

**VODAFONE NEW ZEALAND LIMITED  
SUBMISSION TO THE COMMERCE  
COMMISSION**



**Number Portability Functions and Standards Draft  
Determination**

**10 June 2005**

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## **I Introduction**

1. Vodafone welcomes the opportunity to provide its views on the Commission's Number Portability Functions & Standards Draft Determination (the Draft Determination).
2. In this submission we follow the structure of the Draft Determination. As previously noted in our correspondence to the Commission, Vodafone supports the Commission in its decision to combine its findings on both the Cost Allocation Application and the Functions Application into one Final Determination.
3. The Commission has not yet indicated whether it will hold a conference to discuss the both the Cost Allocation Draft Determination and this Draft Determination.
4. Vodafone believes a conference should be held to discuss the issues raised in the Draft Determinations. We believe that there would be benefit in creating the opportunity for dialogue between industry and the Commission on some of the more substantive issues that the Draft Determinations deal with.
5. There is no confidential information in this submission.
6. In addition to this submission, Vodafone has provided its views on the changes to the Draft LMNP and Network Codes in a joint submission with Telecom, TelstraClear, and WorldxChange (the Parties).
7. Where the Parties to that submission did not have an opportunity to review the Commission's changes or to agree on a position, Vodafone has provided its comments on those specific areas of the Codes in this submission.

## **II Porting of local telephone numbers from fixed to cellular telephone networks**

### *Mobility of a fixed telephone network service*

8. Vodafone wants to be able to offer a local service to customers over its existing 2G/2.5G mobile telecommunications network and its new 3G mobile telecommunications network. Vodafone may wish to compete in local services markets by enabling Vodafone local customers to receive and to make local calls to and from their mobile handset.
9. Local number portability is critically important if consumers are to benefit from the increased competition that our local service could deliver. Number portability would lower switching costs and so enable more customers to enjoy the benefits of competition were we to launch our local service.
10. As the Commission is aware, number portability is not the only barrier to the launch of our service. In particular, we would need a local interconnection agreement with Telecom.

11. Vodafone welcomes the Commission's findings that:
- local numbers should be able to be ported irrespective of the type of network;
  - an interpretation neutral in terms of the underlying network is likely to best give effect to the purpose statement contained in section 18 of the Telecommunication Act; and,
  - a fixed telephone network service need not be "fixed to the wall" in the traditional sense, but can indeed have a mobility element consistent with end-user demands to be able to make and receive local calls even where they are away from their home or work place.
12. However, Vodafone strongly disagrees with the Commission's attempt to distinguish between local and cellular services for number portability purposes by specifying that a fixed telephone network service:
- "...is limited to calls that are made, and received, in a geographic area that is bounded by a single transmission tower (cell site). A 'fixed telephone network service' does not extend to a service that allows the end-user's telephone device to perform call hand over between transmission towers or to calls made (and received) on that device which require the involvement of more than one transmission tower in the wireless network." (para 68)
13. Vodafone has three concerns with the Commission's approach:
- first, the geographic limitation of a single transmission tower or cell site;
  - second, the restriction that the service must be limited to calls made and received in that geographic area; and,
  - third, the requirement that the end user's telephone device is not able to perform call hand over between transmission towers (if this is what the Commission means in the quote set out above).

### *Single cell site distinction arbitrary and artificial*

14. A geographic limitation based on the coverage of a single cell site is both arbitrary and artificial.
15. The coverage of a single cell site is not the appropriate means by which to prescribe the allowable mobility end users should be able to enjoy with a fixed telephone network service. Despite what the Commission says at paragraph 70 of the draft determination regarding its interpretation being neutral in terms of the underlying network, this interpretation focuses on the network and not on the service.
16. Vodafone submits that such a restriction on a fixed telephone network service:
- will be unworkable in practice, as the architecture of a cellular network requires that a particular location will frequently be within the coverage area of more than one cell site, with calls being carried over different cell sites depending on strength of signal and demand for coverage in the area at the

time of a call. The Commission should also be aware that, with Vodafone's new W-CDMA technology and with Telecom's existing CDMA technology, cell sites "breathe" meaning that coverage areas contract as demand in an area increases and vice versa;

