

Commerce Commission

Mobile Termination Issues Paper

Submission from New Zealand Communications Limited

September 2008

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OVERVIEW

1. New Zealand Communications Limited (**NZ Comms**) welcomes the Commerce Commission's (**Commission**) Issues Paper of 8 August 2008 (**Issues Paper**) inquiring whether or not the Commission should commence an investigation under Schedule 3 of the Telecommunications Act 2001 (**Act**).
2. There is overwhelming evidence of "*reasonable grounds*" for an investigation:
 - (a) Mobile termination rates (**MTRs**) are an order of magnitude above cost (**excessive**) - this is unlikely to change without regulatory intervention given current market structure and conduct.
 - (b) Excessive MTRs have a number of effects. In particular:
 - (i) They exacerbate incentives for large networks to set high on-net/off-net price differentials (**closed net pricing**). This creates a barrier to new entrants by reducing their flow of inbound calls, making the larger incumbents even more attractive to consumers and creating a significant barrier to entry and/or expansion for smaller networks.
 - (ii) They inhibit new entrants from offering competitive tariffs. Where they offer low off-net prices (necessary to compete with closed net pricing) they make losses where the large network makes profits and large traffic imbalances are likely. This leads to significant financial transfers from small to large players.
3. The above leads to retail prices which embody substantial monopoly rents. Service choice and quality are more limited than would be the case in a more competitive environment. Without substantive changes (regulation) end-users will remain unnecessarily harmed by non-competitive outcomes.
4. Appropriate wholesale regulation is necessary to achieve efficient competitive entry and remove artificial entry barriers, so that competition can take place. The effect would be lower prices, and enhanced choice and quality, to the long-term benefit of end-users of telecommunications services. Retail price regulation, requiring greater regulatory intervention, would be less effective in achieving such goals, so would only be a "second best" option.
5. It is widely recognised that efficiency is maximised where MTRs are charged at or below cost. It is also generally accepted that "cost based" MTR rates should be much lower than previously thought. The EU Commission has acknowledged that EU termination rates exceed costs and anticipates major reductions in the future (so historic benchmarking is considerably skewed in the incumbents' favour). It is now recognised that both the called party as well as the calling party benefit from a call so it may be inappropriate for the calling party's network to bear the entire cost of any call.
6. The distortions from high termination rates should be the principle concern of the Commission. While they remain, competition will always be skewed in favour of large operators and consumers will not get the benefits of undistorted competition. The Commission should be more concerned with setting efficient prices that avoid market distortions than with efficient cost recovery given the inherent problems with cost recovery.

7. Bill and Keep (**BAK**) is the most efficient means of removing the above distortions and would reduce the tools available to the incumbents to prevent new entry and maintain duopoly rents. It would also avoid billing and regulatory costs. Moreover, the empirical evidence suggests BAK benefits consumers without in any way harming carrier viability.
8. The “next best” option would be marginal cost (**MC**) based pricing to avoid double mark-ups and reflect the benefit received by the called party and their network. Failing that the next best is Long Run Incremental Cost (**LRIC**) but it is important that LRIC follows a correctly defined cost-based approach (which would be a costly and contentious process). The European Commission has recognised that many supposedly LRIC based MTRs inappropriately include common costs and has made it clear that and non-traffic related costs should be disregarded. They have estimated that true LRIC would result in MTRs being set at between 1 and 2 (Euro) cents per minute (**cpm**) (2-4 cpm (NZD)). Ofcom’s LRIC model results in costs of around 0.6 pence per minute (GBP) (1.5 cpm (NZD)) when adjusted to remove common costs.
9. The remainder of this submission sets out NZ Comms’ general comments and specific answers to the questions in the Issues Paper. NZ Comms has also commissioned Concept Economics to prepare a separate report on the “Impact of MTM Termination Regulation on Mobile Entry” (**Concept Economics Report**). The Concept Economics Report is **attached** to this submission.
10. Confidentiality is sought for the information contained in bold square brackets in the confidential version of this submission (i.e. [**]**). Confidentiality is sought until NZ Comms confirms in writing to the Commission that the particular information is no longer confidential. This request is made because the information is commercially sensitive and valuable information which is confidential to NZ Comms, and disclosure of it would be likely to unreasonably prejudice NZ Comms’ commercial position. Confidentiality is requested under section 100 of the Commerce Act 1986 via section 15(i) of the Act and under section 9(2)(b) of the Official Information Act 1982. NZ Comms requests that it be notified of any request made to the Commission under the Official Information Act 1982 for release of confidential information, and that the Commission seeks its views as to whether the information remains confidential and commercially sensitive, at the time such a request is being considered.

GENERAL COMMENTS

1. Introduction

The overall policy of the regulatory regime is to promote competition

- 1.1 The purpose of Part 2 (Designated services and Specified services) and Schedules 1 to 3 of the Act are to:

“... promote competition in telecommunications markets for the long-term benefit of end-users of telecommunications services within New Zealand by regulating ... the supply of certain telecommunications services between service providers.”¹

- 1.2 In making that determination:

“...the efficiencies that will result, or will be likely to result, from that act or omission must be considered.”²

- 1.3 More generally the purpose of the Act *“is to regulate the supply of telecommunications services”*. This regulation acknowledges *market failure* in the provision of telecommunications services flowing from the natural monopoly characteristics of many services.

- 1.4 As discussed below, the duopoly nature of New Zealand’s mobile communications market exhibits many of the harms associated with monopoly, which would be substantially reduced through efficient competitive entry. However, the present New Zealand regulatory environment provides Telecom and Vodafone with the capacity to deter efficient entry. NZ Comms considers that a light handed approach (ie BAK) to MTR regulation could significantly ameliorate this market failure at very low cost.

There is limited competition in retail mobile telecommunications market(s)

- 1.5 It is a testament to the desirability of mobile services that New Zealand has around 4.5 million mobile subscribers and 106% penetration.³ This is because in New Zealand the costs of mobile phone calls and text messaging are very high.⁴ As a result, despite good market penetration utilisation levels are very low by international standards.⁵ (References in this paper to mobile telephony or “calls” apply equally to voice and text, unless the context suggest otherwise. The competitive dynamics and principles are the same.) This is unsurprising as the mobile telecommunications market is a duopoly with high entry and expansion barriers. As the Commission has noted, comparable countries tend to have four or more operators, clearly accompanied by greater variation in market shares. In contrast, New Zealand’s mobile market is highly concentrated. Not only does this

¹ Section 18(1) of the Act.

² Section 18(2) of the Act.

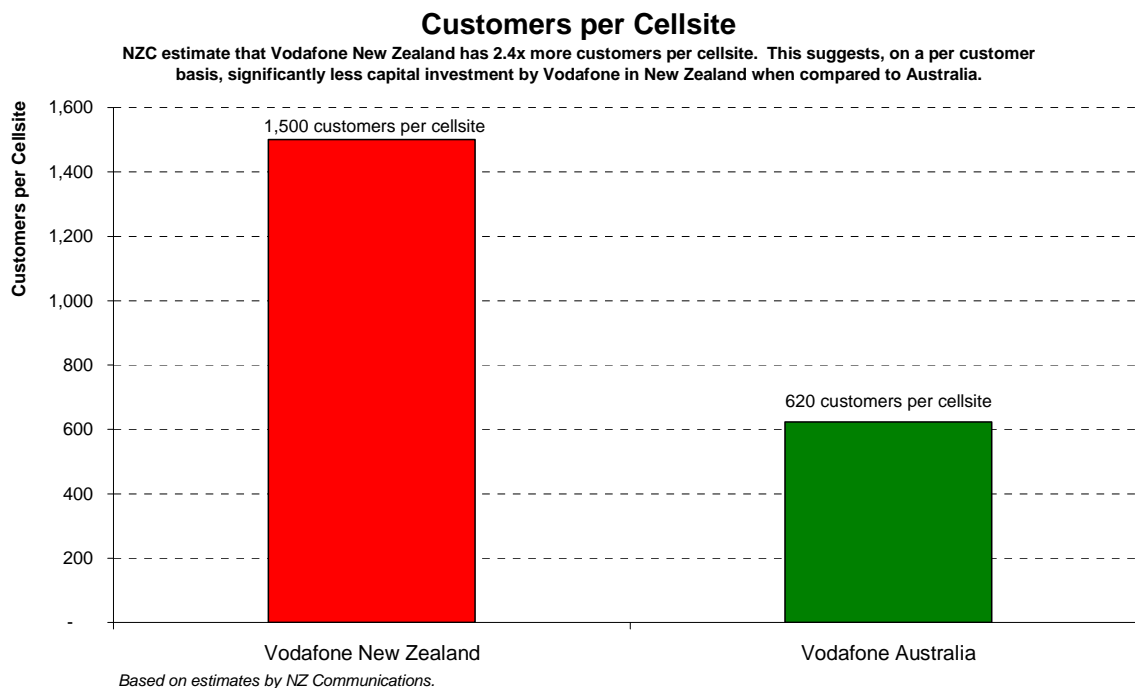
³ *Telecommunications Act 2001: Schedule 3 Investigation into Regulation of Mobile Termination Issues Paper*, 8 August 2008, Commerce Commission, para 40, 42.

⁴ As concluded by the Commission, in *2007 Telecommunications Marketing Monitoring Report*, 31 March 2008, para104, *“The introduction of new calling plans has benefitted some users (particularly through on-net pricing), but OECD benchmarking indicates others are still paying high prices by international standards. Average calling minutes per user are also still relatively low by international standards.”*

⁵ Above.

provide few incentives to compete, but it is relatively easy for the two mobile network operators to tacitly collude.

- 1.6 High entry barriers are made manifest by the fact that despite Telecom and Vodafone's apparently high profitability,⁶ and the presence of two additional spectrum licences, no facility-based entry has occurred in this market.
- 1.7 There has also been an under-investment in infrastructure so service quality is relatively poor. Incumbents often argue that regulation will create disincentives to invest. The reverse seems to be true – if there is competition, then networks have to compete on service quality as well as price. (Further, without regulation, the proposed investment by NZ Comms may well not occur.) The table below gives an imperfect but useful illustration of Vodafone cell site investment in New Zealand and Australia.



The problem: High termination charges & on-net pricing prevent or deter material new entry and keep prices higher

- 1.8 NZ Comms agrees with the Commission's conclusion that mobile termination on the incumbents' networks constitutes a *bottleneck* (as discussed in section 3). It also agrees with the Commission's concerns about the incumbents' market power in call termination (including prices significantly above cost, strategic price discrimination, actual/constructive refusal of access and bundling). This bottleneck enables the incumbents to set mobile termination (access) charges significantly above cost. (Cost matters are discussed in section 5.)
- 1.9 These excessive termination rates incentivise incumbents to favour on-net pricing more than they already do. The higher the level of MTRs the stronger the incentives to discriminate between on-net and off-net calls, and the greater the network effects and

⁶ For example, Vodafone's international CEO Arun Arin stated in an interview with *National Business Review* 2004 that he "wished he could take the New Zealand company and scale it to the rest of the world "I could say my job's done, I could retire early"...". See, Cone (2004), "Vodafone head toasts New Zealand success story" *National Business Review – Personal Investor*, 8 April 2004 <http://www.sharechat.co.nz/features/nbr/article.php/dc44e106>

price signal sent to customers. This reinforces pre-existing network effects and incumbency advantages, exacerbating considerable entry barriers.

1.10 These adverse effects are well-recognised:

“...terminating operators have incentives to raise rivals’ costs by setting termination prices at a level that impedes their ability to compete in downstream retail markets.”⁷

1.11 There are considerable difficulties challenging this closed-net pricing, in part because incumbents can argue that price differentials reflect “costs”. In fact, this is incorrect, because internal “costing” must implicitly be done on the basis of marginal or no cost whereas external termination charges are priced at monopolistic levels (even though purportedly based on cost).

