allow efficient providers to compete in the provision of fixed-to-mobile and long-distance services with Telstra and Optus.
- It would leave the ‘efficient’ recovery of the fixed costs of mobile networks to the market.
- It would ensure that access prices are not predatory and that fixed operator’s are not price squeezed.
- It would mean that access prices are cost based and given effective competition in the provision of mobile telephony services, mobile providers will not have the scope to ‘over-recover’ the costs of providing mobile telephony services.

Price cap

- 7.32 Another form of regulatory intervention is a global price cap for mobile services. A global price cap on mobile services would be superior to the direct setting of the price of one component of mobile service – termination rates. This is because mobile operators will retain greater flexibility in the efficient recovery of their fixed and common network costs. This is better for consumers than the direct setting of the price of one component of service.
- 7.33 It is not however clear that such a cap is consistent with the ACCC’s recent recommendation to remove mobile-to-mobile and mobile-to-fixed services from the Government’s price control regime. It would also require the ACCC to form a view that mobile operators are earning supranormal returns when there is no evidence of this in the market.

Retail fixed-to-mobile pass through

- 7.34 Retail fixed-to-mobile services are important to this review and are certainly of relevance because they are a downstream service of mobile termination.

However, Optus believes that competition in the retail fixed-to-mobile market is not affected by a lack of termination rates.

- 7.35 There are adequate market forces to ensure an efficient pass-through of negotiated termination rate reductions. For example, there are numerous carriers and providers competing for long distance and fixed to mobile services and the retail fixed to mobile rate is regulated in the retail price control arrangements (as recommended by the ACCC).
- 7.36 Optus believes the only potential beneficiary of a heavy-handed termination rate reduction is Telstra. In the short term Telstra would benefit from less than complete pass-through, and the benefit could endure if the lack of pass through is not competed away. This would not be in the LTIE. Optus believes it is insufficient and inconsistent with the Act to introduce regulation that the ACCC cannot demonstrate increases competition and provides real benefits to end-users.
- 7.37 In the long term, termination rate reductions would likely necessitate increases in mobile origination and mobile subscription rates. This would advantage Telstra by reducing substitution from fixed to mobile telephony, thereby perpetuating the dominance of the legacy fixed incumbent network.
- 7.38 Optus observes that retail fixed-to-mobile prices have generally fallen in line with lower termination rates. Previous sections of this submission provide evidence of this. Whilst reductions have not been consistent across customer groups, with larger corporate customers receiving the largest reductions, overall falls in termination rates appear to have been passed on to retail fixed-to-mobile customers.
- 7.39 Optus notes that this outcome directly rebuts claims by fixed carriers (such as AAPT) that price squeezes are occurring in the market. Declaration of termination services is clearly not necessary to address anticompetitive conduct concerns. Optus believes that these matters should not be the subject of this inquiry and are appropriately dealt with under the Trade Practices Act's anti-competitive conduct provisions.
- 7.40 This tracking of retail fixed-to-mobile prices and termination rates is consistent with what would be expected in a competitive market. Indeed, even if the retail fixed-to-mobile market is deemed to be either a competitive or a monopoly market, a once off marginal cost reducing event will be passed through in retail prices. A rational profit maximising monopolist will pass on a reduction in marginal cost (eg. termination rates) in lower retail prices.
- 7.41 For these reasons it should be unnecessary for the ACCC to introduce a pass through mechanism. Moreover, such a pass through mechanism may create distortions by reducing fixed operators' pricing flexibility in downstream retail fixed-to-mobile services. A pass through mechanism is likely to influence how retail fixed-to-mobile rates are structured and may have distributional consequences in terms of which customer groups receive the greatest price reductions – this involves equity issues that the ACCC should avoid.
- 7.42 Optus believes that there is already too much regulation of fixed-to-mobile retail pricing given the level of competition for this service. Regulation of this service is already established in the Government's retail price control regime.

Its inclusion in the call basket means that prices for this service must reduce in real terms. More regulatory intervention is unnecessary.

