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Friday, 31 August 2007

Osmond Borthwick
Director – Telecommunications Branch
Commerce Commission
PO Box 2351
WELLINGTON

Dear Osmond,

Revised Undertaking

1. Please find attached Vodafone's further revised Undertaking for National Roaming and Co-location. For convenience, I also attach a copy which shows all mark-ups to our earlier amended Undertaking (dated 22 May 2007).

2. To assist the Commission, we provide this commentary to explain revisions to the Undertaking and address comments/questions raised by the Commission in its Draft Report. I have included the relevant text of the Draft Report in boxes to provide the context for such commentary.

3. We also attach a summary table to this letter which identifies all issues the Commission has raised in relation to Vodafone's Undertaking and how Vodafone has sought to address these issues and the Commission's concerns.

Roaming on 3G networks

> 303. The Commission notes that Vodafone's main competitor in the mobile market is Telecom. Telecom currently uses a different technology to provide 3G services but will be deploying the same technology as Vodafone in late 2008. The Commission considers that Vodafone would continue to invest in 3G in order to compete effectively with Telecom, and that such incentives to invest and innovate will be increased to the extent that facilities-based competition is strengthened.
> …
> 306. In order to promote more effective competition in mobile services, new entrants must be able to offer similar services to the incumbents. Accordingly, the Commission considers that the Vodafone roaming services should be technology neutral and should not be restricted to '2G like' services.

4. We have covered in our submission our concerns about the regulation of 3G roaming. We repeat them in brief here:

   - The Commission's analysis of the impact of roaming regulation on investment is inadequate. The main purpose of regulating roaming is to change investment incentives. However, the Commission has dismissed any negative impacts without sufficient consideration.

   - The Commission has not demonstrated why regulation of 3G roaming is required in order to solve the market failure that motivates roaming regulation.

- Regulating new technologies and unbuilt networks runs enormous risks of unintended consequences. These risks are not worth taking when 3G roaming is a "nice to have", not a necessity for a new mobile entrant.

5. We fear that the Commission will continue to insist on regulating 3G roaming despite our serious concerns. We have therefore decided to make the Undertaking more generous.

    - We have amended the terms of the Undertaking from a four year to a three year period after which competitors would be entitled to access Vodafone's new technologies.

    - The net result of this is to allow competitors to gain access to Vodafone's 3G W-CDMA (excluding HSDPA) from August 2008, HSDPA from September 2009, and any other radio access network technologies, within the 3G W-CDMA family of technologies, three years after the date on which the radio access network technology is first offered commercially by Vodafone.

6. The Commission ought not to take this concession on our part as an admission that we approve of the regulation of 3G roaming. We believe the case for 3G roaming regulation is flawed and is both unnecessary and unduly risky.

7. The only reason we are prepared to offer these terms in the Undertaking is because of the risk that the Commission will decide to regulate 3G roaming in any event.

8. Vodafone encourages the Commission to accept a three year wait-period as a pragmatic means to ensure access seekers will have timely access to 3G and HSDPA, while at the same time ensuring Vodafone has some incentive to continue to invest in, launch and promote new technologies as part of its network for the benefit of customers.

9. We have also added new prices for 3G and HSDPA data services, as well as for video-calling services, so that access seekers have certainty on these prices when they become available from August 2008 and September 2009 respectively.

Undertaking Term

> 310. … The Commission is satisfied that Vodafone will continue to make the terms of the undertaking available to other access seekers if it terminates an access seeker's access where that access seeker is in breach of the terms of the undertaking. However, the Commission considers that the 24 month period stipulated by Vodafone before it could once again supply the services to an access seeker is too restrictive.

10. The intention behind the stand-down period in Vodafone's Undertaking is to remove an ability for access seekers to default on one contract, only to be able to then immediately establish a new entity and gain access to the roaming service under the Undertaking. The period clearly needs to be of sufficient duration so as to deter this type of behaviour.

11. We have reflected further on the Commission's concerns that a 24-month period may be too onerous, particularly where the breach may be for genuine business reasons rather than as a means to actively seek to avoid liabilities incurred. Vodafone has amended this period in its Undertaking down to a 6-month stand-down period.

12. To attempt to guard against the type of risk Vodafone was targeting in its original 24-month period, Vodafone has also supplemented the 6-month period with wording to the effect that where any breaches are outstanding and are remediable, then these breaches must be remedied before Vodafone is obliged to re-supply the roaming service. The stand down period, and the requirement to remedy breaches, applies to the access seeker, any member of the access seeker group of companies, and to any person that acquires all, or substantially all, of the assets of the defaulting access seeker.