This harms the competitive process to the detriment of consumers

1.12 The status quo (high prices and low utilisation) will remain without new entry, or at least without significant new entry (unless retail pricing is regulated). It is well-recognised that high termination rates translate to high prices for end-consumers.⁸

1.13 It is also acknowledged that:

“...low termination rates facilitate low retail call charges and higher consumption”.⁹

1.14 As the Commission noted in the PSTN Determination,¹⁰ new entry:

“...will result in consumers having greater choice of local access providers, which will, in turn, encourage local access providers to deliver product innovation and reduced prices. Such increased competition would be in the long term benefit of end users and is likely to give best effect to the purpose set out in section 18...”

1.15 NZ Comms believes similar consumer benefits will flow from efficient competitive entry in the mobile market.

The solution is regulation of MTRs

1.16 The clear answer is to regulate termination rates so as to prevent excessive wholesale prices. This view is supported by various authorities as discussed in more detail below. It would reduce incentives for the *artificial distinction* between on-net and off-net costs of termination. While wholesale regulation is unlikely to completely solve all potential exclusionary/predatory conduct by incumbents it will go a long way towards facilitating efficient competitive entry.

1.17 Regulation should be on a BAK, MC or LRIC basis as discussed in section 5 below.

⁷ As noted in EC *Draft Commission Staff Working Document Explanatory Note – Accompanying document to the Commission Recommendation on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU*, 2008, at p6.

⁸ Above, “... the absolute level of termination rates remains high in a number of Member States, thus continuing to translate into high, albeit decreasing, prices for end-consumers”, p4.

⁹ Above, p7.

¹⁰ *Final Determination on the application for determination for ‘Interconnection with Telecom’s fixed PSTN’*, 28 September 2006 (**PSTN Determination**), para 154
http://www.comcom.govt.nz/IndustryRegulation/Telecommunications/InterconnectionDeterminations/InterconnectionDeterminations/ContentFiles/Documents/500941_6.pdf

It may also be necessary to consider retail regulation

- 1.18 At this stage in the process NZ Comms does not advocate control of retail pricing, but reserves the right to do so when the Investigation commences. It would prefer that wholesale markets, where the primary market power lies, are regulated. Appropriate regulation should result in consumers benefitting from a range of new and innovative retail options. However NZ Comms is concerned about the difficulties of policing cross-subsidisation, which is a real issue, particularly with the growth in bundling and fixed rate plans (with unlimited calls).
- 1.19 On that basis it might, for example, be necessary to prohibit on-net/off-net price differentiation at the retail level to ensure wholesale regulation is not frustrated. This obviously was the case for the PSTN Determination where the Commission imposed a section 30 condition preventing Telecom from retail price discrimination for calls terminating on Vodafone's network (as had been requested by Vodafone). There is a direct analogy with price discrimination for off-net mobile calls. The PSTN Determination is discussed in more detail at section 6 below.

2. Commercial arrangements

- 2.1 The Commission will be aware that NZ Comms is currently seeking to conclude commercial interconnect arrangements with the incumbent operators.
- 2.2 It is not possible to enter the market without interconnect agreements in place. NZ Comms has therefore entered into negotiations with the incumbent operators in the interests of reaching commercial agreements that will allow it to progress towards launch while the regulatory process runs its course.
- 2.3 It is not expected that termination rates provided for in proposed commercial arrangements will reflect cost (current offers remain significantly above cost, which in itself is indicative of the market power of the incumbent operators).
- 2.4 Absent the threat of regulation, Telecom and Vodafone, in keeping with their fiduciary duties to their shareholders, would simply refuse to interconnect on terms that would reduce their profits or facilitate competition. It is our view that this would likely result in no, or entirely ineffectual, entry. **[CONFIDENTIAL]** [

] Moreover, the arrangements Telecom and Vodafone are presently prepared to offer are unlikely to enable NZ Comms to place an effective competitive constraint on the incumbents. Indeed, they may prevent NZ Comms' operations from being commercially sustainable. Arrangements that will allow material efficient competition will only occur with regulation which, at a minimum, addresses the harm of monopolistic termination pricing and hence the associated high on-net/off-net pricing differential capability. As a result, commercial arrangements will not remove incentives for closed net pricing or address the other barriers to entry discussed in section 3. **[CONFIDENTIAL]** [

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- 2.5 NZ Comms has incurred significant costs and is committed to further investment. Commercial arrangements are an interim measure only, intended to put NZ Comms in a position where it may seek to achieve some cash revenues to reduce its level of losses. Investment decisions to date have, however, been made on the assumption that the regulatory regime set out in the Act, which has the purpose of promoting competition for the long term benefit of end users,¹¹ would "work" (eg above cost pricing would be regulated where necessary).

¹¹ Section 18(1) of the Act.

2.6 In these circumstances any commercial agreements which may be concluded should in no way be taken to suggest that regulatory intervention is no longer required. On the contrary it seems inevitable that regulatory intervention is essential to facilitate efficient competitive entry, rather than entry *per se*.

3. **Barriers to entry**

3.1 This section briefly describes barriers to entry and the termination bottleneck.

3.2 NZ Comms' main points are that:

- (a) new entrants face significantly higher barriers to entry than the incumbents faced;
- (b) in particular, the wholesale termination bottleneck (by definition) is the most significant;
- (c) designation of mobile termination should address the abuse of market power of excessive termination costs (which should in turn address the exclusionary effects of closed net pricing);
- (d) network effects reinforce the impact of closed net pricing;
- (e) contrary to some submissions to date, commercial arrangements either agreed to date or on the table are not "commercial", or "sweetheart deals" but in fact also represent monopolistic conduct;
- (f) further, designation requiring that MTRs be at cost (or comparable arrangements) would only address wholesale pricing; it would not by itself create even entry conditions nor would it address issues surrounding retail conduct.

Wholesale termination is a bottleneck

3.3 The "bottleneck" nature of termination on Vodafone's and Telecom's networks is self-evident (as recognised by the Commission at paragraphs 26 and 34 of the Issues Paper). A provider of mobile telephony services must have access to other mobile networks in order to provide end-to-end connections to all mobile users. This is determined by retail customer demand, for which there are no good substitutes.

3.4 As noted by Albon and York, mobile network operators:

*"...have market power in mobile termination that manifests itself in prices for termination well in excess of costs of production. This market failure results in an efficiency cost that gives rise to a prima facie case for intervention in the form of regulated reduction of the termination charge to cost..."*¹²

3.5 Albon and York note that other externalities have different implications, but conclude that it is likely to be efficient to set MTRs to cost in markets with high penetration.

Network Effects

3.6 Recent academic studies of mobile termination rates illustrate an increasing understanding of the ability of larger mobile operators to use excessive MTRs

¹² Albon and York, (2006) "Mobile termination: Market power, externalities and their policy implications" *Telecommunications Policy*, 30, 368-384, at p382.

strategically to distort competition.¹³ These studies typically examine the impact of call externalities, which refer to the fact that both the sender and receiver of a call receive a benefit from it despite the fact that under a “Calling Party Pays” (CPP) regime only one party is charged for the call. As noted by Armstrong and Wright:

“...why else would anyone leave their mobile phone on to receive calls”¹⁴

- 3.7 This means that, other things being equal, consumers benefit more from subscribing to a network on which they make and receive more calls.
- 3.8 If a large network can deter its customers from making calls to a small network, it reduces the value of that small network to potential subscribers. Large networks can do this by setting high off-net tariffs. Small networks can also set high off-net prices but the effect is not the same, since they have fewer subscribers and therefore less impact on overall calling patterns. This is why off-net tariffs are at levels far above on-net tariffs and unrelated to the wholesale cost of those calls (ie MTRs).
- 3.9 At the same time, high MTRs allow operators to set low on-net tariffs. Again, all operators can set low on-net tariffs but the distortionary effects are greatest when practised by large operators that have the scale to affect overall calling patterns. Low on-net tariffs encourage on-net calls. A large network will have many on-net calling opportunities. Therefore, a potential subscriber will see that for many calls the large network offers cheap on-net tariffs, and certainly for more calls than a small network can offer. This encourages consumers to subscribe to the large network as they, and their calling circles, will benefit.
- 3.10 The use of retail tariffs to create a preference in favour of a network has been described as a “*tariff mediated network externality*”.¹⁵ Low on-net tariffs can be replicated by a small operator but with much less appeal, due to its limited customer base. The small network could even offer off-net tariffs at the same level as the large operator’s on-net tariffs in order to be competitive, but this financially punitive for a small network. On-net prices are already below incumbent’s MTRs in New Zealand which is creating distortions in the fixed to mobile market and will create further distortions in the mobile market if new entry occurs.
- 3.11 Through a combination of high off-net and low on-net tariffs large operators can make small operators unattractive for a prospective subscriber. The strategy of high off-net and low on-net tariffs leads to a further distortion. It creates traffic imbalances in favour of the large operator. The large operator deters off-net calls, but to compete the small operator has to offer low off-net tariffs (to compete with the on-net tariff of the incumbent), encouraging its subscribers to call off-net. This leads to small operators sending more interconnection traffic than they receive. With symmetric MTRs this results in a transfer of profit from small to large operators, which cannot be in the interests of long-term sustainable competition.
- 3.12 The presence of the call externality and the possibility for large networks to set prices strategically to harm their smaller rivals has led many studies to conclude that optimal

¹³ Relevant studies include: Armstrong and Wright (2007) “Mobile call termination in the UK” *UCL* September 2007, Cambini and Valletti (2007) “Information exchange and competition in communications networks” forthcoming in *Journal of Industrial Economics*, Hoernig (2007) “On-net and off-net pricing on asymmetric telecommunications networks”, *Information Economics and Policy* 19(2),171-188, Cabral (2007) “Dynamic price competition and network effects”, *CEPR Discussion Paper No. 6687*, 1Feb 2008 (April 2007), Harbord and Pagnozzi (2008) “On-net/ off-net price discrimination and ‘bill and keep’ vs ‘cost based’ termination pricing” forthcoming.

¹⁴ Above, footnote 42, p17.

¹⁵ Laffont, Rey and Tirole “Network competition: II. Price discrimination” *RAND Journal of Economics*, 29(1), 38 – 56.

termination rates are below cost.¹⁶ The incentive to set high off-net tariffs does not disappear with termination rates below cost, but they become more difficult to sustain and are less damaging to the new entrant because it can respond with lower off-net prices.