- 7.43 We note that the ACCC, in its recommendation to Government on the price control regime did not advise a separate sub-cap for fixed-to-mobile pricing. Presumably the reason for this was that this would remove Telstra's pricing flexibility and its ability to reduce prices on long distance, local, international and fixed-to-mobile services in an economically efficient manner. This would not have been in the LTIE. It is not clear that the ACCC has provided any rationale to the contrary in its most recent paper.

8. Domestic intercarrier roaming for mobile services

- 8.1 Optus does not support the regulation of domestic intercarrier roaming for mobile services. Optus believes that the ACCC should not intervene by mandating the supply of mobile roaming. Rather, the ACCC should continue to allow the market to determine appropriate commercial mobile roaming arrangements.
- 8.2 There is no evidence of regulation of mobile roaming being in the LTIE. Optus believes that it is not necessary in order to promote competition, nor is it relevant for achieving any-to-any connectivity. Further, it does not promote the efficient use of and investment in infrastructure.
- 8.3 The principal reason for declaring a service is a belief that the service is a bottleneck to competition in some downstream market. This proposition fails in the case of roaming because roaming is not a bottleneck service to competition in downstream mobile services. The provision of roaming services can occur over three nationwide GSM infrastructures, one nationwide CDMA infrastructure and now a 3G infrastructure. As described below, the roaming service is not a bottleneck because:
- Four nationwide mobile networks can, subject to technical feasibility, competitively supply roaming services; no one provider has a monopoly or bottleneck over roaming and, accordingly, roaming will be purchased through the normal commercial processes at efficient market prices.
 - The roaming function can be supplied in an alternative manner at a reasonable economic cost through SIM card manual roaming.
- 8.4 One complaint of a refusal of a carrier to provide roaming services to another mobile carrier is not sufficient evidence of the fact that declaration is required and the commercial processes are ineffective. In fact, Optus believes that the commercial processes are efficient and equitable in their current form. Mobile network owners need to be able to refuse to roam in those circumstances where it will harm their quality of service or pose unreasonable financial risk.

Service description of domestic intercarrier roaming

- 8.5 The issue of service description is critical to any proposed declaration by the ACCC. In defining the service description for domestic intercarrier roaming, it must be focused on where there is a perceived market failure. The service description cannot be too broadly defined; otherwise the declaration might apply to services that are not the subject of the supposed bottleneck market power. Declaration of a competitive service may lead to market distortions that are contrary to the objectives of the declaration. If the service is defined too narrowly, on the other hand, the risk of the service being defined incorrectly can be similarly distortionary.
- 8.6 Optus does not believe that there are any market failures in the mobile intercarrier roaming market. However, mobile roaming is most important from an efficiency point of view, in certain areas where it is unlikely and generally inefficient for facilities-based competition to develop, that is areas where it is economic for only one network to provide coverage. It is in those areas only that there may be a risk of potential market failure.
- 8.7 In areas where more than one network provides coverage, it is apparent that infrastructure-based competition is viable and that carriers are investing for capacity. In these circumstances there is no bottleneck and carriers have incentives to compete for termination and roaming services in order to achieve economies of scale on their infrastructure.
- 8.8 In areas with only one network, the investment that has occurred has established mobile coverage rather than network capacity. In these areas, the existing mobile network providers already have a very strong incentive to provide roaming (resale services) as a way to utilise capacity on these under-utilised routes. No regulatory mandate has been required for this to proceed commercially. For example, commercial arrangements have developed for roaming between Vodafone and Telstra in rural Victoria and Tasmania.
- 8.9 In areas where more than one mobile network provider has significant short-run spare capacity on their networks then they have strong commercial incentives to offer roaming on their networks in order to achieve greater economies of scale. Indeed, if there is sufficient demand for roaming, they will vigorously compete for roaming revenues.