Set-up costs

> 328. The set-up costs referred to by Vodafone appear to relate to establishing systems necessary to support the provision of roaming on its network. According to Vodafone, special features have not yet been deployed, although it appears that Vodafone has already incurred some costs in relation to its national roaming agreement with TelstraClear.
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> 332. In terms of cost minimisation, the Commission is concerned that Vodafone's proposal may not create sufficiently strong incentives for Vodafone to ensure that its system set-up costs are genuinely incremental costs and are efficiently incurred. The greater the proportion of these costs that are recovered from access seekers who will be competing with Vodafone in the retail mobile services market, the lesser incentive for Vodafone to minimise these costs. The principle of cost minimisation would therefore suggest that Vodafone should be faced with some contribution towards these costs.
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> 336 There may also be a number of practical issues associated with Vodafone's proposal to include a margin to the roaming rate to reflect its system set-up costs. These largely relate to the level of transparency of the underlying costs, and how such costs may be pro-rated in the event that additional entrants require roaming in the future. The Commission considers that such a proposal would likely lead to disputes between Vodafone and access seekers.
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> 337 At this stage, the Commission considers that requiring each party to bear their own system set-up costs would be most consistent with the above set of cost allocation principles. Accordingly, the Commission's preliminary view is that no margin should be added to the base roaming rate to recover these costs from the access seekers.

13. There are some important issues of which the Commission may not be fully aware in relation to the recovery of incremental set-up costs from access seekers.

- Vodafone has to date incurred no set-up costs in relation to the TelstraClear roaming agreements. The figure of $4.98m provided in our last submission was the contractual amount provided for as set-up costs in Vodafone's roaming agreement with TelstraClear.

- None of the set-up costs are costs that Vodafone would otherwise incur or in any way enhance Vodafone's services to our existing customers. They are genuinely incremental to Vodafone providing roaming services to the requesting access seekers. They are costs which have not previously been incurred by Vodafone.

- The suggestion by the Commission in the Draft Report that Vodafone may incur such set-up costs inefficiently is counter to reality. Many of the charges will be set by Vodafone's suppliers and are driven by the obligations on Vodafone to provide a service that is in compliance with the Technical Specifications. Furthermore, there is good evidence in the current planning for NZCL's service that Vodafone is prepared to work with them and our vendors to reduce their costs.

- Vodafone, as a global customer of many vendors, will actually be in a position to pass on the benefits from set-up costs below list prices. These benefits will be passed directly through to roaming operators since Vodafone has provided in its Undertaking that it will pass through such set-up costs without mark-up.

- Vodafone is undertaking to incur such set-up costs on a fully transparent basis, including provisions for an auditor's certificate of set-up costs if requested by an access seeker (see clause 17 of Schedule 2). Vodafone can not see how it can agree to be more transparent than this.

- Set-up costs common to all access seekers will be pro-rated between the number of access seekers utilising the service. This will be transparently calculated at the time of entry/exit for each access seeker, with other access seekers being provided with an updated apportioned cost amount. Of course, access seekers will also have available to them the right to have all such set-up costs verified by way of an auditor's certificate.

- Vodafone considers that its offer to allow access seekers to pay such set-up costs through a one cent per unit of roaming traffic increment is highly advantageous for access seekers. Most obviously, it permits access seekers to repay their portion of set-up costs in line with their revenues over time. Given the scale of access seekers' operations and the fact that the cost of money has not been factored into calculations, Vodafone will in reality be funding a share of the upfront costs.[1]

- The Commission's Draft Report does not appear to have regard to the inefficient incentives that would exist were access seekers not to be wholly responsible for set-up costs. Should the Commission maintain such a position, entrants will have incentives to ask for enhancements they do not want simply to generate costs that the access provider must meet. Vodafone doubts that it could have been the Commission's intention to create such value-destroying incentives and would encourage the Commission to ensure that incremental set-up costs lie with whoever causes the costs.

- Finally, Vodafone remains unsure about how the Commission would approach set-up costs under a TSLRIC final pricing principle. Under normal TSLRIC principles, set-up costs would be included in establishing an efficient level of pricing. Vodafone would therefore be entitled to recover such costs as part of an efficient price. Vodafone questions how the Commission can reconcile such a position with that contained in its Draft Report and which denies Vodafone the ability to recover any common or specific set-up costs from access seekers.

14. We have now amended the Undertaking to give even more comfort to access seekers on the setup costs.

- Under the revised Undertaking, Vodafone is obliged to only pass-on reasonable and actual costs incurred in set-up and development costs, and to first consult with the Access Seeker on ways to minimise such costs.

- We have provided additional wording around how common set-up costs would be shared amongst Access Seekers both now, and as Access Seekers in the future request the roaming service.

- We have also introduced a new cap on the total common set-up costs able to be pro-rated between access seekers (i.e. costs which do not change based on the number of Access Seekers, the identity of the Access Seeker or the number of Access Seeker End Customers). This cap is $2m for all initial common set-up and development costs and represents a significant reduction from the estimated $4.98m at the time Vodafone and TelstraClear agreed the first of the two national roaming agreements.

- The cap of $2m for all initial common set-up and development costs is separate from those set-up costs specific to an individual access seeker (e.g. the costs of the VLR capacity upgrade required for that access seeker). Such access seeker specific set-up costs will be invoiced at cost to the access seeker by Vodafone and must be paid prior to obtaining the service (see clause 11 of schedule 3). It is therefore only an access seeker's apportionment of the common set-up costs that will be recovered through a 1 cent per unit of roaming traffic basis.