- 3.13 In some cases on-net tariffs set by large operators are below the level of their MTRs (in 2007 Ofcom reported that for the UK market as a whole average charges for off-net calls were 8.9ppm in 2006 compared with 3.5ppm for on-net calls,¹⁷ compared with average termination rates in the region 6ppm¹⁸). This prevents, or at least significantly impedes new entrants' profitability and makes it very difficult for a smaller operator to match the tariffs offered by the larger operator. This strategy is practiced by Vodafone in New Zealand with "best mate" voice and \$10 text (2000 texts for \$10) offers.
- 3.14 Traffic imbalances are reinforced in those markets, such as Italy, where often the same customer purchases two or three SIM cards, and uses the one of the smaller operator (which typically has lower call charges) mainly for making calls, whilst receiving calls on a different SIM. A similar situation exists in New Zealand, where dual handset ownership is relatively common. It is thought that over 250,000 customers have both Telecom and Vodafone subscriptions, which is fundamentally inefficient.
- 3.15 The power of on-net/off-net price differentials has forced one of NZ Comms' current investors to withdraw from the Slovenian market after having spent 200m (USD) on launching the third mobile network "Vega". Vega tried to enter the market where the entrenched incumbent Mobitel had an 80% market share. Mobitel used on-net/off net pricing to great effect to prevent successful entry and charged its customers between two and 14 times more to call Vega's customers than it did to call other Mobitel customers. This resulted in almost no cross network traffic and Vega's customers did not receive the benefit of incoming calls. The attractiveness of the Vega offer could not be sustained despite Vega's very low pricing simply because no Mobitel customers would call Vega customers. Vega withdrew from the market, selling all assets to the incumbent and incurring a total loss of investment. The New Zealand mobile market is not dissimilar. Vodafone carries the majority of mobile traffic, estimated to be between 65% and 70% and provides heavy discounts for on-net traffic resulting in between 77% and 80% of their traffic being on-net. Telecom have between 63% and 72% of traffic on-net.¹⁹
- 3.16 The impact of closed-net pricing cannot be over estimated. By way of example, in August 2008 NZ Comms had an Auckland based secondary school student survey mobile phone network use by students across seven schools in Auckland and Christchurch. The findings demonstrate that there is virtually no cross network traffic between Telecom and Vodafone for this customer type. Students effectively "had no choice" as to what mobile provider they used. This was because of the closed network calling patterns of the user group. Students colonized either Vodafone or Telecom and

¹⁶ See for example Cambini and Valetti (2003) "Network Competition with price discrimination: 'bill and keep' is not so bad after all" *Economic Letters* 81 (2003) 205-213; Berger (2005) "Bill and Keep vs. Cost-Based Access Pricing Revisited" *Economic Letters* 86(1) 107-112; and DeGraba (2003) "Efficient Intercarrier Compensation for Competing Networks when Customers Share the Value of a Call" *Journal of Economics and Management Strategy*, 12, 207-230.

¹⁷ *The Communications Market 2007*, August 2007, Office of Communications, Figure 4.40, p286.

¹⁸ Harbord and Pagnozzi (2008), p30.

¹⁹ Source: NZ Communications engaged a third party research consultant to conduct research into calling patterns. Survey size >1000 mobile users.

would virtually never text off network. As a consequence students had to be on the same network as the rest of the school.²⁰

- 3.17 A further distortion from MTRs is that they give more profit to large operators than to small operators. While termination rates are above cost, operators are earning a margin on them (that is, they are a source of profit). The more termination minutes, the more the profit. Those termination profits can then be used to distort competition in the retail market. So, when regulators set MTRs above cost they are granting large operators more profit and a competitive advantage. What is even more distortionary is that those profits are paid for by direct competitors.
- 3.18 It has also been recognised that while larger firms will charge higher off-net prices even without anticompetitive intent large on-net/off-net differentials are a “hallmark” of predatory behaviour.²¹

Other barriers to entry

- 3.19 New entrants also face many other costs or barriers to entry which the incumbents either did not face or which are considerably higher for new entrants. (NZ Comms does not propose to discuss these in detail at this stage.) For example:
- (a) NZ Comms must compete with two long established incumbents in a market where there is only limited capacity for further gains in penetration. Thus, NZ Comms must by and large attract existing customers away from the duopolists, which, as is well known, is costly (because consumers face both psychological and practical switching costs). Moreover, to the extent that NZ Comms will be able to expand the market, bringing on new customers, these are likely to be the most marginal of all customers (since the incumbents will have already sought out the most profitable customers). At the same time, NZ Comms must engage in this process while only having, in comparison to the duopolists, limited knowledge of the characteristics of the market, and, importantly, the customers the duopolists already serve.²²
 - (b) Attracting customers away from the two incumbents is made all the more difficult by the unusually long contracts end-users are forced to sign to gain service. Such contracts, in effect, foreclose a substantial proportion of the market making expansion by an entrant difficult. Three year contracts are increasingly common in New Zealand and unusual elsewhere where 12 or 18 months tend to be the norm.
 - (c) The incumbents are able to offer bundled services that NZ Comms cannot offer.
 - (d) Network deployment and customer acquisition involves significant sunk costs, which substantially increase the risks that entry will result in unrecoverable losses.
 - (e) The risks associated with the largely untested Industry Portability Management System (IPMS).
 - (f) Incumbents’ responses (including pro-active/preparatory activity such as on-net pricing bundling, long contract durations).

²⁰ 7 schools initially surveyed, 95% of students from each school were all on the same network, because “*no one will call me*” & “*my buddies will ignore me like an outcast*” the behaviour was put down to the fact that it costs 40 times more to communicate to another network than it does on net. All Schools surveyed in Auckland were Vodafone schools and schools in Christchurch were dominated by Telecom.

²¹ Hoernig (2007), p172.

²² See for example *NZ Bus v Commerce Commission* CA 149/06; CA 227/06 [2007] NZCA 502, 19-21 September 2007, Hammond, Arnold & Wilson JJ, where it was noted in that context that “*an incumbent provider will have the lowest costs*”, para 74.

- (g) The need to offer a “full service” from day 1, which involves [CONFIDENTIAL] []]. Many deals presently offered to NZ Comms by incumbents are far from attractive commercially and will significantly inhibit NZ Comms’ ability to enter as an efficient competitor. NZ Comms has determined that in the short run it loses less money than it would without these agreements (as it would then have no revenues). However NZ Comms expects that its business may be unsustainable without adequate regulatory intervention on MTRs, and it certainly would not be an *efficient competitor*, which is necessary to deliver consumer benefits.

3.20 We note that the Commission published *A Review of Cellular Mobile Market Entry Issues* in October 2006. That report, its findings and its commentary were crucial in persuading private equity investment into NZ Comms.

4. International experiences

Emerging themes in literature

4.1 Some of the international economic literature is discussed in the network effects section above.

4.2 NZ Comms also notes:

- (a) The closely related point that the existence of call externalities has become generally accepted. This is directly relevant to determining who should pay for any such call.²³
- (b) It is now well-understood that incumbents can use on-net retail discounts to create artificial network effects that can foreclose entry. Moreover, if (off-net) termination charges exceed marginal costs, as would be the case, for example, if those termination rates were set to average long run incremental costs, then such foreclosure can occur even when the larger (foreclosing) network’s on-net discounts exceed marginal on-net costs, so appear to be competitive.
- (c) There is a substantial body of literature favouring BAK.²⁴
- (d) Equally, many economists suggest that MTRs should be below MC.²⁵

Current regulatory approach

4.3 The European Commission is currently preparing a Recommendation on voice call termination rates in the EU and issued a public consultation on 26 June 2008 seeking the views and contributions of all interested parties on a Draft Commission Recommendation and Draft Explanatory Note by 10 September 2008.

4.4 At the time of release of the draft documents Viviane Reding, EU Telecoms Commissioner said she wanted termination rates to be lowered by “*up to 70 per cent*”

²³ There is a distinction between “earlier” literature (Armstrong, Laffont-Rey-Tirole) and more recent studies which recognise receivers’ benefits (DeGraba; Jeon-Laffont-Tirole, Hermalin-Katz, Cambini-Valetti).

²⁴ Harbord (2008), Cambini and Valetti (2003), DeGraba (2003), Berger (2005).

²⁵ See para 3.12 and footnote 16 above.

over the next three years²⁶ and as noted in the Issues Paper to between 1 and 2 cpm (Euro) by 2012.²⁷

4.5 Similarly, Neelie Kroes, EU Competition Commissioner, said:

"Truly cost-oriented termination rates will increase competition to the benefit of consumers. Consumers should expect to pay lower retail prices as a result. This Recommendation will also benefit large parts of the telecoms industry as it is likely to eliminate distortions of competition between fixed and mobile operators. It will also reduce the large sums for call termination which smaller mobile operators have to pay to large operators when they try to compete with the latter with the very popular flat rate offers. In view of these benefits a timely implementation of this Recommendation is essential."²⁸

4.6 The draft papers make the following points:

- (a) There is a divergence of price control measures within the EU and a significant variation in costing tools. There are also different practices in implementing those tools even when they are the same. Costs should be determined on a LRIC basis including only avoidable costs; non-traffic related costs should be disregarded.²⁹
- (b) National Regulatory Authorities (**NRAs**) have in a number of cases authorised higher termination rates for smaller operators because they are new entrants and have not benefited from economies of scale and/or are subject to different cost conditions.³⁰
- (c) The absolute level of mobile termination rates remains high compared to countries outside the EU.³¹
- (d) Closed net pricing reinforces the network effect and increases barriers to entry. Receiving retail customers have no incentives to change behaviour when the wholesale termination rates go up and down because they do not pay the price.³²
- (e) Terminating operators have incentives to raise rivals' costs by setting termination prices at a level that impedes their ability to compete in downstream retail markets.³³
- (f) High termination rates may also facilitate collusive behaviour between two or more terminating operators.³⁴
- (g) There is a clear benefit to both parties to call:

²⁶ As quoted in the *Financial Times*, 27 June 2008 <http://www.ft.com/cms/s/0/734832d0-43e7-11dd-842e-0000779fd2ac.html>

²⁷ Issues Paper, para 78.

²⁸ European Commission Press Release, "Lower charges, greater consistency, more competition: Commission consults on bringing down mobile phone tariffs in Europe", IP/08/1016, 26 June 2008. <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/08/1016>

²⁹ Explanatory Note with Draft recommendation, p4.

³⁰ Above.

³¹ Above.

³² Above, p6.

³³ Above.

³⁴ Above.

*“In any case, it may be noted that call termination is a service which generates benefits to both calling and called parties (if the receiver did not receive a benefit it would not accept the call), which in turn suggests that both parties have a part in the creation of costs”.*³⁵

4.7 The ERG's Common Position³⁶ makes similar observations:

(a) Asymmetric pricing: The ERG MTR benchmarking exercise confirmed that 25 of 31 countries surveyed allowed asymmetric pricing as at January 2007, but that the proportion of operators with an asymmetric MTR had fallen from 47% to 39% since January 2004³⁷ (page 74) with 82 % of National Regulatory Authorities enforcing or planning to enforce symmetry by 2012.³⁸

(b) Costs - Late entry:

“Putting aside the fixed costs incurred by any given operator, a recent MNO cannot from the start have a comparable customer base to his existing counterparts. Assuming that using the same technology and the same spectrum over the same geographical area, fixed costs of all operators should be (or, for the reason of efficiency or similar regulatory coverage requirements, must be) equal or very close to equal. However, in the short run, the new coming MNO does not benefit from comparable economies of scale and efficiency since it has fewer customers. As a result, NRAs may observe that the late entrant incurs a higher per unit cost for all services (including termination) than its competitors (if costs are allocated across lifetime volumes then this effect will potentially be more limited).

In order to acquire a significant market share after a certain period of time, MNOs must benefit from the economies of scale, increase their market share, and their traffic volume. This seems to be the key factor from a MNO in order to enhance efficiency. When recent entrants have higher unit costs, it can be appropriate to allow them to benefit from asymmetric MTRs, which allow them to recover higher termination costs. This is recognised by the majority of NRAs, who mostly allow such initial asymmetries.

*Nevertheless, NRAs should avoid allowing difference in MTRs that do not only cover higher per unit costs faced by the newcomer for termination but also subsidies retail services, since MNOs compete on retail not on wholesale market. Indeed, such a practice could act as a disincentive for efficiency gains and could furthermore distort retail competition among operators.”*³⁹

(c) Impact of high MTRs: The ERG notes that before MTRs are regulated at cost there may be situations where smaller operators are unduly competitively disadvantaged:

³⁵ Draft Commission Recommendation on the Regulatory Treatment of Fixed and Mobile termination Rates in the EU, June 2008, para 14.