Broad market definition for domestic intercarrier roaming

- 8.10 Optus supports a broad market definition for domestic intercarrier roaming.
- 8.11 There is no reason to narrow the market definition to a particular spectrum, such as a particular bandwidth of 1800 MHZ, as this comes with significant regulatory risk. Mobile operators' efficient decisions on bandwidth or service technology should not be distorted by regulation. Any declaration should be technology neutral.
- 8.12 Optus believes that the service description for roaming should be applied consistently across all mobile phone service delivery technologies (ie. GSM, CDMA and 3G). To only apply the service description to one or two of these would influence and distort efficient infrastructure investment decisions. The

service description (if the ACCC chooses to pursue declaration) should be applied in a “technology neutral” manner.

- 8.13 The introduction of new technologies should pose the question of whether declaration is in fact required. That is, the market definition should be broad enough to incorporate the fact that the availability and use of wider spectrum and different technologies implicitly increases the level of competition in the market.

Declaration does not achieve the objectives of LTIE

Declaration will not promote competition

- 8.14 Declaration of domestic intercarrier roaming would do nothing to promote competition in downstream retail mobile markets. In fact, declaration is more likely to reduce, rather than increase, the level of competition in downstream markets.
- 8.15 Competition in any downstream market is already effective and roaming is not a bottleneck to competition in the mobile calling market nor the fixed-to-mobile market. These markets are competitive because:
- No player has market power and the market is de-concentrated.
 - Networks compete for termination revenue.
 - There are efficient resale based arrangements.
 - There are already roaming agreements that work effectively at both the wholesale and retail levels.
- 8.16 Commercial processes have been successful in the provision of domestic roaming services to date. Take, for example, the roaming arrangements between Vodafone and Hutchison which were integral to Hutchison proceeding with their launch of 3G technologies.

Any-to-any connectivity is not relevant to intercarrier roaming

- 8.17 Optus does not consider that “any-to-any connectivity” is relevant to the provision or declaration of mobile roaming. Intercarrier roaming is unrelated to the objective of any-to-any connectivity as it involves the connection of a customer to a network rather than communication between two customers who are already connected.
- 8.18 A close examination of the any-to-any connectivity requirement in 152AB(1) and its interpretation in section 152AB(8) illustrates this point quite clearly. The “any-to-any connectivity” clearly relates to carriage services that involve “communications between end-users”. It does not relate to the connection of end-users to networks per se. Under section 152AB(8), it is stated that the objective of “any-to-any connectivity” is only achieved if each end-user who is supplied with a carriage service that involves communication, by means of that service, with each other end-user who is supplied with the same service, or a similar service, whether or not the end-users are connected to the same

telecommunication network (our emphasis added). It is therefore clear the any-to-any connectivity is focused on end-users who are already connected to a network and who are presently being supplied with services over that network. It does not relate to the connection to the network itself.

- 8.19 Optus' position is also supported by the following statement in the Explanatory Memorandum to Part XIC:

“Note that any-to-any connectivity will only be relevant when considering whether a particular service promotes the long term interest of end users of a carriage service that involves communications between the end users. When considering other types of services (such as carriage services which are inputs to an end-to-end service or distributive service such as the carriage of pay television) this criterion will be given little if any, weight compared to the other two criterion.”
(our emphasis added)

- 8.20 To the extent that the connection of person to a network by means of roaming involves the provision of a carriage service to that person, this connectivity is clearly an input to the end-to-end mobile carriage service and, according to the Explanatory Memorandum, should be given little, if any, weight compared to the other two LTIE criterion in section 153AB.
- 8.21 Finally, Optus does not believe that “ubiquity” and “any-to-any connectivity” are either interchangeable or synonymous. As discussed above, any-to-any connectivity is principally associated with communications between persons connected to networks and not the ubiquity of connectivity to networks. Optus' view is supported by both section 152AB(8) and the Explanatory Memorandum.