[1] As we explained previously, given TelstraClear's forecasts for roaming traffic, it would have taken 311 years to repay the set-up costs with the one cent increment. NZ Communication's forecasts are higher, but we would still expect the set-up costs not to be repaid for many years.

Access Fee

> 341. The Commission's view is that this level of access fee [$20,000 per month] does not seem unreasonable when compared against current revenues in the mobile market. The Commission considers that it may be reasonable and appropriate to allow an alternate form of credit cover to be provided such as a letter of credit from an investment grade bank.
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> 342. However, the Commission would need to obtain assurances from interested industry participants as to whether such a fee is reasonable and in line with normal commercial practices.

15. Vodafone's proposed Access Fee is a prepayment against a certain level of minimum guaranteed revenue per month. Being either 25% of an Access Seeker's forecast usage or $20,000 per month (whichever is the greater), the amount represents a very conservative approach to establishing a minimum spend level. A minimum revenue amount is necessary if Vodafone is to cover certain minimum levels of on-going expenditure incurred in providing the roaming service to the access seeker.

16. Other commercial parties have previously accepted equivalent provisions in negotiated agreements with Vodafone. This indicates that these terms are not unreasonable, particularly when considered against the likely level of mobile revenue a new entrant Access Seeker would be targeting as part of a commercially viable business case.

17. Any usage charges incurred by the access seeker during the relevant calendar quarter are applied against that Access Fee. Vodafone finds it difficult to imagine a scenario whereby an Access Seeker's total usage charges will not exceed the Access Fee amount over any particular calendar quarter.[2]

18. Vodafone does not support the Commission's suggestion that there may be other means, such as a letter of credit from an investment grade bank, able to act as a substitute for the minimum Access Fee.

    - The purpose of the Access Fee is not strictly one of security (security being addressed separately by clause 23 of schedule 3 of the Undertaking).

    - The primary purpose of the Access Fee is instead to provide a minimum level of revenue paid in advance which is then fully credited to usage charges for the access seeker.

    - Such a structure is reflective of the patterns of charging in the retail market where access fees are paid up front for on account customers and pre pay customers pay for all their services before they are received.

Excluded Operator

> 347. The Commission considers that there are likely to be overall benefits from having same technology competition in the mobile market. Consequently, the Commission considers that the Vodafone roaming service should not exclude Telecom from accessing the service.

[2] The Commission states that an average customer uses around 100 voice minutes a month. To spend $20,000 a month at 14 cents per minute therefore requires about 1,500 customers who are roaming for all calls. In reality, the number will be higher than this, since the entrant will try to keep customers on its network. But even if the entrants' customers only roam 25% of the time, the entrant would need only 6,000 customers to incur $20,000 in fees each month. This is a very small proportion of the 4.18 million mobile customers in New Zealand.

19. Vodafone does not agree with the Commission's preliminary conclusion that Telecom ought to be entitled to be an access seeker and therefore be entitled to take advantage of Vodafone's roaming service under the Undertaking.

20. Vodafone questions the level of analysis the Commission has applied to such a critical competition issue (the Commission's reasoning being expressed in only a few short paragraphs in the draft determination). We also take issue with the Commission's assumption that access to such a roaming service is required by Telecom to generate same technology competition:

- Telecom will build its GSM and W-CDMA networks regardless of whether it has access to regulated roaming services, just as it has built its other nationwide networks without access to roaming.

- Telecom does not need regulated roaming in order to provide nationwide coverage while it builds out its GSM network. It already has nationwide coverage.

21. There is no justification for the Commission to require Vodafone to provide any roaming service to Telecom. It is not a new entrant. It already has nationwide mobile coverage. It is four times bigger than Vodafone,[3] six times more profitable,[4] and able to fund several mobile networks each year from its current level of capital expenditure.[5]

22. The Commission is not focusing on the market failure that might justify roaming regulation. Where an access seeker already operates its own nationwide network, or where it already has a significant mobile customer market share, no market failure regarding entry can be said to exist.

23. We understand that the Commission does not want a specific reference to any particular firm in the Undertaking. So we have removed the express exclusion of Telecom. However, we have amended the terms of the Undertaking to exclude access seekers in situations where no market failure can be identified.

- The definition of Access Seeker now excludes any market participant that has previously had over 20% mobile market share in New Zealand (at any stage in the five years prior to requesting the roaming service).

- This exclusion does not apply where a new entrant reaches a 20% market share while roaming on Vodafone's network. The exclusion only applies at the time an access seeker initially requests the roaming service from Vodafone, so long as it continues to use the roaming services under the Undertaking.

24. These amendments will ensure that only genuine new entrants are entitled to the roaming service under the Undertaking.

25. We have also added an additional requirement of reciprocity in the Deed of Acceptance that each Access Seeker must enter into (see Schedule 5). The amendment provides that where an Access Seeker operates a cellular mobile network in New Zealand, it is obliged to offer a reciprocal roaming service to Vodafone on similar terms and conditions as the Undertaking.

Wireless LAN Services

> 348. The Vodafone roaming services in the undertaking exclude wireless LAN services (also known as WiFi and WiMax) or any similar services.

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[3] Telecom 2007 revenues: $5,562 million. Vodafone 2006 revenues: $1,300 million.