³⁶ The European Regulator's Group (ERG) Common Position on Symmetry of Fixed Call Termination Rates and Mobile Call Termination Rates, 28 February 2008., (ERG (07) 83 final 080312) http://www.erg.eu.int/doc/publications/erg_07_83_mtr_ftr_cp_12_03_08.pdf

³⁷ Above, p74.

³⁸ Above, p77.

³⁹ Above, p89.

“This disadvantage could arise where certain retail price structures – on net/off net price differentials – that may result from high MTRs create a net outflow of traffic for smaller operators...As long as the internal cost signal for on net costs is below the external cost signal for off net calls (the latter being equal to the mobile termination rate plus the cost due to call origination), there is an incentive for any MNOs to promote on net offers, whatever its market share is. The incentive is stronger to the extent that MTRs are significantly above cost”⁴⁰

- (d) Closed net pricing: The ERG paper considers the situation where a smaller network decreases its off-net price so that it can compete with the on-net price of the incumbent. This gives rise to the situation where more customers on the smaller network call the larger network rather than the other way round, resulting in a traffic imbalance in favour of the larger network.

“When the MTR level exceeds costs incurred to terminate a call (which are costs linked to the additional capacity required to carry the extra-traffic incoming from the smaller operator), the situation can be detrimental for the smaller operator, as it gives money to the bigger operator allowing it to finance its investments for example in customer acquisition, quality of service or innovation. Thus traffic imbalance, when caused by on-net/off-net retail price differentiation, in combination with MTRs significantly above costs, can give rise to net outpayments made by smaller operators to larger operators. It should be recognised, however, that traffic imbalances per se are not necessarily a problem to be corrected.”⁴¹

- 4.8 On 28 August 2008, Ofcom published an initial consultation document assessing how the mobile sector delivers to UK consumers, posing questions about the future of competition and regulatory policy (including re-examining the regulatory decisions it made in 2007).
- 4.9 Ofcom's Chief Executive, Ed Richards said:

“Mobile communication is now a central feature of modern life. As our flourishing mobile sector evolves, we want to help maintain strong competition and innovation alongside consumer protection. With significant market and technology developments underway, now is the right time to ask some touch questions about the future approach to regulation. We look forward to a wide ranging debate on these issues.”⁴²

Overseas experiences - Some specific examples

- 4.10 As noted by the Mobile Challenger Group:⁴³

“In France, Bouygues Telecom had no choice: to face larger operator’s on-net offers, the last entrant was compelled to commercialise such offers as “NEO” – unlimited calls to all networks from 20:00 to 24:00 every evening and

⁴⁰ Above, p96.

⁴¹ Above, p99.

⁴² <http://ofcom.org.uk/consult/condocs/msa08>

⁴³ “The Mobile Challengers” are a group of 7 operators (or groups of operators) in Europe who are all late entrants into their respective markets whose aim is to challenge the competitive environment of the European mobile industry. “We want to create a level playing field for all operators and to provide greater choice and better conditions for consumers”. www.mobilechallengers.eu

weekends. As a result of this pricing strategy Bouygues Telecom incurred transfers of more than 400M Euro interconnect charges in two years”⁴⁴

5. Costs

Overview

- 5.1 Regulating MTRs should focus on removing the distortions under the status quo. As noted the incentives on incumbents to maintain excessive MTRs are strong, and the regulatory costs and imperfections around so-called “cost based” regulation are high.
- 5.2 Emphasising cost recovery alone risks failing to achieve the objective of removing market distortions so as to facilitate efficient retail prices and dynamic efficiencies. A cost based focus could lead to a focus on static, rather than dynamic efficiencies (at the extreme it could favour a regulated monopolist which is inconsistent with the underlying assumption of the Act). As discussed above, excessive termination rates:
- (a) increase incentives for enable closed net pricing, creating/enhancing significant entry/expansion barriers;
 - (b) lead to significant financial transfers from small to large operators;
 - (c) keep retail prices high;
 - (d) reduce consumer choice, the benefits of dynamic competition and delay the introduction of new services.
- 5.3 Fixing these problems should be the Commission’s principle concern. Until that is done, consumers will not get the benefits of undistorted competition.
- 5.4 BAK is the quickest, most efficient means of removing those distortions. This is consistent with optimal termination rates as described in a number of recent academic studies. It moves away from the flawed assumption that only the call initiator benefits from the call and takes into account positive call externalities. It results in operators recovering costs from their own customers rather than competitors (thus encouraging efficiency). There would be substantial rigour and consistency in taking such an approach. BAK is simple, and not far off the (unknown) optimal price.
- 5.5 Alternatively, given market power, and call externalities, below-short run MC pricing may be the optimal policy (because of downstream market power the cost recovery problem is not paramount, but rather the need to get cost-reflective retail prices).
- 5.6 Cost-based pricing involves subjective decisions (eg regarding allocations and how costs are defined and averaged). But if thought appropriate then LRIC may be an acceptable interim step.

Issues with cost determination and benchmarking and the application to NZ

- 5.7 It is evident that cost models are not applied consistently. Regulators in the EU using the same cost model have obtained very different results,⁴⁵ in circumstances where the

⁴⁴ http://www.mobilechallengers.eu/01/MyDocuments/challenger_statement_onnet.pdf

⁴⁵ For example, using the same cost model, Ofcom has concluded that MTRs in the UK should come down to about €8 cpm by 2010 – 2011, whereas PTS has already imposed MTRs of below €6 cpm in Sweden. See *Ofcom (2007) Mobile Call Termination: Statement*, p2, http://www.ofcom.org.uk/consult/condocs/mobile_call_term/statement/statement.pdf; PTS (2007) *The Swedish Telecommunications Market 2007*, p17, <http://www.pts.se/upload/Rapporter/Tele/2008/The-Swedish-Telecommunications-Market-2007.pdf>

different results cannot be justified by underlying objective differences.⁴⁶ This is likely to be a result of policy decisions. In particular, the level of termination rates and the existence, or otherwise, of asymmetries are policy decisions.

- 5.8 Fundamentally it is necessary to note the difference between business and economic bases of cost. The question is how do firms account for internal cost if at all? In practice any party will “price to itself” at marginal cost or lower, recognising the “two sided market” – people want to make and receive calls. It is artificial to have a disconnect between internal and external pricing.
- 5.9 When considering benchmarks, it is important to note that the New Zealand practice of charging wholesale on a first minute plus second basis, rather than on a straight per second basis (as is the norm in the rest of the world) distorts benchmark comparisons (and stifles retail competition and price innovation). NZ Comms believe that if compared on a like for like basis, the current NZ mobile termination rate of 16 cpm (NZD) is equivalent to around 25 cpm (NZD) charged on a per second basis. NZ Comms understands that Vodafone New Zealand is the only one of the 25 Vodafone operators globally that charges on a first minute plus second basis.⁴⁷
- 5.10 It is notable that many regulators use either “bottom up” incremental cost models or fully allocated cost models with “top down” accounting data to set regulated MTRs on a per minute basis. These cost models take fixed and common costs and allocate them across services, including termination, and also convert costs that do not change with traffic volumes into a per minute rate. This gives the misleading impression that the per minute cost of mobile call termination is high. If the cost models look only at the efficient costs that are directly caused by termination traffic, as recommended by the EU, the per minute costs of mobile termination would be much lower.
- 5.11 By overstating the direct cost of termination, these models allow operators to earn a margin on termination. Given that the margin is paid for by competitors, this gives rise to the possibility for distortions, especially if traffic flows are not balanced. It will also distort competition if some, but not all, operators in a market have been allowed to set higher termination rates over a long period, enabling them to over-recover their costs.
- 5.12 Maintaining termination rates above the directly incurred costs of termination even after an operator has recovered its initial investment allows that operator to earn an excess profit from termination. It is clear that in New Zealand this is what is happening. The early entrants have likely more than recovered their whole network investment from termination rates alone. In contrast, new entrants have yet to recover their initial network investment. If the current system of termination rates is to be applied consistently over time and between operators, it would require asymmetric termination rates that allow all operators to recover their costs, but not to over-recover them.
- 5.13 NZ Comms comments further on issues with benchmarking in the Q&A section.
- 5.14 In short, in addition to the “tariff mediated network externality” problem, cost models often overstate the costs of termination, which keeps retail prices artificially high, to the obvious detriment of consumers.

⁴⁶ Explanatory Note with Draft recommendation, p12.

⁴⁷ The practice is particularly odd in that if a terminating network’s quality is poor, the greater the artificial inflation effect. As any consumer who has had a call drop mid way through a conversation knows, it can be frustrating having to make the call again. If the total usage for both calls is less than one minute but the customer is charged for two minutes due to a poor quality network, the 100% increase in costs seems inappropriate and unacceptable as it is outside the control of the customers.

Bill and Keep

- 5.15 It has been argued that for a BAK arrangement to work traffic flows must be roughly balanced between the interconnecting networks; and the cost of accepting traffic on the network at no charge is low in relation to the cost of measuring and charging for traffic.⁴⁸
- 5.16 Vodafone has submitted that there will not be traffic imbalances. If correct, then BAK should be adopted immediately as it is the most efficient option.
- 5.17 In fact, so long as there are substantial on-net/off-net price differentials, there will be asymmetric traffic flows, as retail prices determine the traffic flows. The Commission has previously acknowledged this point.⁴⁹
- 5.18 If correct, then BAK would be the best option as it has reduced regulatory and compliance costs and removes the tariff mediated network externality: one of the main benefits of BAK is that it reduces the incentives for inefficient on-net/off-net price discrimination.⁵⁰ This should lead to more symmetrical traffic flows.
- 5.19 Harbord refers to the French experience to illustrate this point, noting the *reverse* point that France's largest mobile operator offers monthly packages with unlimited on-net calls and that its second largest operator offers packages with unlimited call allowances to 3 nominated on-net numbers, but that:
- "...these differentials have only emerged since 2005, prior to which mobile-to-mobile termination was on a bill-and-keep basis."*⁵¹
- 5.20 Harbord concludes that a move to BAK would:
- "...likely result in a more efficient wholesale and retail price structure, help to eliminate barriers to entry caused by "tariff-mediated" network effects, and increase welfare and competition in the mobile market."*⁵²
- 5.21 As noted BAK also offers low transactions costs (allowing the networks involved to avoid accounting, billing and collection costs⁵³) and low regulatory costs (avoiding the need for detailed cost based analysis, monitoring and reporting).
- 5.22 It also incentivises parties to keep their termination costs down, and permits greater flexibility in customer plans. BAK has been described as representing a solution to the monopoly termination problem that allows competition and customer choice, instead of regulation to determine how to pay for incoming calls.⁵⁴

⁴⁸ Farnon and Huddle, (1997) "Settlement systems for the Internet." in Kahin and Keller (eds) *Coordinating the Internet*, p400.

⁴⁹ PSTN Determination, at para 95. See further discussion of the PSTN Determination at section 6 of this submission.

⁵⁰ See, Harbord and Pagnozzi, (2008) for example who argues price differentials are "*at least partly responsible for softening price competition and maintaining higher call charges in the UK and other CPP countries*", p33.

⁵¹ Above, p31.

⁵² Above, p6. See also: "*A general conclusion which emerges however is that bill-and-keep arrangements lead to low retail prices and very high mobile utilization rates compared with CPNP (calling party network pays) countries, with little effect on penetration rates.*", p29.