Declaration will not encourage the efficient use of, and investment in, infrastructure

- 8.22 Domestic roaming is a form of resale of services or infrastructure sharing arrangements. It allows a number of network providers to combine to achieve efficient network coverage. This is particularly the case for areas where it is economic for there to be only one network provider. In these areas roaming (or resale arrangement) can possibly lead to the efficient use of infrastructure.
- 8.23 However, in areas where there are multiple networks, this form of resale competition delivers limited short-term benefits to consumers rather than the long-term benefits which competition law is concerned with. Facilities-based competition has been the cornerstone of Australian telecommunications policy and should not be undermined by the second-beset alternative of declaring roaming.
- 8.24 Further, if roaming is declared, new entrants will have an expectation of achieving access to roaming services through the ACCC arbitration process at prices below commercially negotiated rates. Thus new entrants will likely redirect scarce resources to achieving access to existing competitors' infrastructure through roaming at these expected subsidised prices, through the regulatory arbitration process. This 'rent seeking' behaviour will crowd-out the evolution of normal commercial processes before such processes have been given the chance to take hold.

8.25 As Professor Hausman states in his expert affidavit:⁶⁹

“If roaming is made a declared service, new entrants will have the economic expectation that they will not need to invest in their own networks, instead using the investment of other network operators. Thus, facilities based competition will decrease. Furthermore, the new entrants will not have an economic incentive to negotiate a commercial agreement with existing operators but will attempt to use the regulatory process to achieve favourable roaming terms. The result will be “regulatory overload” in which new entrants will attempt to compete through the regulatory process rather than an attempt to compete in the market by investing in new network facilities and services which increase consumer welfare.”

- 8.26 King and Gans believe that access regulation in mobile telephony could be counterproductive, reducing investment and innovation. In commenting on the ACCC’s 1998 inquiry into the declaration of digital roaming, they argued that declaration would favour ‘second movers’, thus access regulation in the mobile industry is likely to have the perverse effect of reducing future investment and innovation. Firms that take risks and build networks for new bands of the radio spectrum should take note that being the first mover may well carry a penalty.⁷⁰
- 8.27 Accordingly, Optus strongly believes that the long term investment incentives required to provide sustainable competition in Australia should not be ignored in favour of short term benefits associated with the declaration of roaming.
- 8.28 In this inquiry an important issue for the ACCC is the effect that the declaration of roaming would have on the legitimate commercial interests of the suppliers of such services (s.152AB(6)(b)) and the incentives for investment in telecommunications infrastructure (s. 152AB(6)(c)). These two factors are clearly linked in this case and regard must be had to both existing investment in infrastructure and future investment opportunities.
- 8.29 The relevant legitimate commercial interests which impact upon economically efficient investment including gaining a reasonable rate of return on prudent investment. The declaration of roaming will potentially defeat, amongst other things, the legitimate commercial interests of the existing GSM operators because new entrants will be able to free-ride off the investment made by existing GSM operators without regard to these legitimate commercial interests.
- 8.30 Accordingly, as a first step when assessing economically efficient use of and investment in telecommunications infrastructure, the ACCC must have regard to the legitimate commercial decisions made by existing GSM operators when investing in their networks and the effect declaration of roaming would have on those decisions. In Optus’ view, the declaration of roaming would disregard these interests and accordingly, declaration should not proceed.

⁶⁹ Expert affidavit by Professor Jerry A Hausman commissioned by Optus in response to the ACCC’s Digital Roaming Public Inquiry, January 1998

⁷⁰ Article in *Australian Financial Review* 30th January 1998, p.32

- 8.31 As a second step, the affect of the declaration of roaming on future investment needs to be considered. As Professor Hausman states:
- “Allowing new entrants to free ride off investments made by current facilities based carriers will affect future investment adversely as both existing and new entrants understand that future entrants will in turn be likely to free ride off their investments.”*
- 8.32 The effect of declaration on future investment needs to be considered from two perspectives – the existing operator’s perspective and the new operator’s perspective.
- 8.33 As discussed above, declaring roaming would be inconsistent with the previous investment decisions and assumptions made by GSM operators. In addition, declaring roaming would eliminate their future incentives to invest in infrastructure.
- 8.34 New entrants could act as simple resellers of basic services. They are likely to be basic service resellers only because of the difficulty associated with the transportability of features over the roaming network. In circumstances where the existing GSM networks are not bottlenecks, simple resale will not in most cases promote the LTIE.
- 8.35 If roaming is declared, a likely scenario is that a new entrant will establish a switch and a limited number of base stations in high density areas and roam onto the existing GSM networks in all other areas. Again, there will be little actual investment by the new entrants because they will be able to rely on roaming on the existing operators’ networks in order to provide coverage to their customers.
- 8.36 In conclusion, Optus does not support the declaration of roaming on the basis that it would undermine existing and future investment decisions of both existing operators and new entrants. The benefits to consumers of promoting competition from declaration are substantially less than the long-term consequences of discouraging investment, particularly relating to innovative services.