[4] Telecom 2007 adjusted net earnings: $955 million. Vodafone 2006 NPAT: $151 million.

[5] Telecom's capital expenditure in 2006/07 was $844 million. The Commission estimates the total costs (i.e., operating plus capital) of a new five city 3G mobile network at around $250 million a year in the first five years.

> 349. As noted elsewhere in this report, the Commission considers that the roaming service should be technology-neutral and should be permitted as long as technical interconnectivity and compatibility can exist between networks.

26. We have covered this point in our submission. We repeat briefly our key concerns with the Commission's draft approach:

    - The Commission has presented no evidence of a market failure in relation to roaming for WiMax or WiFi operators. There are several in the market who appear to be able to operate commercially without nationwide coverage.

    - The Commission has not looked in any detail at market definition issues, but has assumed that these operators will be providing services in the same retail mobile market that the Commission has defined.

    - There is no evidence of any failure or inability to negotiate roaming arrangements by WiMax or WiFi operators. By the time these services are commercially available, we would expect there to be many operators for these firms to buy roaming from.

27. To clarify this area and ensure that Vodafone is only obliged to provide the roaming service to access seekers who themselves are providing a mobile service, we have included in the Undertaking a new definition of cellular mobile network which further clarifies the definitions of Access Seeker Mobile Network and Access Seeker Mobile Service. The text now clarifies that any access seeker must themselves be a mobile network operator and be seeking a mobile roaming service.

28. We understand that the Commission did not intend to regulate WiMax or WiFi services provided by mobile operators. For the avoidance of doubt, we highlight for the Commission that Wireless LAN services or any similar services provided by Vodafone are expressly excluded from the Vodafone Roaming Service.

Numbering

> 351. The Commission notes that the issue of numbering is the responsibility of the Number Administrator under the Number Administration Deed and Number Allocation Rules. As such the Commission considers that the exclusion of a particular type of service from a particular number range should be made by the Number Administrator and not by Vodafone.
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> 352. The Commission considers that if an access seeker complies with all Number Allocation Rules as set by the Number Administrator and its network can interconnect and is technologically compatible with the Vodafone network, then the access seeker should not be excluded from roaming on the Vodafone network.

29. Vodafone agrees with the Commission that Vodafone ought only be obliged to support those numbers on its roaming service that comply with the Number Allocation Rules and the Numbering Administration Deed.

30. However, Vodafone can foresee a situation arising whereby the Number Administrator has neither prohibited nor approved the use of geographical numbers in connection with a service offered using Vodafone's roaming services. In such a situation, the Undertaking provides that the access seeker is obliged to have its intended use of geographical numbers confirmed by the Number Administrator as being fully compliant with the Numbering Rules.

31. It is appropriate that confirmation of the use of particular numbers is sought and obtained in advance of Vodafone supporting such numbers on its network. Otherwise, were any party to later challenge the use of such numbers as being in breach of the numbering rules, customers would be disadvantaged.

International Roaming

> 354. The Commission understands that international roaming agreements are usually agreed on a reciprocal basis. The exclusion of in-bound international roaming customers restricts the ability of access seekers to conclude reciprocal international roaming agreements with mobile network operators overseas.
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> 355. The Commission considers that this limitation would prevent access seekers in New Zealand from offering a comprehensive service likely to be required by New Zealand end-users. Accordingly such exclusion does not promote competition for the long-term benefit of end-users in New Zealand.

32. Vodafone disagrees with the conclusions drawn by the Commission regarding international agreements and reciprocity. It is not the case that international roaming agreements are only ever agreed on a reciprocal basis. Indeed Telecom offers outbound GSM roaming services for its customers despite not offering any inbound GSM roaming services. In fact, Telecom offers GSM roaming in more countries than Vodafone New Zealand.[6] It cannot therefore be reasonably concluded that New Zealand mobile operators require access to inbound international roaming in order to offer outbound roaming to end-users.

33. Without such a connection between international inbound roaming and the ability for a new mobile entrant to provide services to New Zealand end-users, it is not clear to Vodafone the legal basis upon which the Commission relies in rejecting Vodafone's proposed restrictions in this area. Vodafone's Undertaking in this regard only impacts on foreign end-users. There would appear to be no connection between regulating inbound international roaming prices and benefits to end-users in New Zealand. Vodafone would encourage the Commission to reconsider its position on such restrictions and ensure that it takes a position in its final report consistent with section 18 of the Telecommunications Act.

34. We understand that the Commission did not approve of the marketing restriction previously imposed, and so we have amended our Undertaking to remove the express restrictions around the active marketing to non-New Zealand end-users. We have added a provision that prevents Access Seekers from entering into arrangements with service providers outside of New Zealand that would allow non-New Zealand customers of that service provider to use the Vodafone Roaming Service.

35. The revenues available from inbound international roaming will provide a useful incentive for access seekers to expand their mobile networks. We feel sure that Telecom will have factored this revenue stream into their investment decision to build a GSM/W-CDMA network.

