

**NZ COMMUNICATIONS LIMITED**

**COMMENT ON VODAFONE UNDERTAKING  
ON ROAMING AND CO-LOCATION**

**18 September 2007**

**FINAL**

## Introduction

1. We are grateful for this opportunity to provide comment on the Vodafone Draft Undertaking.<sup>1</sup> The Draft Undertaking has been substantially advanced in terms of both its level of detail and its incorporation of commercial terms from the initial rough cut first submitted in January. However, the Draft Undertaking continues to remain critically short in terms of pricing detail and in reflecting reasonable commercial terms, and therefore is not ripe for serious consideration by a rational facilities-based competitor.
2. While we recognize and support the Commission's interest in promoting industry-led solutions, we remain unconvinced that the new Undertaking process, on its own<sup>2</sup>, will help to promote competition or commercial resolution of the access issues currently under consideration in the Commission's Schedule 3 Investigation into the regulation of co-location and roaming.
3. The Undertaking process grants Vodafone – an operator with substantial market power – undue leverage in the resolution of the complex and hotly-debated issues now before the Commission. The Undertaking is a process in which the Commission and the SMP discuss a substitute for regulation, during which other interested parties are granted only a limited window to review and comment on the proposed regulatory substitute. The absence of co-operation in the review-and-comment process further undermines efforts to reach a resolution of these issues.
4. The Undertaking process is inefficient, and a source of substantial delay. It involves a great deal of duplicative work, including submissions to the Commission from Vodafone, notice letters and public comment periods, re-submissions (apparently an infinite number of them) from Vodafone to amend or modify its previous submissions, etc. This process has been the birthplace of too many gaming tactics and delays, and only serves to upset the Commission's efforts to create facilities-based competition.
5. In addition, we are especially worried with the burdens this Undertaking process is putting on the Commission's resources, and its delay of the Commission's conclusion of its Schedule 3 Investigation. The end result is extensive delay.
6. Despite these misgivings, we are happy to participate in this process if doing so will further an equitable resolution of the key issues raised in the Commission's October Report.<sup>3</sup>

## Executive Summary

7. NZC's view is governed by its desire to commence facilities-based competition. In order to do so, NZC believes that the undertaking must have the indicia of a competitive, commercially reasonable offer. Those indicia can be summarised by the following principles:
  - Cost-based pricing;
  - Promotion of economic efficiency for both the access seeker and the access provider;
  - Provision, with respect to roaming, of seamless hand-over, efficient routing, and access to 3G, data, and SMS services at cost-based rates;
  - No constraints on otherwise lawful retail conduct and retail competition;
  - Furtherance of facilities-based entry in order to promote competition at both the wholesale and end-user levels.
8. For a more detailed overview of NZC's rationale, we refer the Commission to our Schedule 3 submissions.

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<sup>1</sup> Vodafone New Zealand Limited *Telecommunication Act 2001: Undertaking to the Commerce Commission under Schedule 3A in respect of national roaming co-location services*, 31 August 2007 ("Amended Undertaking").

<sup>2</sup> That is, without continued pursuit of a regulatory solution.

<sup>3</sup> Commerce Commission *A Review of Cellular Mobile Market Entry Issues*, 2 October 2006 (the "**October Report**").

9. As NZC has expressed in our previous submissions on the ongoing investigation into the regulation of roaming and co-location, we do not feel that the Undertaking offers sufficiently competitive terms for NZC to commence facilities-based competition. NZC's main concerns with the Undertaking can be summarised as follows:
- Price. The proposed level of pricing is well above cost and would seriously constrain NZCs ability to compete at a retail level.
    - For roaming, GDA is an inappropriate pricing principle.
    - For co-location, pricing must be rationally related to market rents, and pro-rated based on *actual* use.
  - Key non-price terms of the Draft Undertaking remain anti-competitive. These non-price terms need to be brought in line with international commercial norms. Key issues include
    - Constraints on retail and end-user marketing and services;
    - Constraints on wholesale relationships;
    - Uncertainty regarding the term length;
    - Excessive security requirements and access fees.
  - Level of detail. Key technical and commercial detail is missing from the proposal. Specific implementation timeframes and commitments are essential to ensuring an executed deed binding an access seeker to an undertaking is not subjected to endless delay.
10. While these terms are still short of a commercially reasonable offer, facially, at least, they are a marked improvement over historical offers. We therefore look forward to further consultation as this undertaking is developed in conjunction with the Commission's Schedule 3 investigation.