Technical feasibility of domestic roaming

- 8.37 The ACCC must have regard to issues of technical feasibility under section 152AB(6)(a) when considering the objectives of encouraging the economically efficient use of and investment in infrastructure. Pre-emptively declaring services where there are technical feasibility issues still to be resolved, may undermine normal commercial incentives to solve such problems. This will discourage efficient use of infrastructure and is not in the LTIE.
- 8.38 A key difficulty with roaming is in call handover of calls in progress from the host network to the home network. Subscribers who roam onto another network are locked on to that other network during the progress of the call until a signal for that network is lost. If the signal is lost, a subscriber’s call will drop out and a new call will have to be initiated.

- 8.39 Technical problems may be experienced where the capabilities of the host and the home network are at different stages of development. This is particularly important with the anticipation of roaming between GSM and 3G networks. In order for the switches of systems using different technologies to communicate efficiently when providing automatic roaming, new protocol conversion standards may in some instances need to be advised.
- 8.40 Issues to consider in respect of technical feasibility include the effects on:
- Quality of service on a network - if there are unexpected volumes of roaming occurring (due to faults or other events) it may mean that home-users receive a congested lower quality of service;
 - Service features versus coverage - it may be that case that whilst roaming users cannot receive all of their usual mobile service features, for example a 3G subscriber may not be able to use the handset for any data-based functions whilst roaming on a GSM network.
 - Mobile services are likely to become more complex and expensive for end-users
 - New products or features may be slower to market or their development may be hampered, particularly when there is a requirement to support national roaming
 - It may render an operator reliant on its roaming partner to undertake actions before its products can be put into service.
- 8.41 Many of these issues will require resolution by negotiation, including the establishment of roaming area boundaries, agreement on call parameters at boundaries to ensure minimisation, and handling of customer service complaints.

Pricing methodology for intercarrier roaming

- 8.42 Any cost-based principles are likely to set the access price at a point that does not take into account the total fixed and common costs nor the substantial risks, associated with mobile network investment.
- 8.43 A retail-minus pricing principle would likely be the preferred cost-based approach, provided that the retail starting price was based on an appropriate rate of return to mobile network providers.
- 8.44 With respect to a cost-benefit analysis, Optus believes that the time and complications associated with implementing a cost-based approach would significantly outweigh any benefits. For example, building up a TSLRIC model for at least four mobile networks, all with assets of different ages and at different stages of technology would be particularly complex. The retail minus pricing principle would be administratively simpler whilst also allowing an appropriate competitive rate of return to mobile operators.

9. International Roaming

- 9.1 In the ACCC's discussion paper, the issue of international roaming is raised, and questions are raised as to the appropriateness of international roaming regulation. In this section of the submission, Optus makes the case against the introduction of any form of regulation.

International Roaming market is competitive

- 9.2 As already established in this submission, the Australian mobile market is highly competitive. Accordingly, there are strong incentives for Optus to ensure that our international roaming (IR) services, along with any other mobile service, are competitively priced against those offered by others in the market.
- 9.3 However, it should be recognised that Optus does not control all the cost elements in delivering this service and this can limit our price flexibility. Currently, the largest single component of the costs of providing IR services is the wholesale price charged by the International carrier. However, in most instances there are at least two mobile providers competing for the IR business of Optus, which creates a level of pricing tension. Further, it should be noted that there exists a multitude of substitutes for IR services, including: SMS, fixed line calls, email, fax, and pre-paid mobile phone services rentals. Customers can use these services to substitute for IR when they are travelling overseas.
- 9.4 Optus considers that there already exist sufficient competitive constraints on IR services both at the retail (national) and wholesale (international) levels. These competitive forces are likely to increase over time as the market responds to the demands of an increasingly mobile public.