Handover between networks

> 356. The amended Vodafone undertaking requires call hand-over from the access seeker to the Vodafone mobile network to be subject to separate commercial agreement. The amended undertaking also excludes call handover from the Vodafone network to the access seeker mobile network.
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> 357. The Commission considers that Vodafone has not justified these exclusions and these arrangements must form part of the undertaking.

36. The Commission has expressed concern about call handover being subject to a separate commercial agreement between an access seeker and Vodafone. Call handover relates to arrangements to ensure that calls in progress on the host network are able to seamlessly continue on to the roaming network when that customer moves out of its host network's coverage area and onto the roaming operator's network. The reverse situation of a call

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[6] Telecom claims coverage in more than 160 countries in http://www.telecom.co.nz/content/0,8748,205667-200448,00.html compared with more than 120 on Vodafone http://www.vodafone.co.nz/personal/coverage-and-roaming/going-overseas/.

transitioning from the roaming network on to the host network is not so critical as the roaming network ultimately has the ability to keep the call on its network when the roaming customer returns to the coverage area of its host network rather than allow the call to drop.

37. Vodafone has not included call handover as part of its roaming service simply because, whilst it is a "nice to have", many access seekers do not actually want it. As a service feature it is technically challenging, costly and considered by many as not crucial to their service offering.

38. Making some features, such as call handover, subject to separate commercial agreement at the election of the access seeker, is necessary in the context of a roaming service. As previously explained, a roaming service can have any number of features added to it. Vodafone has attempted to offer a standard bundle of such features likely to suit most access seekers. Vodafone's offer to contract separately for such features allows the access seeker to further tailor the roaming service to its needs. As such, Vodafone considers it difficult to view an entitlement to separately contract for particular additional features as anything but pro-competitive.

39. Finally, while it is technically possible to perform call handover between two GSM networks, or between a W-CDMA and a GSM network, call handover is technically not possible at present between a WiMax network and a W-CDMA network. Nor are we aware of it being on our vendor's roadmap.

Roaming Pricing

40. The Commission raises several points on pricing. We begin here by starting with general comments on the de-averaging approach, and then moving to consider each of the Commission's six specific concerns in turn.

De-averaged pricing in general

> 398. The Commission therefore considers that while the pricing approach taken by Vodafone in the amended undertaking may be appropriate to the extent that it endeavours to reflect the cost of roaming on those areas where the roaming service is actually used, there remains considerable uncertainty over the way in which such pricing would be implemented. Such uncertainty is likely to be particularly severe from the perspective of an access seeker.

41. Vodafone has retained its approach of having a form of geographic de-averaged pricing in the revised Undertaking. We believe it is a more efficient way to set roaming prices.

42. In paragraph 387 the Commission suggests that having a single roaming rate for all traffic may lead to some distortion in incentives for network building. Because the rate is set at an average of unbuilt areas but the entrant always faces the incremental cost of building the next area, the Commission suggests that an entrant would end up replicating the entire national network of the access provider.

43. In fact this will not happen in practice.

- When considering building the entrant has to consider the costs of building in the next area and the likely volume of traffic in that area. If building looks cheap enough, given the traffic, then the entrant will build.

- At some point the costs of building relative to roaming will be so high given the traffic available that it is more efficient to roam permanently than build (or at least until the entrant accumulates more customers in an area). This is the efficient result, and it emerges even though the rate is set at an average of unbuilt areas.

44. Exactly the same incentives apply in respect of bitstream and UCLL prices, where bitstream is equivalent to roaming and UCLL to building. Entrants will use bitstream in an area while there are insufficient customers to

justify unbundling. Equivalently, entrants will roam in an area until there is sufficient traffic to justify building. If sufficient traffic never materialises, then the entrant will roam permanently.

45. We find some of the Commission's comments on the general approach concerning. In particular:

- The Commission seems sceptical that costs would vary across the network, undermining the basis for geographic de-averaging. In paragraph it says 378 say "according to Vodafone" with the implication that others may not agree with us. We would be very surprised if the Commission had any evidence that costs were constant across the network, but we would certainly encourage the Commission to make any evidence it does have available to network operators.

- In paragraph 381 the Commission criticises our de-averaged pricing proposal saying that it is "not geographic pricing in its pure form". In paragraph 385 it says "according to Vodafone, it would be too complex to set 31 different roaming rates". We understand that the Commission does not actually want us to propose 31 prices, but it would be helpful for the Commission to clarify its position on this point. We can have as many prices as the Commission wishes.

Changes in the base price

> 389. First, the current costs used by Vodafone to calculate the de-averaged prices are the civil and radio equipment costs of its 2G cell sites. However, under the amended undertaking, Vodafone retains the discretion to include other costs attributable to the access network portion of the entire Vodafone network. These costs may include operational expenditure relating to the access network and transmission costs.
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> 390. The Commission understands that Vodafone does not plan to do any work, at this stage, on including the operational and transmission costs. However, the Commission considers that the inclusion of this caveat in the undertaking is unsatisfactory, as it creates considerable uncertainty over the level of roaming prices for an entrant. Inclusion of such a caveat creates a high likelihood that the headline rate quoted by Vodafone in its undertaking could rise about the 14 cents currently indicated if and when Vodafone decides to review its costs methodologies governing the determination of the headline rate.