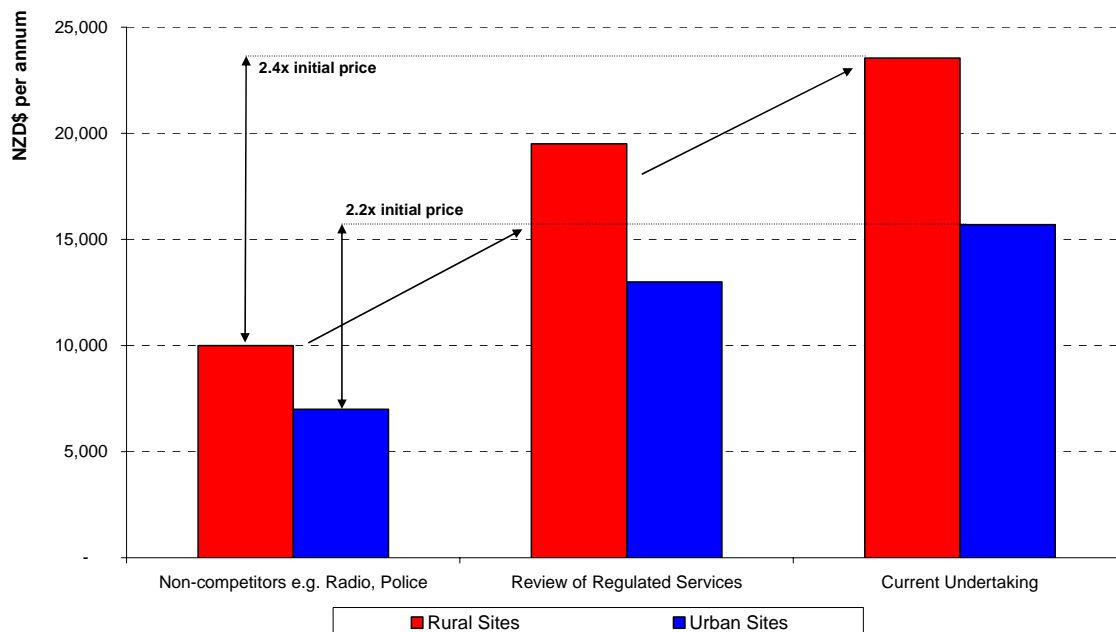
### Co-location

11. Vodafone proposes in its Draft Undertaking to offer co-location services under the terms of the Co-location Code,<sup>4</sup> or such other terms as the parties may agree, pursuant to rates set forth in the Draft Undertaking.
12. Vodafone's undertaking with respect to co-location requires the following modifications to be considered a reasonable substitute for regulation:
- The price of co-location must be commercially competitive and equivalent to reasonable market prices;
  - The terms and conditions of the Co-location Code need to be brought in line with reasonable commercial agreements;
  - Vodafone needs to agree to minimize antenna head-frame space in order to accommodate co-located antennas;
  - Vodafone needs to agree to specific co-location commitments to ensure that co-location will not be buried beneath post-execution delays and unreasonable technical testing or implementation requirements.
13. **Price.** We can agree in principle to consider either of the two pricing options contained in the Draft Undertaking, though we would need to see substantial reductions in pricing prior to accepting these terms and conditions. Vodafone's pricing proposals have increased substantially over the course of these regulatory proceedings (see chart, below), and it is essential that pricing return to commercially reasonable norms.