⁵³ Re WorldCom/MCI (1998) European Commission Decision. Case IV/M.1069, para 53.
http://ec.europa.eu/comm/competition/mergers/cases/decisions/m1069_19980708_600_en.pdf

⁵⁴ Littlechild, 2006, "Mobile termination charges: Calling Party Pays versus Receiving Party Pays", *Telecommunications Policy* 30, 242-277, p274.

- 5.23 BAK has been criticised as having the potential to soften competition for subscribers (described as the “waterbed effect”).⁵⁵ The argument is that high termination charges give mobile operators an incentive to offer discounts and subsidies to their subscribers, so regulation to reduce termination charges will reduce this incentive. It is said that this means that there could be an increase in subscription charges and the prices of handsets and an overall reduction in the mobile penetration rate.⁵⁶
- 5.24 Even if this was accepted (which it is not):
- (a) the impact of any “waterbed effect” would be negligible given mobile penetration rates in New Zealand are already above 100%;
 - (b) any such “waterbed effect” would be the result of an inefficient subsidy, permitted by the monopolistic conduct (monopoly pricing and exclusionary on-net discounts), ie this would not occur in hypothetical competitive markets;
 - (c) retail competition will deliver countervailing benefits exceeding any such “loss”. (BAK is expected to lead to efficient retail prices given Telecom and Vodafone’s present market power, and hence capacity to mark up over wholesale costs. Lower retail prices would be expected to increase utilisation and make mobile subscriptions more attractive.⁵⁷)
- 5.25 It has been argued that BAK arrangements remove the incentives for networks to invest in network development and infrastructure. This is particularly said to be the case for small networks. The reason for this is that the networks are suggested to be able to use a rival’s network for free.⁵⁸
- 5.26 This criticism is commonly made in respect of the internet and is less of a concern in relation to mobile telecommunications. That is especially so given the requirement placed on NZ Comms that, as a 900 MHz spectrum management right holder, 65% population coverage is required for the renewal of the 900 MHz spectrum.⁵⁹
- 5.27 In fact, BAK has also been acknowledged in the literature as providing high incentives to invest. For example Valletti and Cambini comment:

“Below-cost charges are optimal but also difficult to calibrate. Given that one needs a regulatory system that has good theoretical properties but is also simple to implement, one practical suggestion is to impose a regime based on reciprocal bill-and-keep arrangements, i.e., a zero interconnection rate. We are in favor of “bill-and-keep” not because the optimal interconnection should be zero (although

⁵⁵ Gans & King (1999), Using “Bill and Keep” Interconnect Arrangements to Soften Network Competition, University of Melbourne 26 November 1999: “...the existence of termination revenue makes networks tougher price competitors (especially when they have less than half of the customers). When networks discount to gain a customer, they attract the (net) calls from other networks to that customer and receive the resultant termination revenues. While these revenues depend on the market share of each network, and are maximised when networks are of equal size, so long as a network’s market share is not too high termination revenues make the marginal customer more valuable and hence, bidding for that customer more intense.” , p8.

⁵⁶ Littlechild, (2006), p245.

⁵⁷ A similar benefit was recognised by the Commission in its investigation of Fixed to Mobile Termination Rates. See *Schedule 3 Investigation Into Regulation of Mobile Termination Reconsideration Final Report*, 21 April 2006, Commerce Commission, para 184.

⁵⁸ Wright et al.,(1997), “Telecommunications Interconnection: A Literature Survey”. <http://www.apectelwg.org/> “Such behaviour is commonplace in the Internet, where bill and keep has been the normal practice between network providers.”, p9.

⁵⁹ MED Offer Document 800/900 MHz Management Rights.

it may be with low marginal costs), but because it would be easy to put into practice and it would provide higher incentives to invest.”⁶⁰

- 5.28 Any national roaming agreement will also be entered into on commercial terms (subject to the above comments about a new entrants lack of bargaining power) which would be expected to prevent free riding and insofar as is economically efficient encourage ongoing investment in network development an infrastructure.

Pricing at or below Marginal Cost

- 5.29 As noted in paragraph 5.5, given market power, and call externalities, below-short run MC pricing may be the optimal policy (because of downstream market power the cost recovery problem is not paramount, but rather the need to get cost-reflective retail prices).
- 5.30 As also noted above there is a respected school of thought suggesting the price should be below marginal cost to reflect benefits to the called party.⁶¹ Further given how low termination costs really are (thought by NZ Comms to be no more than 1.5-3 cpm (NZD) and 0.05c per SMS (NZD)) and the considerable costs of regulation, BAK seems the superior option.

Long Run Incremental Cost

- 5.31 As noted in paragraph 5.6, cost-based pricing involves subjective decisions (eg regarding allocations and how costs are defined and averaged). But if thought appropriate then LRIC may be an acceptable interim step.
- 5.32 If adopted the appropriate basis for determining cost should be as currently proposed in the EU, namely:
- (a) including only avoidable costs attributable to termination traffic; and
 - (b) disregarding all other costs, including costs attributable to traffic from other services and non-traffic related costs.
- 5.33 Incumbents' obvious self interest must be taken account of and they will seek to inflate these numbers. Conversely, new entrants on the other hand gain no real advantage from setting prices “below cost” other than removing acknowledged market distortions.

Asymmetric Pricing

Reasons for an asymmetry

- 5.34 For completeness, NZ Comms notes that the asymmetric entry barriers faced by new entrants support asymmetric pricing.
- 5.35 Cost based termination will require the imposition of asymmetric termination rates in favour of small operators to offset the asymmetric costs/barriers they face necessary to:
- (a) prevent small operators transferring margin to incumbents due to imbalances in termination traffic;
 - (b) allow small operators to compete effectively against incumbents' discounted on-net offers; and

⁶⁰ Valletti and Cambini (2005) "Investments and Network Competition," *RAND Journal of Economics*, 36, 446-467, p454.

⁶¹ See para 3.12 above.

- (c) enable small operators to offer innovative and cheaper (for example, bundled) tariff packages to their customers.
- 5.36 Having true MC or LRIC based prices with asymmetric MTRs would mean reducing MTRs while maintaining a sufficient gap between operators to avoid market distortions. This approach would lead to lower short term prices and the benefits of competition over the long term (provided this was passed through by incumbents on a non-discriminatory basis, which may require retail regulation under section 30 of the Act). This would be a short term step while moving to the more sustainable and beneficial system of no termination payments (ie BAK).
- 5.37 The rationale for asymmetric pricing is that it encourages new entry and investment, leading to greater competition in the long run. While asymmetric pricing has been criticised for encouraging inefficient entry the benefit of securing new entry justifies asymmetric pricing at the very least in the short to medium term while the new entrant becomes established. Thus the regulators should decide over what period of time it is reasonable to expect the new entrant to reach efficient scale and then set MTR's accordingly. For example, the introduction of asymmetric pricing in many European states has often been accompanied by an appropriate "glide path" towards price symmetry. A similar approach would be appropriate in New Zealand if a cost based regime was adopted.
- 5.38 The degree of asymmetry would ideally be sufficient to at least ameliorate the advantages enjoyed by incumbents. Atiyas provides empirical evidence from Turkey where new entrants failed to survive as independent entities despite asymmetric termination rates of around 14 cpm (Euro) for calls from the incumbents to the entrants, and about 11 cpm (Euro) for calls from the entrants to the incumbents.⁶²
- 5.39 As noted, European NRAs have in a number of cases authorised higher termination rates for smaller operators on the grounds they are new entrants and have:
- (a) not benefitted from economies of scale; and/or
 - (b) have been subject to different cost conditions.

Conclusion

- 5.40 In conclusion:
- (a) BAK is clearly the best option: operating a BAK basis would avoid billing, regulatory and compliance costs, and more importantly reduce the tools available to the duopolists to prevent entry and maintain duopoly rents;
 - (b) the second best option would be pricing below marginal cost to avoid double mark-ups and reflect the benefit to the called party and their network;
 - (c) failing that, the option would be pricing on a LRIC basis which, following the EU would include only the avoidable costs attributable to termination traffic;
 - (d) the Commission's estimates of median benchmark LRIC MTRs are far too high at 10.76 cpm (NZD). Most estimates of true LRIC/MC (ie without common costs) give estimates below 2.5 cpm (NZD);
 - (e) further, given the asymmetric barriers to entry faced by new entrants, there is good precedent for MC or LRIC pricing to be asymmetric with a glide path.

⁶² Atiyas and Dogan, (2006), "When Good Intentions Are Not Enough: Sequential Entry and Competition in the Turkish Mobile Industry", *Telecommunications Policy*, 31, Issue 8-9, 502-523.

6. The Commission's PSTN Determination⁶³

6.1 NZ Comms notes support for the above analysis and comments in the Commission's PSTN Determination.

6.2 The determination makes it clear that:

- (a) Vodafone thought BAK had real advantages and its use should not be treated as an exception.
- (b) Telecom's experts also favoured BAK in earlier submissions, but tried to limit its application in later submissions.
- (c) The Commission noted commentary accepting that BAK approximated the large fixed costs and very small marginal costs of (in that case) local calls.
- (d) Vodafone's experts thought it inappropriate to treat BAK as a price less than actual cost.
- (e) The Commission noted that BAK:
 - avoided the MC disadvantage Vodafone faced;
 - this enabled more effective competition;
 - removed incentives to game the regime or target customer groups, and encouraged efficient termination costs through retail charges;
 - enhanced dynamic competition.
- (f) The Commission also prohibited Telecom from price discrimination (namely charging more for calls termination on Vodafone's network). Yet that is exactly what closed-net pricing constitutes. Unlike Vodafone, NZ Comms at this stage seeks only wholesale regulation (but reserves its position).

6.3 Some of the key commentary and submissions on the above points are repeated below as they go directly to the issues at hand.

Vodafone's position - use of BAK most appropriate

6.4 The Commission summarised the submission from Vodafone as follows:

"Vodafone submits that termination costs on its network are significantly higher than termination costs on Telecom's fixed PSTN. Accordingly, the adoption of cost-based termination pricing would result in the payment by Telecom to Vodafone of net interconnection charges. Telecom would then pass that cost on to its retail customers, which would retard competition by discouraging Telecom customers from making calls to Vodafone local numbers."⁶⁴

6.5 Accordingly:

⁶³ PSTN Determination, 28 September 2006.

⁶⁴ Above, para 78.

“Vodafone argues that forward-looking cost-based pricing will not give best effect to the purpose set out in section 18, and that bill and keep pricing is preferable. Vodafone submits that⁶⁵

“...the ability for callers to ring a Vodafone local number at the price of a local call is likely to be important to the success of our local service initiative.”

Vodafone does not consider that the use of bill and keep in Decision 477 was an “exception” and notes that in the past Vodafone and Telecom had interconnected mobile-to-mobile calls on a bill and keep basis and that Vodafone and Telecom currently use bill and keep to exchange MMS traffic on their mobile networks.⁶⁶

Telecom’s experts’ comments on BAK

6.6 The Commission commented:

*“During the consultation stage preceding Decision 477, Charles River Associates (“CRA”)⁶⁷ submitted on behalf of Telecom that a forward-looking cost-based methodology was appropriate for many call-types, but that pure bill and keep was preferable for local calls. CRA argued that pure bill and keep leads to greater compatibility of incentives between interconnecting parties, which enhances dynamic efficiency. In particular, CRA argued that under pure bill and keep each carrier is required to **bear its own costs for reciprocal traffic exchange, thus providing incentives to minimise costs.** CRA also cited simplicity and avoidance of the risk of gaming or arbitrage as examples of the benefits of bill and keep pricing for the interconnection of local calls.*

CRA’s submission in response to the draft determination for this Application states that some of their previous comments on bill and keep only apply to voice and data calls and not calls to mobile networks.”⁶⁸[emphasis added]

6.7 The Commission noted that the use of forward-looking cost-based pricing *“incurs administrative costs due to the billing and recovery of Interconnection charges. ...[It]...would also incur the regulatory cost of the Commission having to undertake benchmarking or TSLRIC modelling to determine the interconnection.”⁶⁹*

6.8 The Commission noted that Telecom had *“initially argued that balanced traffic is a pre-requisite for adopting bill and keep pricing, but later argued that in New Zealand, bill and keep was only introduced “to deal with the specific internet call sinks (asymmetric traffic) problem” ...”⁷⁰* But the Commission then went on to note that, when it issued a paper prepared by Frontier Economics suggesting that out of balance traffic could be priced at its forward looking common cost:⁷¹

⁶⁵ Above, *Vodafone Submission on Commission decision to investigate local service application* for April 2006, para 37, at footnote 25.