46. This seems to be a misunderstanding of how the pricing actually works. Including opex and transmission will not change the base price at all. The base price is not set based on any assessment of cost. The rates are simply figures that we thought were reasonable and that we thought would be attractive to the Commission since they are near to the Commission's own estimates of the cost of roaming services.

47. The only thing that including opex and transmission could affect is the shape of the de-averaging curve. It is not clear what impact it would have, but we would expect operating expenses to have relatively little impact on the shape of the curve (since the operating costs of cellsites may not vary greatly by location) and transmission costs to make the curve steeper (since transmission costs may be correlated with remoteness).

48. We would be comfortable setting the deaveraged prices for the first five years without including operating expenses or transmission costs in the calculation if that helps to alleviate any concerns.

Information available to the access seeker on which areas have which costs

> 391. A second concern with the proposed pricing relates to the level of information that would be available to an entrant.
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> …

49. The Commission is concerned that access seekers do not know which location areas have what prices and therefore may not know what the roaming rate would be once its network is extended to a particular area.

50. The information about which areas have higher traffic and therefore lower relative costs is highly valuable for obvious reasons and not intuitive. This is why we have kept it secret.

51. We are aware that access seekers must have reliable information on what roaming prices will be. So in the Undertaking there is a process that allows an access seeker to ask what the roaming price would be if it covered some particular new area, and that that price would hold for 12 months. This allows access seekers to plan with confidence.

52. We believe that this mechanism alleviates the Commission's concern.

Data pricing

> 393. Thirdly, the Commission notes that under the original undertaking Vodafone was proposing a roaming rate for data of 4.9 cents per MB. Under the amended undertaking, the de-averaged pricing principle adopted has seen the headline rate for data roaming increase to 30.2 cents per MB (excluding the set-up costs), which represents a substantial increase (in excess of 500%).

53. This increase in rates is not an impact of deaveraging. We have increased the underlying proposed rate because the initial rate was too low.

- Our original price for data was derived from our headline retail data rate on our 3G network. But this was not actually a correct representation of the price because it did not build in out of bundle pricing.

54. The Commission says it wants to set prices based on benchmarking. There are relatively few benchmarks available, since no regulator as far as we are aware has actually been called upon to set data roaming prices.

55. Vodafone has amended its Undertaking in relation to data pricing.

- Until such time as 3G becomes available as part of the roaming service data will be charged at 31.2 cents per MB.
- From the time that 3G W-CDMA becomes available as part of the roaming service (August 2008) the price for the roaming service data would fall to 9.1 cents per MB when a roamer uses the 3G W-CDMA network.
- This price would further reduce from when 3G HSDPA radio access network technologies are deemed to be a part of the Vodafone Network (September 2009) to 6.2 cents per MB when a roamer uses the 3G HSDPA network.

56. We think that the rates we are offering in the Undertaking are reasonable. For example, the applicable rate in a comparable European roaming agreement that we are aware of equates to $1.55 per MB.[7]

57. It is clear that there is room to make money at retail with the prices we propose, even if an entrant built no network at all. Vodafone average revenue per MB of traffic for the year ended March 2007 was **[ ] VNZCOI** for On Account customers. At these prices, a rate of 30 cents per MB leaves a substantial retail margin.

58. We do have retail plans that are priced at 5.2 cents per MB ($53.29/GB) for the first GB and 0.9 cents per MB ($8.89) for the second GB, but many customers do not use their full bundles, and data beyond the first two GBs is charged at 44.4 cents per MB. Vodafone's casual data rate (for customers not on a plan) is $8.89 per MB.

[7] 1 Euro = NZ$1.9375 at today's spot rate

SMS Pricing

> 395. Fourthly, the Commission notes that the price for SMS is 5.1cpm per leg rising to 16cpm per leg. The Commission considers this to be high when compared to priced being offered by Vodafone such as the TXT2000 service which is currently being offered to Vodafone retail customers for $10 a month for 2000 SMS messages.

59. We are pleased to see the Commission's recognition that our SMS retail prices are so competitive. But we do not think the SMS roaming rate we are proposing is unreasonable.

60. The Commission has indicated that interconnect rates would provide a reasonable benchmark for roaming prices.

- The current SMS interconnect rate Vodafone makes available to other mobile operators is 9.5 cents per text.
- In these circumstances, we think the 5.1 cpt rate we are proposing is quite reasonable.

61. The relationship between roaming and retail rates is not straightforward. In particular, it is not possible to compare a single roaming price with a single retail price for a particular product and conclude anything about a price squeeze:

- The extent of an entrant's build and its market share have a strong influence on how roaming prices influence an entrant's ability to compete at retail.
- The entrant will likely acquire customers who are likely to primarily make and receive calls and texts within areas where the entrant has built. This could be as simple as marketing most assertively in places that the entrant covers.

62. In addition, the Commission has defined the market as a broader mobile services market. We can not see how the Commission can consider price squeeze issues on a single product or even a single retail plan within that market.