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<sup>4</sup> Co-location of Radiocommunications Services Regulated under the Telecommunications Act 2001, proposed by the Telecommunications Carriers Forum and approved by the Commission on 7 December 2006, throughout either the "**Co-location Code**" or simply the "**Code**".

### Vodafone's "Standard" Co-location Pricing



14. Pro Rata Share. The Commission has requested that the price of co-location be based on the access seeker's *pro rata* share of use of the access provider's mast. Vodafone has responded by proposing that any antenna capable of providing both 2G and 3G services be counted as two antennas. This proposal is inconsistent with efficient use of existing infrastructure and equipment, has no relationship to the actual burden of the co-location on the access provider's mast, and is inconsistent with the Commission's request.
15. The Draft Undertaking must therefore be modified to calculate an access seeker's *pro rata* share by the *actual* antenna space use. For example, if the access seeker were to install three antennas on a mast supporting 9 access provider antennas, we would expect the access seekers pro-rata share of costs to be 25% of the total.
16. Capital Contribution Calculation. The capital contribution formula must address those situations where ground space will not be provided by the access provider (that is, where the access seeker will need to lease separate ground space from the land owner). In order to properly allocate the costs, we believe that 50% of the costs should be considered "ground space" costs, and 50% "tower space" costs. The capital contribution formula should be modified as follows:

$$\text{Capital Contribution} = 50\% * C \left( \frac{k}{k + j + v} \right) + 50\% * C \left( \frac{k}{k + j + v} \right)$$

Ground Space
Tower Space

"C" should be defined as the Modern Equivalent Value.

"k", "j", "v" should be defined as actual antenna numbers. The antenna count should not be doubled (or tripled) for using, e.g., dual- or tri-band antennas.

17. The operating cost calculation should similarly be apportioned between ground and tower space using the above formula.
18. A question that requires clarification is what the consequences of this cost contribution are to the access seeker. Is the access seeker receiving a shared ownership interest in the tower? Will their rights as a shared owner permit the access seeker to have some say in the further allocation of tower space? Will the access seeker receive rights equal to those of the access

provider with respect to future use of the tower and ground space? These issues will need to be resolved.

19. Monthly Rental Calculation. As noted above, this calculation must be *pro rated* based on the actual use of antenna space. In addition, several changes need to be made to the definitions in the formula used for calculating the monthly rental price:

- “**r**”: Vodafone proposes a pre-tax WACC rate of 15.7%. However, this rate is non-binding, and Vodafone reserves the right to change this rate at any time. The pre-tax WACC rate should be set at a fixed 10.2%, a more appropriate reflection of the risk involved in providing the co-location services. (NZC has recently agreed to the 10.2% rate in its co-location agreement with Woosh.)
- “**n**”: Under Vodafone’s proposal, most sites will have an “n” equivalent to the remaining life of the lease. This definition effectively allows Vodafone to fully recover the capital costs within the remaining lease term, whether it be 1 year or 20. In addition, at the expiration of the lease term, Vodafone can re-calculate the new capital charge to recover the lease costs again (assuming, as is typically the case, that Vodafone does not have to take down its tower because it has obtained a renewal from the land owner). NZC has previously agreed to a value of 20 years, though this is still a fairly short term for a typical cell-site lifetime (NZC estimate that the weighted average life of a cell site’s components is 50-years).
- “**C**” should be defined as the Modern Equivalent Value.