Consumer information on pricing is readily available

- 9.5 Consumer information on IR charges is readily available to ensure that consumers are fully informed of the costs of using the service. Optus customers can contact our customer service and be notified of the availability of the service and the applicable rates. The rates can be passed onto consumers via phone, email, fax or mail. Further, the IR service is not automatically available to customers. It has to be activated through customer service, and it is usual for customers to be offered rate information whilst the service is being activated.
- 9.6 To minimise customer inconvenience, Optus has also produced two brochures entitled "Take your mobile service overseas" and "International Mobile services". Each brochure outlines how Optus IR services (or "AutoRoam") are charged, and provides some illustrative examples. The brochures clearly identify the number customers can call to obtain rate information.
- 9.7 In addition, Optus is currently exploring the options of sending IR prices to customers' mobile phones via SMS, and producing pocket guides for customers to take overseas detailing IR rates.

Price setting

- 9.8 This section outlines how international roaming calls prices are built up from the underlying component costs.
- When an Optus customer takes and uses their mobile phone overseas, they are automatically logged onto the network in that country (once the international roaming agreement is in place). If Optus has an agreement with more than one carrier in that country (which is almost always the case), the customer has the option to choose whichever carrier they feel is most suitable. Customers also have the ability to switch between the various roaming partners at any time to take advantage of different call charges that apply at certain times of the day or week. This can be done via the handset.
 - Each call the customer makes and receives is recorded in the billing system of the overseas network and sent back to Optus, either directly or via a clearinghouse, using the GSM standard protocol, TAP (Transferred Account Procedure). It is worth noting that a number of overseas carriers charge roamers for both outgoing and incoming calls.
 - During the transferring period, the call details are changed from the local currency of the overseas carrier, into the SDR (Special Drawing Rights) currency, and subsequently into Australian dollars. The SDR currency is the GSM standard used by all member carriers of the GSM Association to enable all call records to be correctly changed from the overseas carrier's currency into the home carrier's currency. It is an International Monetary Fund (IMF) 'virtual' currency. Due to exchange rate fluctuations, roaming charges can vary from month to month.
 - Optus applies a standard mark-up to the amount levied by the International carriers and the total amounts are recorded on the customer's bill. **[Start: Commercial-in-Confidence]**
 - **[End: Commercial-in-Confidence]**
 - The mark-up applied by Optus is intended to recover the costs associated with the provision of international roaming services, including: administration, bad debts, marketing, consumer education, and exchange rate losses.
 - Optus considers the level of this mark-up to be reasonable. As previously noted, Optus has strong incentives to ensure prices are competitive both with the IR services of other carriers, and also of a range of other services.

Customer numbers

- 9.9 Optus has a subscriber base of around 4.7 million customers. Of those customers, on average between 75,000 and 80,000 customers use international roaming services each month. This amounts to less than 2% of Optus' total customer base.

International roaming should not be regulated

9.10 Given the demonstrable absence of any market failure in the IR, regulation of the service is clearly not appropriate. To summarise the factors that have led Optus to this view:

- Optus has very little control over the level of international roaming charges faced by Australian consumers.
- Consumer information on IR charges is readily available.
- In the vast majority of cases, consumers are given the choice of the network that they chose to roam with. Additionally, Optus is continually adding new roaming partners to its databases, expanding consumer choice.
- There are many effective substitutes to roaming, and consumers are well aware of this.

9.11 Optus submits that price regulation would have minimal benefits to consumers and would jeopardise the continued provision of IR services to Australian consumers. Regulation would be incapable of reducing wholesale charges set by international carriers which mark up the vast majority of the current retail charges. Therefore, any price reductions would have to be incurred directly by the Australian retailer. If the retail costs of IR could not be fully recovered, then it is unlikely that carriers would continue to offer the service.

10. International developments

10.1 Supplementary submission to come.