Costs of 3G

> 396. Fifthly, as noted elsewhere, the Commission considers that the roaming service should not be restricted to a particular technology. Vodafone has indicated that the roaming rates contained in the amended undertaking are based on Vodafone's estimated costs of its 2G network. To the extent that roaming would be available on newer, lower cost technologies, it may be appropriate for this to be reflected in cost-based roaming.

63. We have explained above that the headline Undertaking prices are not based on cost estimates from Vodafone. The de-averaging profile is based on our costs, so including 3G traffic information could change the shape of the curve, but it will not change the headline prices at all.

64. We have dealt with elsewhere our views on whether 3G should be regulated.

65. But in fact it is not obvious that 3G is a lot cheaper than 2G, at least while traffic on the network remains low. This seems to be a clear conclusion from OfCom's 2G/3G model. Both the ACCC and the OfCom figure that the Commission uses in benchmarking its 14cpm voice rate are 2G/3G rates.

In coverage roaming

> 397. Finally, the Commission considers that further clarification surrounding the evolution of roaming rates in the amended undertaking would be useful. In particular, Vodafone has indicated that the 10% (or 100 [macro] site) "sunrise" clause in the undertaking will mean

> that an access seeker will have to include a set of location areas in its initial exclusion zone, and that as a result, the roaming rate will differ from the headline rate. However, Vodafone has also indicated that under the amended undertaking, the decision to exclude an area will be made by the access seeker. This suggests that an access seeker with a network that satisfies the sunrise clause could nevertheless decide to request roaming in all areas, and hence would face the headline roaming rate.

66. The position is as follows:

- An access seeker can not roam in the sunrise coverage area.
- But an access seeker is in control of what areas it roams in after that point. So it could choose to roam in all other areas, even if it had also built coverage in those areas.

New video calling price

67. We have now included a price for video calling of 34.3 cents per minute.

Co-location

> 365. The Commission considers that a better method for apportioning costs would be an allocation made on the basis of the number of antennas on the mast and use of floor space within equipment rooms. The amended Vodafone undertaking does not cater for this allocation method.

Antennae

68. The Commission has proposed that for co-location pricing the allocation of costs be based on antennae usage on a mast or floor space in other facilities.

69. However, in respect of antennae Vodafone would highlight that it is not simply a matter of counting the number of antennae on a mast. The key determinant is the number of services provided by the mobile provider. For example, in areas where Vodafone has built its 3G network, it has two antennae on a mast, one each for 2G and 3G. However, latest technology (such as we would expect any new entrant to seek to co-locate with) is able to combine 2G and 3G into a single antenna.

70. Under the Commission's proposal where a single 2G/3G co-locating new entrant sought co-location on Vodafone's mast, Vodafone would be liable for two-thirds and the new entrant only one-third, despite both benefiting equally from the mast in offering both a 2G and 3G network.

71. Vodafone would encourage the Commission to make the key determinant for the allocation of costs a product of both the number of antennae on a mast multiplied by the number of services supported by that antennae. For example, where a single antenna supports both a 2G and 3G network, then this ought to count as 2 (1 multiplied by 2). Otherwise, Vodafone will be penalised for having invested in its 2G mobile network years before technology allowed for 2G and 3G networks to be provided through a single antennae.

Dispute Resolution

72. Vodafone agrees with the Commission that it would be appropriate to provide for a specific dispute resolution mechanism where the determination of the actual replacement costs is disputed.

73. We have amended Schedule 7 of our Undertaking to provide for an audit procedure and which would draw on the services of an independent valuation expert to provide an audit of the level of replacement costs where a dispute arises.

74. Finally, paragraph 14 of the draft determination implies that Vodafone's terms for co-location are unacceptable. We find this very surprising, particularly given our terms are near identical with those offered by Telecom.

Conclusion

75. I trust that this revised Undertaking will meet with your approval. I remain, of course, at your disposal to discuss it further. I continue to believe that it provides a superior way to deliver certainty to new mobile entrants that the Commission's regulatory proposals.

Yours sincerely,

Tom Chignell
General Manager Corporate Affairs

Commission Issues with Vodafone Undertaking that have been resolved

Issue	Commission concern	Vodafone Amended Undertaking	Commission Draft Report
Inclusion of implementation plan and operational procedures	Must be part of the Undertaking	Included reference to third party if can not resolve terms of implementation plan and operational procedures	Concerns addressed
Procedures for creation of Exclusion Zones	Process for changing location areas should be part of the Undertaking	Included process for adding location areas in Undertaking	No further comment
Exclusion of access seekers with existing commercial agreements	Service must be offered to all access seekers	Existing contract terminated if access seeker takes the Undertaking service	Concerns addressed
Sunrise clause of 150 sites	150 sites or 10% population coverage is appropriate	Either 10% population coverage or 100 macro sites	Concerns addressed
Exclusive provider of roaming	Not consistent with s18 purpose statement	Vodafone can terminate on notice if an access seeker takes roaming from other operator	Concerns addressed
Vodafone can decommission 2G coverage in an area at any time without obligation	May disadvantage access seekers	Provide for continuation of roaming on 3G in that area	No further comment
No wholesale without VF approval	Access seekers should not need VF	Requirement removed	Concerns addressed

	approval		
Price changes over time	Undertaking should include a price review mechanism	Price is reassessed under various circumstances Access seeker may request pricing before being committed to take service and that pricing holds for 12 months	No further comment