20. NZC recommend the following modifications to the proposed pricing formula for calculating monthly rentals:

$$\text{Annual Capital Contribution} = R \times \left[ \frac{0.5C A_A}{A_T} + \frac{0.5C M_A}{M_T} \right]$$

Where:

R = Annualisation factor

C = Agreed Modern Equivalent Value of the site

A<sub>A</sub> = Number of Access Seeker antenna on site

A<sub>T</sub> = Total number of antenna on site (incl. Access Seekers)

M<sub>A</sub> = SQM Area utilised by Access Seeker

M<sub>T</sub> = Total SQM Area utilised at site (incl. Access Seeker)

21. The Annualisation Factor should be calculated as follows:

$$\text{Annualisation factor} = [(1+r)/(1+a)]^u * ((1+a)^{(t-1)}) * (r-a) / (1 - [(1+a)/(1+r)]^n)$$

Where:

a = annual change in price of asset 0%

r = pretax WACC 10.2%

u = time to build (years) 0

n = economic life of the assets (years) 20

t = year for which calculation made 1

22. Finally, the operating cost contribution should be based on the following formula:

$$\text{OPEX Contribution} = \frac{0.5O A_A}{A_T} + \frac{0.5O M_A}{M_T}$$

Where:

O = Actual Operating Costs

23. **Co-location Code Modifications.** Vodafone has stated that its co-location offer will be pursuant to the TCF code approved and adopted by the Commission. NZC has previously noted its concerns with the Master Co-location Agreement; these are discussed in more detail in our cross-submission on the Draft Report.
24. **Space Optimization.** Co-location is only possible where there is space on the mast structure to accommodate the access seeker's antennas. There is an incentive in a regulated regime for the access provider to inefficiently use antenna space on its masts in order to prevent co-location (or, failing that, to place an additional financial burden on the access seeker by shifting the costs of deploying new access provider antenna equipment, or resorting to a tower extension or tower replacement).
25. Cross-polarization diversity antennas (CPDA) are now widely available and are inexpensive, at circa USD \$1,000. An existing mast owner can easily free up mast space for an access seeker's equipment for less than \$10,000. In return, co-location (at the annual rent received from co-location) will pay for such modifications within a year, and may even allow a mast to accommodate a third carrier.
26. Space optimization through the strategic use of existing, inexpensive technology is an efficient use of masthead space and infrastructure investment capital. A failure to make use of available antenna reduction options is only readily explained by an interest in preventing new entrants from completing their network build.
27. We consider that an approved undertaking must include a commitment to optimize antenna space where necessary to accommodate a request for co-location.
28. **Implementation Commitments.** As we have learned in our experience with Telecom, execution of an agreement under the Code will not in and of itself ensure that co-location will be made available.
29. Therefore, we would only find that an Undertaking, acting as it does as a substitute for regulation, would be acceptable only if it included express, explicit timeframes and commitments to ensure that co-location is provided promptly, without unnecessary complication or delay. We think at a minimum that an Undertaking must commit to:
  - Concluding and executing at least 10 individual site agreements within 30 days of an access seeker submitting a binding deed and a list of site candidates.
  - Execution of at least 90% of co-location requests within 30 days of receipt of individual site applications.
  - Approval of all resource consent or building permit applications, as deemed reasonably necessary by the access seeker, within 10 days of submission.
  - Commencement of construction on at least 90% of executed co-location agreements within the later of (i) 30 days of execution, or (ii) 5 days receipt of a resource consent or any other necessary governmental permit or approval.

## Roaming

30. Vodafone's Draft Undertaking still remains critically short in a number of areas, including:
  - Price;
  - Marketing and sales;
  - Set-up costs;
  - Efficient implementation of routing;
  - Key technical implementation terms and timeframes.
31. We address each of these below. In addition, we have attached as Annexure 2 a black-lined mark-up of a more commercially reasonable Vodafone Undertaking. (As noted in paragraph 40, the black-lined undertaking is not comprehensive, and should therefore not be interpreted as a thorough and complete review and comment.)