⁶⁶ Above, para 83.

⁶⁷ Above, CRA, *Interconnection Pricing*, 7 June 2002, p9, at para 85, footnote 29.

⁶⁸ Above, CRA, *Economic Advice on Aspects of Vodafone’s Application for Interconnection with Telecom’s Fixed PSTN*, 3 July 2006, p4, at para 86, footnote 30.

⁶⁹ Above, para 93.

⁷⁰ Above, para 94.

⁷¹ Above, para 95.

“TelstraClear and Telecom responded with a common view that pure bill and keep should be used for all local call traffic (i.e. that pure bill and keep should not be limited to addressing the call sink situations, but extended to all local calls)...

*...While there is no reason to believe that local voice traffic between Vodafone and Telecom customers would intrinsically be materially out of balance, forward-looking cost-based pricing could result in the introduction of retail plans that game the interconnection payments. By changing customer call behaviour and/or attracting certain customer calling profiles, such plans could lead to an imbalance of interconnection traffic. **Hence the pricing method can itself influence whether or not traffic is in balance.**” [Emphasis added]⁷²*

6.9 The Commission noted:

*“Bill and keep has been described as a pricing regime in which each carrier bears its fixed costs for interconnection, and the payment for out of balance termination is set as zero. In this sense, **the prices that are set under bill and keep approximate those that are incurred by carriers** – large fixed costs and very small marginal costs for both origination and termination of local calls.”⁷³[emphasis added]*

6.10 The Commission commented:

“Vodafone considers that Telecom would receive compensation for their costs in the form of reciprocal termination on Vodafone’s network, and notes that termination costs on a cellular network are higher than a fixed PSTN.”⁷⁴

In an earlier paper CRA submitted that, like in barter, the absence of an explicit price does “not mean the price is zero” and that bill and keep did provide a price:⁷⁵

“In neither case (hybrid bill and keep or pure bill and keep), however is the price of interconnection (as opposed to the net payment) set to zero.”

In the earlier paper CRA argued that “it is inappropriate to assume that bill and keep interconnection prices at less than its true cost”. Or that bill and keep sets prices “below cost”.⁷⁶

However, CRA’s current submission argues that some of their previous comments on bill and keep only applied to “voice and data interconnection” and “not mobile networks”, the implication being that

⁷² Above, para 98.

⁷³ Above, CRA, Comments on the Draft Access Determination: Interconnection Pricing, 9 September 2002, pp4-6; at para 113, footnote 36.

⁷⁴ Above, Vodafone, Cross-submission on Vodafone’s Interconnection Application, 11 July 2006, para 23, at para 115, footnote 38.

⁷⁵ Above, CRA, Interconnection Pricing, 7 June 2002, pp7,16, at para 116, footnote 39.

⁷⁶ Above, p7 at para 117, footnote 40.

these earlier comments applied to interconnection between two fixed PSTNs”.⁷⁷

Commission Comments on BAK

6.11 The Commission commented:

“Since calls are exchanged without payment under pure bill and keep this **avoids the problem of Vodafone having a marginal or per call cost disadvantage relative to Telecom and TelstraClear** for determination of local voice calls on Telecom’s fixed PSTN. Equivalence of **input prices allows Vodafone to compete more effectively** for residential customers who want uncapped or a large number of free local call minutes.

As pure bill and keep removes the potential for the Parties to generate a positive net flow of interconnection payments, **it removes the incentives for the Parties** to game by targeting customers who are net receivers of local voice calls. Pure bill and keep **removes the inefficient cross-subsidies** that such gaming would create.

As pure bill and keep applies to both Parties it is effective at resolving the price determination on both networks, **hence removing a barrier to launching the new competing service**. In the absence of any term requiring the access seeking to provide termination under its network on comparable terms to what it pays the excess provider for termination, pure bill and keep addresses any potential terminating monopoly problem.

CRA⁷⁸ previously submitted the pure bill and keep reduces ongoing regulatory and administrative costs. Pure bill and keep does not require the Commission to undertake benchmarking or TSLRIC modeling to determine the interconnection rates.

The Parties agree that termination on Vodafone’s network would cost more than termination on Telecom’s fixed PSTN.

Vodafone may choose to recover its higher termination costs through its retail charges, such as fixed monthly subscriptions. In that event, Vodafone’s higher termination costs will be recovered from its retail customers and not from Telecom.⁷⁹
[emphasis added]

Incentives

6.12 The Commission noted that:

“Pure bill and keep removes the incentives of the Parties to inefficiently subsidise customers that have large net inbound traffic streams. Under pure bill and keep, each network operator would bear the network termination costs from attracting these customers, and the operator using a technology with higher costs would absorb these higher costs. Accordingly, pure bill and keep reduces the

⁷⁷ Above, CRA *Economic Advice on Aspects of Vodafone’s Application for Interconnection with Telecom’s Fixed PSTN*, 3 July 2006, p4, at para 118, footnote 41. This comment was made with reference to the paper by Quigley and Vogelsang *Interconnection Pricing: bill and keep Compared to TSLRIC*, CRA Report for Telecom New Zealand, 7 April 2003.

⁷⁸ Above, CRA, *Interconnection Pricing*, p9, at para 125, footnote 43.

⁷⁹ Above, paras 122-127.

*incentive to target individual customers or design other strategies to 'game' the interconnection payment system.*⁸⁰

- 6.13 The Commission noted that “*The Commission agrees with CRA⁸¹ that this benefit of pure bill and keep enhances dynamic efficiency*”.⁸²

Requirement of non-discrimination for off-net calls

- 6.14 Vodafone’s application requested the Commission to impose a condition preventing Telecom from discriminating between the price it charges customers for local calls made to Vodafone’s local customers and those made to other networks.⁸³ The Commission quoted Vodafone’s submission⁸⁴ that: “*If Telecom can require callers to Vodafone local numbers to pay higher rates than callers to other local numbers, there could be a significant disincentive to take up Vodafone’s local service*”.

- 6.15 The Commission then noted:

“If Telecom charged a premium for local voice calls to Vodafone local numbers, this would discourage Telecom customers from calling Vodafone numbers and would reduce Vodafone’s ability to compete against Telecom’s local access services.

*For Vodafone’s service to be an effective substitute for existing local access services, customers would expect that people would call them at rates comparable to other local calls. Potential users of the Vodafone service would recognise that any additional charge incurred by callers to Vodafone local numbers could make it less likely that callers will choose to call those numbers.*⁸⁵

- 6.16 At this stage NZ Comms is not seeking comparable regulation of off-net calls, while noting that the Commission has jurisdiction to do so. (But this may be necessary to address exclusionary and predatory conduct in the retail markets.) Accordingly NZ Comms reserves its right to make further submissions on this issue when the investigation commences. As noted by the Commission:

*“Section 30(d) of the Act states that a determination may include the actions that a party to the determination must do or refrain from doing. The Act does not impose any restrictions on the scope of the actions that this section applies to”.*⁸⁶

Benefits of BAK

- 6.17 The Commission concluded that the Vodafone service:

“will result in consumers having greater choice of local access providers, which will, in turn, encourage local access providers to deliver product innovation and reduced prices. Such increased competition would be in the long term benefit of end users and is likely to best give effect to the purpose set out in section 18. Telecom as an integrated provider with its own mobile network is

⁸⁰ Above, para 128.

⁸¹ Above, CRA, *Interconnection Pricing*, p8, at para 129, footnote 44.

⁸² Above, para 129.

⁸³ Above, para 136.

⁸⁴ Above, *Vodafone Submission on Commission Decision to Investigate Local Service Application*, 4 April 2006, para 43, at para 141, footnote 46.

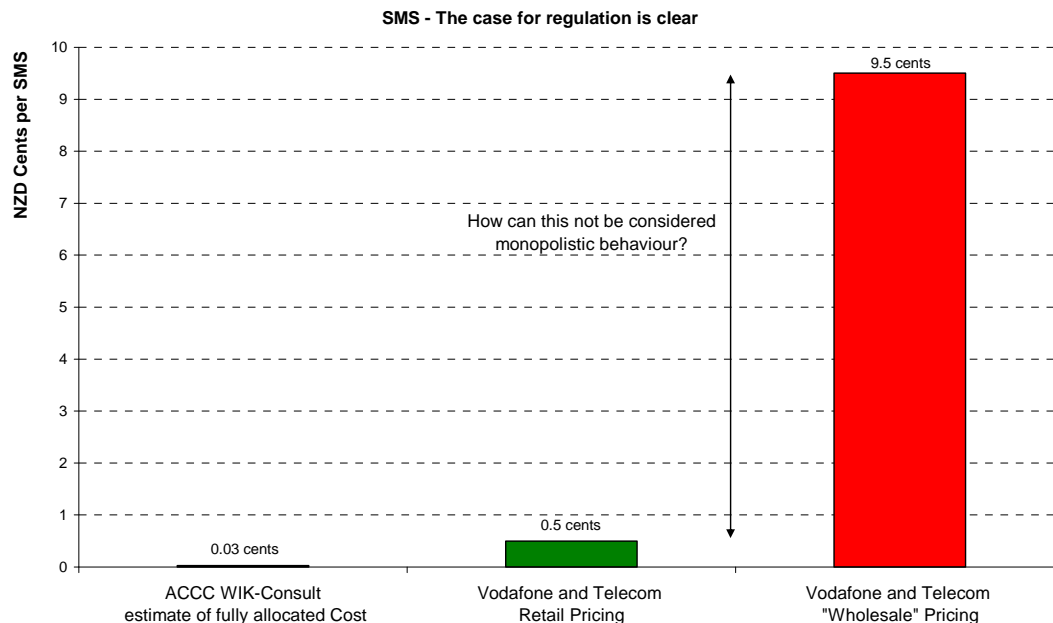
⁸⁵ Above, paras 150-151.

⁸⁶ Above, para 155.

capable of responding to the competitive challenges that the proposed Vodafone service may present⁸⁷.

7. SMS - MMS

- 7.1 Domestically, the incumbent operators charge 9.5 cents per SMS (NZD) for wholesale termination, whereas the cost associated with terminating SMS traffic is negligible (less than 0.05 cents per SMS (NZD)) and the same operator's retail price is around 0.5 cents per SMS (NZD).
- 7.2 NZ Comms is surprised at the suggestion that an operator can offer a "wholesale" rate that is almost 20 times higher than its retail rate and 190 times higher than its cost.
- 7.3 In an international context, BAK is the norm for exchanging SMS. In fact, it is far cheaper for NZ Comms to transit SMS via international carriers than it is to exchange them directly with Telecom or Vodafone. This inefficient routing of traffic is directly attributable to the distortions created by the incumbent operators wholesale pricing.⁸⁸



8. Conclusion

- 8.1 New Zealand has only two mobile network providers, with the associated duopoly effects:
- (a) high MTRs, which inflate retail prices;
 - (b) while penetration rates are high, mobile phone charges are also high resulting in low mobile telephony utilisation rates;
 - (c) incumbents are highly profitable, but there is limited evidence of full consumer benefits and there is anecdotal evidence of inadequate infrastructure investment and poor service quality;

⁸⁷ Above, para 154.