Changes arising from Commission's Draft Report

Issue	Commission concern	Action	Commission Draft Report	Vodafone Action
Limited to 2G services	Vodafone should offer 3G roaming	New services become available to access seekers 4 years after commercial launch	Remain of the view that Vodafone should be required to offer 3G roaming	New services become available to access seekers 3 years after commercial launch (meaning 3G W-CDMA (excluding HSDPA) available from August 2008), HSDPA available from September 2009 Additional Prices included for 3G, HSDPA and Video Telephone calls providing future certainty for access seekers
Undertaking can be withdrawn at any time	Vodafone cannot terminate or withdraw a registered Undertaking	Vodafone can not withdraw an Undertaking after it has been registered, but can terminate services to an access seeker who is in breach On termination, that person can not again access services for 24 months	24 month term too restrictive	On termination, that access seeker can not again access services for 6 months New obligation on Access Seeker to have remedied all previous breaches capable of remedy prior to Vodafone re-supplying roaming service
Setup costs paid by access seeker	Not appropriate for access seeker to pay VF network setup costs	Increment of 1 cpm added to services to recover some setup costs over time and in line with revenues	Not appropriate for access seeker to pay VF network setup costs	Transparency of set-up costs clarified with a "Reasonable and Actual Costs" obligation on Vodafone inserted and the ability for an Access Seeker to request Audit Certificate of set-up costs. Vodafone also obliged to consult with access-seekers on set-up costs

				with the aim of reducing or minimising set-up costs Cap of $2m on common set-up costs included, providing further comment to prospective access seekers Additional wording provided around the pro-rata sharing of common set-up costs and clarification about pro rata effect when additional access seekers subsequently commence use of service
Access fee required in advance	Normal commercial terms should apply	Access fee of $20k per month is prepayment against usage	Seems reasonable but feedback from Access Seekers sought	No change
Telecom can not be an access seeker	No comment	No change	VF must offer access to Telecom	Express Telecom exclusion removed but Excluded Operator definition modified to ensure only genuine new entrants can gain access to roaming services New reciprocity obligation on an Access Seeker
Roaming services exclude WiFi and WiMax services	No comment	No change	VF must offer roaming to WiFi and WiMax operators	Clarification that the mobile roaming service provided by Vodafone does not extend to any WiFi or WiMax services that Vodafone may supply Clarification that Access Seekers must be providing a cellular mobile service to be entitled to access mobile roaming service from Vodafone

Numbering issues	NA	Access seeker can not use geographic numbers when roaming	Can use any numbers that meet rules of NAD	Restriction on use of numbers does not apply where Access Seeker obtains confirmation from the Number Administrator that its proposed use of geographic numbers complies with the numbering rules
Inbound international customers can not roam on the VF network	No comment	Restriction on marketing of a SIM swap option	Exclusion of inbound international customers may restrict offering of roaming to NZ users	Marketing restrictions to end-users removed. Access Seekers prevented from entering into arrangement with service providers outside of NZ that would allow non-New Zealand customers of that service provider to use the Vodafone Roaming Services
Call handover	NA	Some call handover rules included	VF has not justified excluding the ability for in-call handover where a customer of an Access Seeker leaves their own network coverage	Wording clarified around why call hand-over not part of default roaming service, but confirmation that Access Seeker may, through separate agreement with Vodafone, request and obtain a call-hand-over upgrade to roaming service.
Price of 21.5 cpm for voice	There is a relationship between roaming and MTR prices	Geographic de-averaging mechanisms included Headline rate for voice is 14cpm (plus 1cpm for setup costs)	Pricing is better, and de-averaging may be more efficient Offering an average price for unbuilt areas may distort investment and access seeker does not know which area is the next least high cost Inclusion of transmission or opex costs later is unsatisfactory	Geographic de-averaging mechanism remains as a more efficient way to price roaming. Vodafone offer to set prices for the first five years without including operating expenses or transmission costs in the calculation if that helps to alleviate the Commission's concerns.

			Including 3G networks may reduce costs	
Price of 9.5 cpt for SMS	Consider submissions on price	Headline rate for SMS is 5.1 cpt	SMS charges are higher relative to on-net retail prices	Price remains the same, but we explain that SMS price compares favourably with current interconnect rates
Price of 4.9 cpMB for data	Consider submissions on price	Headline rate is 30.2 cpMB	Data roaming prices have gone up significantly	Prices now fall as new technologies become available over time
In coverage roaming	NA	NA	An access seeker that meets the sunrise requirement may want to roam in all areas	Amended Undertaking clarifies that an access seeker can not roam in the sunrise coverage area, but could choose to roam in all other areas, even if it had also built coverage in those areas
Co-location pricing is a choice for the access seeker	NA	NA	Better to apportion costs based on number of antennae on the mast and use of floor space Should include dispute resolution system on replacement costs of site	Amended Undertaking apportions costs based on number of antennae and service provision Undertaking includes resolution system for replacement costs of sites