32. **Price.** While the Commission has not yet rendered its conclusions on the pricing of roaming services, the Commission has suggested that the price of roaming should be cost-based. We agree. Vodafone's response is to actually raise the rates at which roaming will be made available under the guise of geographic de-averaging ("**GDA**"), which sets a price floor at a rate similar to that of the mobile termination rate. The effective rate, however, will always be above that rate.<sup>5</sup>
33. As a Mobile Network Operator intent on a combined national roll-out of GSM/3G infrastructure we would see national roaming as providing additional coverage for us, and incremental revenue for the roaming supplier. The roaming rate a new entrant pays directly affects the level of price-competition in the market for end-user services. Reasons for this include:
- For marketing reasons, a new entrant will want to offer the same rate to customers regardless of whether they're roaming on the access provider's network. (This has been the experience of most new entrant's in overseas markets.)
  - Especially during the early years of network deployment, a substantial proportion of the new entrant's traffic will be roaming on the access provider's network.
  - The new entrant faces substantial financial risk if it is forced to sell certain types of call below its out-of-pocket cost. (This was a contributing factor in the collapse of OneTel in Australia: OneTel was forced to offer roaming rates substantially below their out-of-pocket costs in order to compete on a pricing basis with the incumbents.)
34. The wholesale price at which the roaming service is made available should not impair our ability to compete at the retail level. We would therefore expect pricing to be more reflective of international benchmarks. (A discussion of the threats of a "price squeeze" are discussed in Annexure 3.)
35. The proposed prices are far above reasonable commercial rates, and we have already submitted benchmark pricing in our submission on the Draft Undertaking. We therefore do not think it would be helpful to counter-propose any alternate pricing at this time. We would note, however, that, compared with existing service plans, the mark-ups on these services are usurious: for example, SMS messaging<sup>6</sup> is now widely available for 1,000 messages for \$10 (and even better plans are available), meaning that the retail price of SMS messaging is 1 cent. Meanwhile, Vodafone argues in support of wholesale roaming messaging of a *headline* rate of 6.1 cents per leg (or over 12 cents on a roamer-to-roamer text). This is unrealistic, and doesn't even come close to representing a retail-minus approach,<sup>7</sup> let alone a commercially competitive cost-based approach.
36. We would also suggest that price should be linked directly to network roll-out and the implementation of exclusion zones. Initial base rates can be agreed and we would suggest that these should be discounted from the implementation date based on roll-out forecasts. Further discounts should apply in accordance with an agreed schedule as roll-out is achieved and exclusion zones are implemented.
37. With respect to Vodafone's proposal to consider geographic de-averaged pricing, our view is that wholesale revenue in rural areas is incremental to the provider (as the provider has sunk costs and spare capacity). As Vodafone has previously noted,<sup>8</sup> in rural areas it may be appropriate to avoid duplicating unnecessary infrastructure.<sup>8</sup> We therefore interpret

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<sup>5</sup> A more substantive criticism of Vodafone's GDA approach is attached as Annexure I.

<sup>6</sup> We here must emphasise the importance of setting both appropriate voice rates as well as appropriate SMS and data rates. Given the predominance of text messaging in New Zealand, the SMS roaming rate is very important to any new entrant. Indeed, historically there appears to be a history of imbalance between on-net and off-net pricing for SMS in New Zealand, driven by excessive SMS termination rates. It is actually cheaper for an operator to send an SMS to another operator in New Zealand via Hong Kong than directly.

<sup>7</sup> Vodafone tentatively supports a retail-minus approach. See the Supporting Submission, para. 39. While sub-optimal for promoting competitive new entry, as we more thoroughly address in our Schedule 3 submission, we would note that the Undertaking does not even appear to reflect a retail-minus approach; it's more of a retail-plus-plus.

<sup>8</sup> Supporting Submission, para. 35.

Vodafone's suggestion to be that it foresees offering additional discounts in rural and other low-capacity usage areas where Vodafone would prefer to share infrastructure rather than duplicate build. We would be willing to consider such a suggestion at the appropriate time. We look forward to seeing the scope of any discount Vodafone is likely to provide for rural coverage in its next update to the Draft Undertaking.