⁸⁸ NZC does not have an Interconnection Agreement with Vodafone. However, in the proposed Agreement, Vodafone has inserted clauses that require NZC to route traffic directly to Vodafone and prevent NZC from routing via least cost routes.

- (d) new entrants face artificial entry barriers created by the combination of termination rates that exceed efficient costs and the incumbents' on-net/off-net pricing discrimination;
- (e) this is possible because termination on incumbents' networks represents a "bottleneck" and the incumbents misuse their monopoly power by setting termination rates considerably above costs;
- (f) incumbents have strong incentives to maintain high mobile termination rates and closed net pricing as these create a virtually insurmountable entry barrier, thereby maintaining the present cosy duopoly with all of its costs to consumers and the New Zealand economy;
- (g) there is much economic literature highlighting the problem of closed net pricing, and this literature generally calls for either BAK or termination rates that are below marginal cost, which in turn is below LRIC;
- (h) at the same time, regulators have been driving termination rates in general, and especially MTRs in Europe, down toward at least LRIC. Thus, the EU Commission has acknowledged that EU termination rates exceed LRIC and anticipates major reductions in future (the average EU MTR today is approximately 8 cpm (Euro), but looks set to fall to a quarter or less of that). Moreover, there is some suggestion that even these rates are too high. As a consequence, benchmarking against present day MTRs seriously distorts international best practice by significantly overstating what are considered to be optimal MTRs;
- (i) appropriate regulation of MTRs will remove above cost wholesale prices and reduce the anti-competitive impacts of closed net pricing (ie remove the artificial barrier to entry),⁸⁹ resulting in a material competitive constraint not available under the counterfactual, which will result in lower prices, enhanced quality of service, and innovation for the long term benefit of consumers.

9. Next steps

- 9.1 NZ Comms looks forward to addressing these issues in more detail in the context of a full investigation under Schedule 3 of the Act. In the meantime, the next section of this submission elaborates on the above and answers relevant Commission questions from the Issues Paper.

⁸⁹ Even with MTRs that reflect marginal costs, anti-competitive closed net pricing is still possible in New Zealand because of the caller pays nature of retail charges. This is because call recipients also value calls received, so if a much larger network has sharp, but not cost supported, differences in on-and off-net call prices, subscribers will prefer that network, and it may be difficult for an efficient, but small entrant to profitably compete.

RESPONSE TO SPECIFIC QUESTIONS

3. The Market For Mobile Termination

Question 3.1

(a) Is the market definition as outlined above (market for mobile termination services) appropriate? If not, what is the appropriate definition/delineation?

For the purposes of the current analysis the market definition proposed by the Commission would suffice, but the specific market definition adopted should not be crucial. An alternative would be a broader market definition that includes all mobile services – that is, retail services as well as termination – to reflect the two-sided nature of mobile markets.

However, regardless of the market definition adopted, both Vodafone and Telecom have substantial market power for termination services on their own networks. Termination on each incumbent's network constitutes a bottleneck which a new entrant must access. The incumbents have a degree of countervailing bargaining power viz a viz each other.

The specific services included in the wholesale termination market include voice, Text/SMS and data (MMS) termination.

NZ Comms is aware that the Commission may wish to consider FTM issues. That should not prejudice or delay examination of the MTM termination issues which are distinct.

(b) Are there other markets that respondents consider the Commission should be taking into account?

The Commission's focus should be on the main problem, namely the exclusionary impact of excessive MTRs, exacerbated by on-net pricing.⁹⁰

NZ Comms considers that the principal markets the Commission should be concerned with are those impacted most by the mobile termination bottlenecks held by Vodafone and Telecom, namely the market/s for the retail supply of mobile telephony services. For present purposes this can be taken to encompass voice, text and data (MMS).

Similarly business and consumer customers can be treated as one, for the purposes of the current analysis, although there are differences between the two customer groups (reflected in the different pricing plans, customer size, countervailing bargaining power etc). There are also likely to be significantly different foreclosure effects between customer groups, most notably business customers and post pay consumers who will be more likely to be "locked in" to excessively long contract terms with incumbents.

Termination rates significantly above costs may also impact other services or markets.

4. Termination as an Interconnection Bottleneck

Question 4.1

(a) Is the approach that termination is likely to be a bottleneck appropriate (arguments have to take into account both retail and wholesale markets)?

Unequivocally yes. MTM termination is an essential input into the provision of mobile service and as such must be considered a bottleneck.

⁹⁰ NZ Comms is also greatly concerned by the other practices identified by the Commission at paragraph 35 of the Issues Paper (such as other strategic price discrimination, closed network pricing, pocket pricing and bundling).

In some cases countervailing buyer power may counteract the market power of the terminating mobile network. This would occur, for example, in negotiations between similar sized networks that both require access to each others' networks and have traffic that is generally in balance. In such cases, it could be considered that there is no bottleneck and therefore no regulatory intervention is required. (Hence Vodafone's and Telecom's wholesale termination may not be bottlenecks to each other.) However, in the current context there is a new entrant which does not have the countervailing power of existing mobile networks and access to the Vodafone and Telecom networks hence should be considered a bottleneck.

The threat of regulatory intervention has led to the incumbent networks offering terminating access arrangements. However, the excessive termination charges in those offers still forms a significant barrier to effective entry. This is because the entrant is faced with the prospect of having to entice customers away from the attractive closed net pricing offered by incumbent networks. In respect of a significant customer segment, this would effectively involve having to match Telecom and Vodafone's on-net discounts with comparable off-net pricing, which would create a traffic imbalance. This traffic imbalance, leading to net-outpayments by the entrant, means that the MTM termination charge would be material to the entry/expansion decisions.

(b) What additional effects (e.g. on other markets) can arise if considering mobile termination services as an essential bottleneck?

The bottleneck characteristics of MTM termination will lead to reduced competition, with higher retail prices, together with reduced choice, quality and innovation.

Abuse of the bottleneck through excessive MTRs means either that new entry does not occur (as has been the case in New Zealand for the past 16 years), or entry occurs in circumstances where the new entrant faces significant market foreclosure as a result of a range of exclusionary conduct. Even when there is entry, the new entrant will (at least initially) operate at suboptimal scale and face artificially inflated termination costs meaning it is unable to compete on price (ignoring closed net pricing and the other entry barriers it faces). Under these conditions, the existing duopoly with limited competition (evidenced by high retail prices and low utilisation) is essentially maintained. Even small scale entry (eg as is potentially the case under the counterfactual) will only see competition in certain defined low value customer segments.

Please see the Concept Economics Report.

(c) What factors can potentially lead to on-/off-net call discounts? Under what circumstances do discounts lead to predatory price discrimination?

Please see the Network Effects section which largely address this issue. Here NZ Comms notes some additional points.

On-net/off-net price differentiation can be based either on cost considerations or on demand side considerations (call externalities and strategic effects as discussed in the Network Effects section).

Costs

The difference between on-net and off-net prices could suggest that on-net prices reflect a very low short-run marginal cost faced by operators (which may in practice be the relevant period for the decision made by commercial management at the mobile operator). This contrasts with the common regulatory contexts, which calculates the off-net termination rate on a different time horizon (namely the Long Run) which is then converted into a per minute termination rate which obviously feeds into the off-net price. Incumbents treat non-regulated access in the same way but without even the appearance of the discipline of linking access prices to costs.

In this sense, the on-net/off-net price differential has been caused by this disconnect in approaches which inflates the short run termination cost only for off-net calls while on-net calls are unaffected.

As outlined earlier NZ Comms considers the actual MC to be very low, and given call externalities, pricing below MC is justified. This would justify little if any differential in on-net/off-net pricing.

Demand Considerations

As detailed more fully in the Network Effects section (in section 3 of the General Comments), the demand-based explanation for price differentials arises because users get (uninternalised) benefits from receiving calls. The originating network wants to reduce off-net calls as they would benefit the recipient rival; the instrument to achieve this is a very high off-net originating charge.

By charging high off-net prices, a network penalises its own customers since they will make fewer off-net calls. But it also penalises the rival's customers who do not receive calls. Thus the incentive to push up off-net prices.

Predation

Even without predatory intent, the network effects encourage predatory outcomes.

Hoernig⁹¹ considers the circumstances where the incumbent wants to predate/inflict some financial losses on the entrant. He shows that if (reciprocal) charges are above cost, the incumbent's on-net/off-net price differential increases even further, since the incumbent will try to reduce as much as possible, incoming calls to the entrant, which are profitable precisely when termination is set above cost ("turn off the tap").

There is complementarity between predation and high termination charges. Predation is more likely/effective with on-net/off-net price differentials when termination charges are set above cost.

Conversely, if termination is priced at cost, there is no incentive to use these differentials to engage in predation since they cause no termination loss to the entrant (though predation might still occur, of course, simply by setting cheap prices in the short run; similarly, the price differential may also still occur due to the "strategic" effect highlighted above when the utility from receiving calls is high enough).⁹²

Please also see Concept Economics Report in respect of the predatory effect of on-net price discounting.

5. Telecommunications Market Overview

Question 5.1

(a) What effects on prices and average network costs can be expected if the geographical coverage for mobile services is increased and if new technologies are implemented (e.g. 3G networks)?

Mobile networks generally deploy first to the lower cost, higher density areas. Expansion of coverage by the incumbent networks would likely therefore increase average costs to some extent given that areas that are currently unserved would be high-cost areas. However whether this cost increase would be significant is an empirical question. The WIK model commissioned by the ACCC provides some insight into this in the Australian context: WIK's model shows that increasing coverage from 92% to 96% for an operator that has a 25% market share increases termination costs by 0.3 cpm (AUD).

⁹¹ Refer para 3.17 above.

⁹² See also para 4.2(b) of General Comments.

Coverage expansion also provides benefits in terms of enhanced brand and marketing value and these benefits need to be offset against any increase in unit costs. Indeed, if the coverage expansion is voluntary, rather than forced, then the firm must believe the benefits exceed the costs. Otherwise, it would not have engaged in the coverage-expanding investment in the first place.

(b) Can the decrease in fixed-to-mobile retail rates from 2004 to 2008 be explained by a pass through from lower wholesale termination rates? Are there any other potential explanations for this decrease?

NZ Comms believes that the answer is “Yes” but it is (or will be) a mobile telephone provider only so is not best placed to offer further explanation at this stage.

(c) What are possible explanations for price differentials between business and residential customers?

The answer may be the underlying difference in cost (eg differences in customer acquisition cost). But the differences in the extent of competition and customers’ responsiveness to price (ie different price elasticities) would have an impact, as would different levels of bargaining power.

These differences in responsiveness would include the variation in the market elasticity of demand as well as the firm’s own price elasticity of demand (ie which reflects the extent of competition for the customer segment).

(d) What is the average duration of a phone call to mobile customers?

At this stage NZ Comms is naturally unable to comment definitively, but believes the average call duration of fixed to mobile calls to be in the region of 88 seconds around 40% of which are under one minute in duration, with an average duration of 24 seconds. But there will be distortions due to the high cost of calling in New Zealand which is likely to result in “text and call back” and “call and call back practices” for those on different networks and price plans.

(e) Are current wholesale voice termination rates for fixed-to-mobile services different to tariffs for mobile-to-mobile? If so, please explain the mechanism applied the current tariff and why tariffs are different?

This is a question for the incumbents to respond to.