- will introduce competitive distortions into the market. Different wireless network providers utilising competing technologies mean a single cell site coverage area is not universal between providers. For example, providers of a fixed telephone network service using, say, Auckland's Sky Tower that can provide coverage to most of Auckland City would qualify as a 'fixed telephone network service', whereas Vodafone has much smaller cell site coverage areas;
  - overlooks the technology underlying some commercial products already in the market that allow users to receive calls away from their home or office. For example, Telecom offers customers both a Call Diversion and a Permanent Call Forward product that allow users to automatically re-route incoming calls to elsewhere in the local calling area, another local calling area, or a mobile phone;<sup>1</sup>
  - overlooks the potential options available to a network provider (fixed or wireless) to divert calls once a call is on its network without any adverse effects on the calling party or originating network operator, such as where any costs of the divert are borne by the called party; and,
  - will be difficult to apply in practice for all of the above reasons.
17. Vodafone submits that the more logical and less arbitrary area for the Commission to define in the context of number portability is the Local Calling Area (LCA). The LCA is the only geographic area contemplated by the number portability service description in the Act. A customer of the local service with premises in the LCA would need to be issued with a local number that is allocated to that LCA.
18. By having the LCA as the relevant geographic area, the Commission is preserving a distinction with the cellular telephone number portability service in the Act. The cellular telephone number portability service would apply to services where there is no geographic dimension, such as the case with Vodafone's 021 mobile service. This in turn is consistent with the Numbering Allocation Rules<sup>2</sup>, where mobile numbers (or non-geographic service codes) are to be used for services without a geographic structure.
19. Vodafone further considers that a geographic restriction based on the LCA to also be technologically neutral. The Commission's current approach of using technology as the basis for a geographic restriction, where the technology employed by providers is not universal and in an area where new technologies are beginning to emerge, will simply act to exclude customers from both service and cost benefits that technology advancements are capable of providing.

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<sup>1</sup> Telecom's 'CustomerLink' and 'Call Diversion' products

<sup>2</sup> Telecommunications Numbering Plan: Number Allocation Rules, version 1.5, 10 September 2004, rule 3.

### *Restriction on calls made and received in the geographic area*

20. The Commission requires that the service is limited to calls made, and received, in the relevant geographic area. Vodafone believes that this is too narrow an approach. The Commission risks artificially limiting participation by mobile network providers in the fixed telephone network services market.
21. In considering the making of calls, a fixed telephone network service provided by a mobile network operator could enable the making of a local call when the calling party customer is physically within the relevant geographic area, and not when they are outside the relevant geographic area.
22. However, if this type of service was offered, this should not limit the ability of the network operator providing that service to allow its customers to make calls from the same device from outside the geographic area, on the basis that the call would be treated, e.g., the same as a normal mobile originated call.
23. In considering the receipt of calls, Vodafone believes that the physical location of the called party should not make any difference for the purposes of the definition of a fixed telephone network service. The location of the called party is irrelevant from the point of view of the calling party or the originating network. The originating network would hand over the call at the same handover point and in the same way, regardless of the location of the called party.
24. In fact, end users already demand the ability to receive local calls where they are not at home or work. As mentioned above, Telecom offers permanent call forward and other similar products whereby a local call can be diverted to another location or a mobile handset both within and outside of a LCA. Customers of this type of service would expect to be able to retain their local numbers when they shift to another operator. The Commission would be artificially restricting competition were it to allow Telecom and other fixed operators to participate in local number portability whilst effectively denying Vodafone the ability to offer services that compete with these permanent call forward and similar products of other fixed operators.

### *Use of devices incapable of performing call hand over*

25. The Commission's statement in the Draft Determination that "A 'fixed telephone network service' does not extend to a service that allows the end-user's telephone device to perform call hand over between transmission towers" (para 68) may be interpreted to mean that the end user's telephone device should not be able to perform call hand over between transmission towers.
26. If this is what the Commission means by this statement, then we strongly disagree.
27. There is no logical basis for the Commission to seek to exclude the provision of a fixed telephone network service that utilises cellular mobile handset devices which, by definition, permit call hand over.
28. Vodafone currently has over 1.8 million customers in New Zealand with telephone devices connected to its network. All of these telephone devices permit call handover by virtue of them being mobile cellular devices. With such an investment in deployed cellular mobile handset devices, it would be an

artificial constraint on competition should Vodafone be required to deploy parallel technology to launch a local service offering. Rather, Vodafone's ability to allow customers to use a single handset for both local and mobile calls will promote competition by simplifying the communications needs for end-users through, e.g., the use of single handset, a single bill and a single voicemail system.

29. Vodafone submits that the Commission ought not to limit the meaning of 'fixed telephone network service' by reference to the technical capabilities of the end-user's telephone device. The Commission ought instead to seek to maintain a technology neutral approach that allows the use of cellular devices to offer a fixed telephone network service in addition to a cellular service.