38. We also welcome Vodafone's proposal that we consider facilities-sharing in places where it would not be efficient for either party to replicate full network infrastructure.<sup>9</sup> (We would note, however, that this proposal seems inconsistent with Schedule 3, para. 5.5 of the Draft Undertaking, which allows Vodafone to terminate the service if there is a reduction in traffic volume. Such a reduction would be likely over the long term as the Access Seeker's network matures.)
39. As a final note, we feel all pricing should be on a per-second basis rather than one minute and one second basis, as this is more consistent with international norms. We would also have a principal where the first 7 seconds of any call are not billed from call set up. We also believe that there is room and reason for improvement on the issue of leg-based billing.
40. **Terms and Conditions of the Undertaking.** Following is a summary of our primary concerns with the terms of the roaming service proposed in the Draft Undertaking. Please note that this list is fairly comprehensive, but is not exhaustive, there being too little time to provide a very thorough and complete breakdown of the terms of the Draft Undertaking. In particular, we have not, at present, provided any comments with respect to the more technical documents comprising Schedule 4.
41. Co-location Reciprocity (Para. 1.1(b)(ii)). NZC will be deploying mast structures that will be capable of supporting co-location, and installing CDPA antennas in order to maximize the available co-location space. Vodafone has undertaken no such commitment. We think that this Undertaking is an inappropriate place for Vodafone to be dictating terms at which third parties will be supplying co-location services to Vodafone.
42. Term (Para. 2.1). A five year term, particularly one that commences upon registration of the Undertaking rather than the commencement of provision of the roaming services to the access seeker, does not provide sufficient time for a new market entrant to complete a roll-out of a nationwide network. While we recognize that Vodafone may eventually wish to decommission its GSM network, such concerns can be best addressed by ensuring that 3G roaming is made available, and providing sufficient time for the access seeker to transition and prepare its services. We would think that an initial 5 year term, commencing upon Vodafone's acceptance of a Deed signed by an Access Seeker, with automatic annual renewal thereafter would be more appropriate.
43. Pricing of Roaming Services (Para. 3.2). We have previously noted our concerns with price, and our expectations regarding pricing. However, with respect to the Draft Undertaking solely as a potential legal document, we would not that an Access Seeker will not know the price at which services are offered until *after* they have been bound to the Undertaking. In addition, the price provided is not subject to any kind of review or verification process. Such discretion defeats the very purpose of the Undertaking process, and the certainty necessary for subscribing to a commercial agreement for the provision of essential services.
44. Permitted Roaming Services (clauses (d) through (p), ,Sch. 1). These restrictions are overly broad. While we agree that Vodafone need not provide any of their proprietary services to NZC end-users, NZC must still be able to provide similar services (whether from NZC or from a third-party VAS supplier) to NZC end-users roaming on the Vodafone network.
45. Price (Sch. 2). Price is discussed above. We have not inserted our differences in pricing in the attached Undertaking, other that to delete the sections with which we disagree in their entirety.
46. Duration (1.1, Sch. 3). The means of determining the duration of calls should be clear, not subject to changing internal policies of Vodafone (such as per minute rounding).

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<sup>9</sup> Id.