(f) Do you agree with the Commission's approach to benchmarking termination rates against cost-based rates set in other jurisdictions? If not please explain why and what the appropriate mechanism should be.

Introduction and the Australian Approach

NZ Comms has reservations about benchmarking as outlined in section 5 above. Whether an international benchmarking approach to cost-based rates is correct depends on whether one agrees with the methodology underlying those rates both in terms of the methods used to calculate costs and the method used to translate those costs into termination rates.

In Australia, the methodology used by WIK, the ACCC’s consultants was to first cost the Capex associated with the mobile network (Radio network equipment, Aggregation network equipment, Backhaul network equipment, Core network transmission and switching equipment, and Central network systems), calculate Opex as a percentage mark-up on Capex, and then apply a mark-up to provide a contribution to business overheads. However the WIK model results were not

directly used by the ACCC to set termination charges. Rather the ACCC took account of other considerations, including international benchmarking, which led to a rate that is significantly above the WIK cost estimates. The WIK cost estimates included common costs whereas LRIC should not. We understand that this is a common type of approach adopted so far.

Issues raised by benchmarking

The Australian example raises some difficulties that the Commission may face in international benchmarking: (1) that even in countries where termination charges are cost-based, other factors may have been incorporated in the regulator's pricing assessment; and (2) there is a degree of circularity involved in benchmarking prices that themselves have been set using international benchmarks.

A further significant issue with the international benchmarking is that it is backward looking and does not capture current changes in regulatory thinking. However, the methodology used to calculate termination charges is a matter where debate has reopened, particularly in the EU. The European Commission has proposed that termination charges be calculated using a definition of incremental cost which includes only those costs that arise as a result of carrying terminating traffic. This view, if implemented, would lead to very large reductions in mobile termination charges – potentially close to zero.

Appropriate mechanisms

Given the above considerations, international benchmarking would not seem to be the most appropriate method to set termination charges. BAK would be a superior alternative. This approach would have a lower regulatory cost as it requires no modelling or benchmarking to be undertaken and would not suffer from the substantial time delays associated with establishing cost models. The latter point means that the very real consumer benefits that will result from the effective entry of a third mobile network will be more quickly realised under BAK than under a cost-based principle.

An alternate approach, and which may still lead to very significant reductions in the termination charge eg to 1-2 cpm (NZD), would be to include only traffic-sensitive costs. This would be consistent with the methodology applied to determine fixed network termination where costs that are not traffic sensitive are recovered through the retail monthly rental charge.

The use of glide paths has been commonplace in regulation of mobile termination charges. It would seem more appropriate for the Commission to take the end of the glide path as its reference point for international comparison (rather than some point along the glide path) as it is the end point that is representative of the estimated cost.

Comments on the New Zealand approach to date and other international approaches

The need to take a forward looking approach to benchmarking can be seen when looking at the Commission's benchmarking exercise used during the Schedule 3 investigation into roaming services in March 2008 (which identifies a median figure of 10.76 cpm (NZD)):

1. The benchmarks are out of date: The benchmarks were calculated in 2007 and mobile termination rates across many of the territories analysed have already dropped considerably; the average reduction in mobile termination rates across Europe between January 2007 and May 2008 was 20.3%. NZ Comms considers it highly unlikely that a similar benchmarking exercise conducted today would result in such a high rate.
2. Rates are dropping: Following on from the above, the MTRs in a number of the countries used have reduced since the benchmarking study was performed and if the benchmarking was repeated today it would yield a lower rate. As noted it is expected that termination prices will drop further in a relatively short space of time. The EU

Commissioner has recognised that mobile termination rates have created “real distortions” in the EU and wants to see a decrease in termination rates to between 1 and 2 cents (Euro) by 2012. NZ Comms believe that the general consensus is that true LRIC prices is in the order of 1.5-3 cpm (NZD) for voice and less than 0.05 per SMS (NZD).

3. The benchmarks are not forward looking:

- Glide paths: NZ Comms believe that if benchmarking was deemed appropriate then it must consider that the benchmark should be “where they will end up” not “where they are now”. The key reason for this is that “where they will end up” is the best approximation of LRIC+ for that jurisdiction. Glide path rates are transitory and not cost based. It is therefore inappropriate to use them for estimating cost based prices.
- Current regulatory indications: The benchmarks do not consider statements of intent by the national regulators in those countries. This is particularly important where national regulators have recognised that they have made historical mistakes in calculating LRIC and they are actively taking steps to remedy this matter.

4. Per second: The benchmarking exercise was based on jurisdictions where per second billing is the norm and cannot be compared to the unique situation in New Zealand where first minute rounding is the norm.

5. The jurisdictions chosen do not set true LRIC prices. A common mistake made by regulatory authorities is that they have used fully allocated cost models (including common costs). Therefore, what has been referred to as “LRIC” models, haven’t in fact been LRIC but rather LRIC+. The effect of this error has been to overstate LRIC by an order of magnitude. This has been recognised by a number of regulatory authorities and they are taking steps to remedy it.

(g) Do you agree with the principal described that tariffs for services with bottleneck characteristics should be set at efficient underlying long-run costs? If not, on what basis should access tariffs to those bottlenecks be set?

This issue is fully discussed in section 5 of the General Comments. As noted in paragraph 5.40, in summary:

- (a) operating a BAK basis would avoid billing, regulatory and compliance costs, and more importantly reduce the tools available to the duopolists to prevent entry and maintain duopoly rents;
- (b) the second best option would be pricing below marginal cost to avoid double mark-ups and reflect the benefit to the called party and their network;
- (c) failing that, the option would be pricing on a LRIC which, following the EU, would include only the avoidable costs attributable to termination traffic;
- (d) the Commission's estimates of median benchmark LRIC MTRs are far too high at 10.76 cpm (NZD). Most estimates of true LRIC/MC (ie without common costs) give estimates below 2.5 cpm (NZD);
- (e) further, given the asymmetric barriers to entry faced by new entrants, there is good precedent for MC or LRIC pricing to be asymmetric with a glide path.

(h) On what principle do you bill termination rates for data and for voice services (e.g. per minute, per second, per unit, etc)?

It is important to note that wholesale termination fees in NZ are currently charged on a *first minute* then per second basis. As noted in paragraph 5.9 of the General Comments this is unprecedented in wholesale markets and creates significant distortions when comparing New Zealand prices with international benchmarks.

NZ Comms estimates that incumbents charging structures provide an artificial inflation of at least 50% above the headline rate as up to 70% a significant number of calls are of less than one minute duration – in part due to the high per minute cost and in part as the result from calls that go through to voicemail and are subsequently terminated. In this construct no-one benefits from the call except for the wholesale provider who extracts a high rent from their charging methodology. When the effect of the minimum one minute charge is taken into account, the 16 cpm (NZD) rate proposed by Vodafone New Zealand is likely to be closer to 25 cpm (NZD) compared to the Commission's international (per second) benchmark median of 10.76 cpm (NZD).

6. Welfare Analysis

Question 6.1

(a) To what extent are price reductions in the wholesale market for termination likely to be passed through to retail markets?

Pass through will not on its own be determinative of the price reductions that would occur with MTM termination regulation. The question is not whether a regulated duopoly will pass through reduced wholesale termination costs to end users, but that significantly reduced termination costs will facilitate new entry and increased competition. It is increased competition which will result in lower prices, as opposed to any pass through obligation.

Therefore, the extent of any reduction retail mobile prices will depend on the type of regulatory intervention. If regulation of MTM termination charges were to lead to only a small termination charge reduction which had little or no impact on entry decisions then pass-through would be less than what would occur if regulation led to significant MTM termination charge reductions that did result in efficient competitive entry.

However, a substantial reduction in the MTM termination charge will encourage entry, and that entry (eg NZ Comms) would intensify competition in the retail mobile market leading to better outcomes to all mobile consumers, including price reductions. Please refer to the accompanying Concept Economics Report for a discussion of likely mobile price reductions.

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The likelihood of price reductions following new entry was also acknowledged by the Commission in the PSTN Determination, as discussed at paragraph 6.17 of the General Comments.

(b) Would a difference in price reduction pass-through be expected between different customer groups (e.g. business or residential customers)?

Pass-through is fundamentally linked to the competitiveness of a given market. Differences in pass-through levels could occur as a result of differences in the intensity of competition between the business and residential customer segments. As described above, pass-through is not on its own the key issue when consider the impact of MTM regulation on mobile pricing. Rather,

the effect on entry will also determine price reductions. As discussed in the accompanying Concept Economics Report, without regulation entry by NZ Comms would be limited to certain niches, whereas with regulation a much broader group of markets will be contestable and will therefore benefit from stronger price competition.

(c) How long is any pass-through likely to take?

A degree of pass-through of MTM reductions by existing players will occur very quickly. The additional effects of increased competition that result from entry becoming viable with MTM regulation may not be immediate, as entry is not instantaneous.

(d) Are there other actions that could be taken to encourage reductions in mobile termination rates to be passed through to end-users?

Other exclusionary conduct by incumbents will need to be monitored (and potentially regulated).

As noted in paragraph 5.40 retail regulation may be required (consistent with the Commission's approach in the PSTN Determination).

(e) What are the potential effects on other markets such as the fixed termination market, SMS termination and data traffic?

The fixed termination market would not be significantly affected.

Regulation of voice termination may have some impact on SMS termination, particularly if reductions were large. SMS termination has different costs (but the same LRIC pricing principles should apply).

SMS needs to be regulated simultaneously to voice. Please refer to the commentary on text/SMS termination costs in section 7 of the General Comments section.

Question 6.2

(a) To what extent are commercial negotiations being undertaken for mobile termination services?

It is not possible to enter the market without interconnection agreements. Commercial negotiations are therefore ongoing in order to progress NZ Comms towards launch. It is not expected that any termination rates agreed in a commercial agreement will reflect cost, and to that extent NZ Comms considers any commercial agreement to be only an interim measure. The relative bargaining positions of the parties clearly dictates likely outcomes as the history of commercial negotiations in this sector shows. **[CONFIDENTIAL]** []

(b) What is the likelihood of commercial agreements being reached for mobile termination services, and the likely outcome of commercial negotiations?

The correct question is the likelihood of viable commercial deals that address the underlying problems. That seems highly unlikely given that new entrants have little negotiating capability and incumbents have no incentives to engage. Agreements entered in these circumstances have a negative impact for the consumer as the full impact of a new entrant initiative is quarantined by the incumbents.

NZ Comms believe that the Commission must conduct a full inquiry, recommend Designation and make a Determination. This is essential to meet the requirements of section 18 of the Act.

(c) What is the most appropriate counterfactual for the services?

Please see the Concept Economics Report.

Question 6.3

(a) What is the likely factual? How would the service(s) compare to the services available under the counterfactual (in particular, in terms of pricing)?

Please see the Concept Economics Report.

(b) How would the introduction of new specified or designated services lead to long-term benefits for end-users, which would not otherwise have been forthcoming? What empirical evidence is available to support such scenarios?

Please see the Concept Economics Report.

(c) What is the interrelationship between the voice and SMS services? How does the price of one service affect the other?

Voice and SMS are substitutable to at least some extent. This is supported by a recent study based on US data which looked at the cross-price elasticity between SMS and voice and concluded that the two types of services are substitutes. The study found that price changes of SMS have a larger effect on voice calling than voice price changes have on SMS. The study also found the extent of substitutability differed across customer types (eg, by age group).

The substitutability of SMS and voice is borne out by NZ market outcomes where text usage is very high compared to voice usage because voice costs are high (and voice usage is low).

(d) To what extent would the introduction of new specified or designated services make new entry more viable?

Please see the Concept Economics Report.