### *Response to issues raised by Telecom*

30. We would also like to respond to certain issues raised by Telecom in their submission in respect of the application.<sup>3</sup>
31. It is inconsistent for Telecom to allege the porting of local numbers to mobile networks will create customer confusion. Just as with Telecom's 'CustomerLink' and 'Call Diversion' products, it is not apparent why there should be any issue of customer confusion in regard to tariffs for the calling party where a local call terminates on a mobile device. To the extent there is any customer confusion, it would already arise with these Telecom products.
32. We are expecting that fixed networks will charge their customers the same tariff when calling a local number on a mobile network as when calling a local number on any other network. There should be no additional cost to the fixed network in carrying this type of call as compared to any other call to a local number. Mobile operators offering a local service would not seek to charge a rate for terminating calls to local numbers on their network that is any different to the normal rate that fixed operators charge for the same service. There is no customer confusion in this case.
33. We are aware that Telecom has raised the anomaly in the TSO Deed that it negotiated with the Crown that entitles them to charge residential customers that call mobile networks, even when the call is to a local number and even when there may be no or minimal interconnection charge to be paid by Telecom. The TSO Deed is seriously flawed in this respect and requires amendment.
34. But the fact that Telecom is threatening to charge its residential customers for calling local numbers on a mobile network, and use this as the basis for a claim this will lead to customer confusion, should be rejected by the Commission.
35. We note that the TSO Deed provisions regarding the free local calling option only apply to calls from Telecom residential subscribers. They do not apply to

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<sup>3</sup> Telecom New Zealand Limited - Submission in Respect of the Application from TelstraClear Limited, Telecom New Zealand Limited and Vodafone New Zealand Limited under s. 31(a) of the Telecommunications Act 2001 to decide certain functions and standards necessary to provide local and cellular telephone number portability services – 11 March 2005 at paragraphs 15-16.

any other Telecom customers and they do not apply to any customers of any other fixed network.

36. We do not see Telecom's argument around customer confusion as being a valid reason to restrict the participation of mobile operators in the local services market.
37. We note that Telecom has also signalled that it wishes to further increase the ability for customers to personalise calls to households by increasing the ability for customers to divert calls to a mobile phone or another landline.<sup>4</sup> As one senior Telecom executive has recently commented in reference to both home and business telephone lines, "It's about creating a more personalised environment and 'nomadic-based mobility' that goes with that".<sup>5</sup>

### *Conclusion*

38. Vodafone submits that the Commission ought to remove the restrictions highlighted above on the ability for wireless operators to offer a fixed local service capable of competing with local service offered by fixed operators.
39. The fact that wireless operators are capable of providing a local service over alternative networks will enhance independent rivalry between service providers. The Commission needs to avoid placing artificial restrictions on alternative service providers through its determination on number portability that will only act to hinder, rather than promote, competition.

## **III The scope of exemptions issued under the Network Terms**

40. The Commission notes that exemptions to a determination should be granted by the Commission. Any exemption would be granted by the Commission on the basis of a recommendation by the TCF. The Commission considers that such a process is consistent with the scheme and purpose of the Act (para 91).
41. The Commission also notes that a Carrier may apply for a clarification or reconsideration of a determination under section 58 and 59 of the Act (para 96).
42. Vodafone supports the Commission's view that any exemption to the Final Determination should be granted by the Commission. We agree with the Commission that this is the appropriate process, given the requirements of the Act. We also recognise the ability for a Carrier to apply to the Commission for a clarification or reconsideration of a determination under sections 58 and 59 of the Act.

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<sup>4</sup> The Dominion Post article, 'Name not number – Telecom', 6 December 2004

<sup>5</sup> Ibid, quote of Mr Murray Milner, Telecom Chief Technology Officer.

## **IV Local calling area**

43. Vodafone disagrees with the Commission's view in paragraph 106 that a requirement in the LMNP Terms of the draft determination "that ported local numbers physically remain within the donor carrier's relevant local calling area, is consistent with the designated multinetwork service." Vodafone remains of the view that you cannot require numbers to "physically remain" in any defined location given numbers do not physically exist anywhere.
44. Vodafone submits that it is only consistent with the designated multinetwork service to require local numbers to be allocated to local service customers with premises in the local calling area. Not only is the current reference to "physically remain" an unnecessary requirement, it risks being used by Vodafone's competitors to assert a barrier to entry for Vodafone participating in local number portability. It leaves participation by cellular networks in local number portability open to challenge on the basis that somehow cellular networks cannot ensure that users (and by implication their numbers) remain in a particular physical location.
45. Vodafone can provide that local numbers will be allocated to local service customers with premises in the LCA of the donor carrier and understands this to be the logical requirement that supports the designated multinetwork service description. Vodafone encourages the Commission to amend the wording of Clause 4.1.8(a) as follows:

"The premises of a customer with a Ported Local Number must be within the Donor Carrier's relevant Local Calling Area. A customer with a Ported Local Number wishing to move premises can retain that Local Number provided that the new premises are within the same Donor Carrier's Local Calling Area."