47. Excluded Operator (1.1 and 13, Sch. 3). Inconsistent with the preliminary conclusions of the Commission.
48. Reasonable and Actual Costs (1.1, Sch. 3). Only direct (out-of-pocket) costs should be included.
49. Conditions (2.1, Sch. 3). Deleted the access obligation to keep in line with the Commission's preliminary conclusions.
50. 3G Services (3.3, Sch. 3). Brings the Undertaking in line with the Commission's preliminary conclusions.
51. Consent (3.7, Sch. 3). If any consents are required for Vodafone to provide the roaming service (which would be highly unusual), Vodafone must identify those consents expressly in the agreement.
52. Emergency Calls (3.10, Sch. 3). It is international practice that emergency calls be permitted regardless of whether there is a roaming agreement in place. It would be repugnant for an entity to seek additional reimbursement for providing such emergency services.
53. TCA Principles (4.3(e), Sch. 3). The TCA principles are intended as general rules of guidance for the determination process. This is not a determination. If there are any issues that fall within these broad categories, Vodafone must address them specifically, discretely, and consistent with the broad objectives of the Act. Their inclusion here is merely a broad mechanism that can be used to attempt to escape from express legal obligations and commitments, and is completely inappropriate in the context of an Undertaking.
54. Price Review (8, Sch. 3). Defeats the purpose of a regulated rate if there's a negotiation every year. We accept, in principle, the idea of a ratchet clause (that is, rates can only go down each year), but the access seeker must be able to submit to dispute resolution.
55. Access Fee (9.1, Sch. 3). Deleted per the preliminary conclusions of the Commission.
56. Marketing (Para. 12, Sch. 3). We concur that the Vodafone brands are sacrosanct, and make no claim to the use of those brand names purely by executing this roaming agreement. However, Vodafone's means of protecting those brands is overly broad, and may be used to attempt to restrict standard competitive advertising, in which differentiation between brand identities and services is an important component. As proposed, Vodafone could claim a breach of this agreement, seek remedies and a 6 month suspension (or threaten a 6 month suspension and payments or other concessions) if it disagrees, reasonably or otherwise, with NZC's mention of the Vodafone name or brand in competitive advertising. Vodafone should rely only on existing law to protect its reputation and brand names, not expanded contractual protections that can be used as a sword rather than a shield.
57. Contract Terms (14.5, Sch. 3). It is inappropriate for Vodafone to dictate another party's end-user agreement terms.
58. Wholesale (15, Sch. 3). The changes are necessary to bring the agreement in line with the Commission's conclusions, and the objectives of §18 of the Act.
59. Numbering (16, Sch. 3). An access seeker's compliance with legal numbering obligations is its own. Vodafone should not interfere with market progression or the possibilities and benefits of fixed-to-mobile substitution.
60. Termination (21, Sch. 3). Investment is dependent on the ability of investors or subsequent purchasers to be able to step in and remedy a breach and default in order to continue operations of the network. Default in performance may be an excuse for suspending services, but is not good for investment if exercise of investment rights saves a company from a difficult financial situation.
61. Liability (22, Sch. 3). Liability and indemnity obligations should be commercially reasonable. They should not be on strict liability standards, nor allow a party to waive its contributing liability. Standard statutory timeframes for causes of action should be the sole barriers to liability. Neither party should be placed in a position of greater obligation or liability than the other party.

62. Arbitration (24, Sch. 3). NZC has an excellent and active arbitration act and process. We can think of no reason to arbitrate a dispute in Singapore, with arbiters lacking any familiarity with New Zealand law or the New Zealand regulatory environment, other than Vodafone's desire to escape a fair and public proceeding.

### **Conclusion**

63. We must reiterate our concerns with the delays caused by the undertaking process. This duplicate workstream, directly related to a comprehensive regulatory review, neither promotes more efficient resolution of competitive concerns with the mobile market, nor promotes commercial agreement in substitute for regulatory action. Instead, the undertaking process provides the incumbent SMP with yet another tool they can use to thwart or delay competition.
64. Telecom has also requested an opportunity to begin a third duplicate workstream in order to propose, negotiate, and conclude another undertaking. We are extremely reluctant to concede that such an opportunity should be permitted, and would protest any such efforts to delay the ongoing Schedule 3 investigation.
65. With respect to the specific terms contained in the Draft Undertaking, we must agree with the Commission's conclusion that the Draft Undertaking is not ripe for consideration or use as a counterfactual, as it is still marked by:
- A lack of certainty regarding the price of roaming services;
  - Excessively priced co-location services (at least 2-3 times the rationale commercial price of such services);
  - Restrictions on the access seeker's retail conduct and behaviour;
  - Restrictions on the access seeker's wholesale relationships;
  - A failure to fully promote the interests of *all* long-term end-users of communications services in New Zealand;
  - A direct rejection of certain minimum changes previously requested by the Commission in its draft report;
  - A failure to include any commitments to implementation timeframes and schedules.
66. For the foregoing reasons, we continue to support the Commission's original conclusion that the Draft Undertaking should be rejected.

## Annexure 1

### Comment Geographic De-Averaging

1. We know of no other case in which geographic de-averaging has been used with respect to mobile services. Vodafone's geographic de-averaging proposal:
  - is not cost-based;
  - does not promote network investment;
  - would be unduly burdensome to implement and monitor;
  - would be detrimental to end-users of communications services in New Zealand; and
  - is not supported by its historical uses.
2. The GDA price is not cost-based. Vodafone has previously claimed that GDA is cost-based. It is not cost-based. "Cost-based," as used in all previous Commission analyses, refers to the cost of providing the service.
3. GDA is normally determined in the fixed network situation by looking at the fixed network costs. However, Vodafone instead uses the ehrlang use of the fixed network, that is, the scope of use of network assets, not the fixed cost of those assets. Voice usage (minutes of use, measured in ehrlangs) varies depending on the price at which voice minutes are made available. The lower the price, the higher the use. For example, if Vodafone reduced price of voice by, say, 5 cpm, usage might double. That would mean that the GDA price would be reduced by 50% (as there's no increased Cost of adding those extra minutes). . In other words, GDA, as proposed by Vodafone, is a measure of *retail* prices, not *wholesale* costs.
4. The cost of GDA increases the more Vodafone charges for its voice traffic – that is, if Vodafone charges a non-competitive price to its customers, it can drive up the costs of providing roaming to an access seeker, and therefore force the access seeker to increase the cost of services to the access seeker's customers. High GDA prices mean the incumbent's network is being used inefficiently. Such network inefficiencies should not be forced upon new entrants.
5. GDA does not promote network build. According to Vodafone, the justification for the GDA pricing is to encourage new entrants to build infrastructure. If the price is kept to low, they argue, the new entrant will not build.<sup>10</sup> They are therefore simply stating that GDA pricing is based on the perceived *value* of roaming to the new entrant, not the *cost* to Vodafone.
6. Under GDA as proposed by Vodafone, costs actually go up as new entrant builds: in other words, it encourages new entrant to roam instead of build network infrastructure. This appears intended to drive new entrants to be re-sellers/MVNOs instead of an infrastructure competitor, thereby allowing Vodafone to capture network value, prevent wholesale competition, and seriously undermine retail competition.
7. GDA is difficult to calculate. GDA is not an expedient substitute to TSLRIC, as Vodafone and Covec contend. GDA is difficult to calculate – it took several months for Vodafone to come up with the initial calculations between its initial submission and its revised draft undertaking – and this price needs to be re-calculated:
  - whenever a new entrant adds an exclusion zone
  - whenever there is a substantive change in the traffic carried in any given LAC on the Vodafone network;
  - whenever Vodafone makes a substantial investment in infrastructure, or there is a substantial depreciation;

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<sup>10</sup> We discuss this concern more in our cross-submission, but reiterate here that NZC would build rather than roam so long as the price for voice roaming remained above 3 cents per minute.

- whenever Vodafone modifies its existing LACs.
8. We do not see why it would be more complicated to simply calculate a fixed TSLRIC price, to be reviewed from time-to-time in the event of any significant changes in the retail market in order to prevent a price squeeze.
  9. GDA does not allow efficient retail competition. GDA does not reflect the one-price-for-all nature of current mobile services. Vodafone, Telecom, and all other major carriers around the world charge fixed-rate pricing (whether that is in the form of bucket plans or fixed per-minute charges). GDA pricing would make it impossible for new entrants to charge a fixed rate to their end-users, as the roaming rate would constantly be in flux due to the lack of certainty as to the cost of adding additional exclusion zones, and a lack of pricing information.
  10. GDA would therefore make the billing of customers more difficult, and would make it difficult for retail end-users to have any certainty in the price of the services they receive while roaming. Such an arrangement is not commercially tenable.

**Annexure 2**

**Vodafone Undertaking – Blackline Copy**