## **V Ongoing non-compliance with Service Levels and Equivalent Service Criteria**

46. The Commission considers that the combination of:
  - The Codes' provisions which allow the Commission to issue notices of breach and to publicly censure a Carrier for non-compliance; and,
  - The ability for a party to enforce a determination via the High Courtprovides an appropriate solution to the issue of ongoing non-compliance.
47. Vodafone supports the Commission's position. The Act provides an enforcement mechanism for determinations. It is entirely appropriate that this existing process be used to deal with the issue of non-going non compliance.
48. As outlined in our earlier submission, we do not believe suspension from the IPMS System is an appropriate penalty due to the potential for such a measure to have a significant impact on the customer experience.

## **VI Contesting Enforcement Agency decisions in respect of exemptions**

49. The Commission's view is that the dispute resolution process is unnecessary and that the exemption approval process provided under the Network Terms should be sufficiently rigorous to ensure that the disputes mechanism is not required to deal with exemptions approvals (para 134).
50. As outlined in our earlier submission, Vodafone does not support the inclusion of a disputes resolution process and we support the position reached by the Commission in its Draft Determination.

## **VII Internationally originated short messages**

51. The Commission has determined that there is sufficient time for Carriers to make the necessary commercial arrangements in order to provide equivalent service in the delivery of internationally originated SMS (para 151).
52. We want to make sure that the Commission is clear on what it means by Equivalent Service in relation to internationally originated SMS.
53. Vodafone also wants to ensure that it correctly understands what the Commission is expecting from the Carriers in terms of resolving this issue via commercial arrangements.
54. Equivalent Service means that a ported number and a non-ported number are provided the same service by the Carrier. Therefore, if a Vodafone 021 customer is able to receive international SMS traffic, so should a Vodafone 027 customer. In reverse, if a Vodafone 021 customer cannot receive international SMS traffic, then there is no reason why a Vodafone 027 customer should be able to receive this traffic.
55. In situations where Vodafone and Telecom have agreements in place with the same international operators, Vodafone will be happy to transit SMS traffic to ported 021 numbers, and Vodafone will work with Telecom to resolve this issue.
56. In an effort to ensure that our understanding matches that of the Commission's we have attached as an annex to this submission diagrams which outline the scenarios that may occur when terminating international SMS traffic. We outline the processes detailed in those diagrams below.
57. Should the Commission disagree with the process as we have outlined below and in the attached diagrams, we will need to discuss this issue further with the Commission so that we may better understand the Commission's expectations.

### ***Current situation – commercial arrangements***

58. Diagram A – Vodafone NZ has a commercial relationship with Vodafone UK (VFUK). Telecom does not have a commercial relationship with VFUK. A VFUK customer sends a SMS to a New Zealand number. VFUK determines if the number is +6421 (i.e. a Vodafone customer in a non-number portability

environment). VFUK sends the traffic to Vodafone NZ. If the number is not +6421 VFUK drops the SMS and the traffic does not terminate.

### *LMNP context with same commercial agreements as in Diagram A*

59. Diagram B – Vodafone NZ has a commercial relationship with VFUK. Telecom does not have a commercial relationship with VFUK. A VFUK customer sends a SMS to a New Zealand number. VFUK hands over all New Zealand traffic to Vodafone NZ. Vodafone NZ performs a LMNP lookup. If the number is attached to a Vodafone NZ customer, Vodafone NZ terminates the SMS to that customer. If the number is not attached to a Vodafone NZ customer, the SMS drops.

### *LMNP context with new commercial agreements in place*

60. Diagram C – Vodafone NZ and Telecom both have commercial relationships with VFUK. A VFUK customer sends a SMS to a New Zealand number.
61. If the number is a +6421 or +6429 number, VFUK sends the SMS to Vodafone NZ. Vodafone NZ does a LMNP lookup to establish if the number belongs to a Vodafone NZ customer. If the number belongs to a Vodafone NZ customer, Vodafone NZ terminates the SMS to that customer. If the number belongs to a Telecom customer, Vodafone NZ transits the SMS traffic to Telecom for termination.
62. If the number is not a +6421 or +6429 number, VFUK sends the traffic to Telecom. Telecom performs an LMNP lookup to establish if the number belongs to a Telecom customer. If the number belongs to a Telecom customer, Telecom terminates the SMS to that customer. If the number belongs to a Vodafone customer, Telecom transits the SMS traffic to Vodafone for termination.

## **VIII Comments on Network Code**

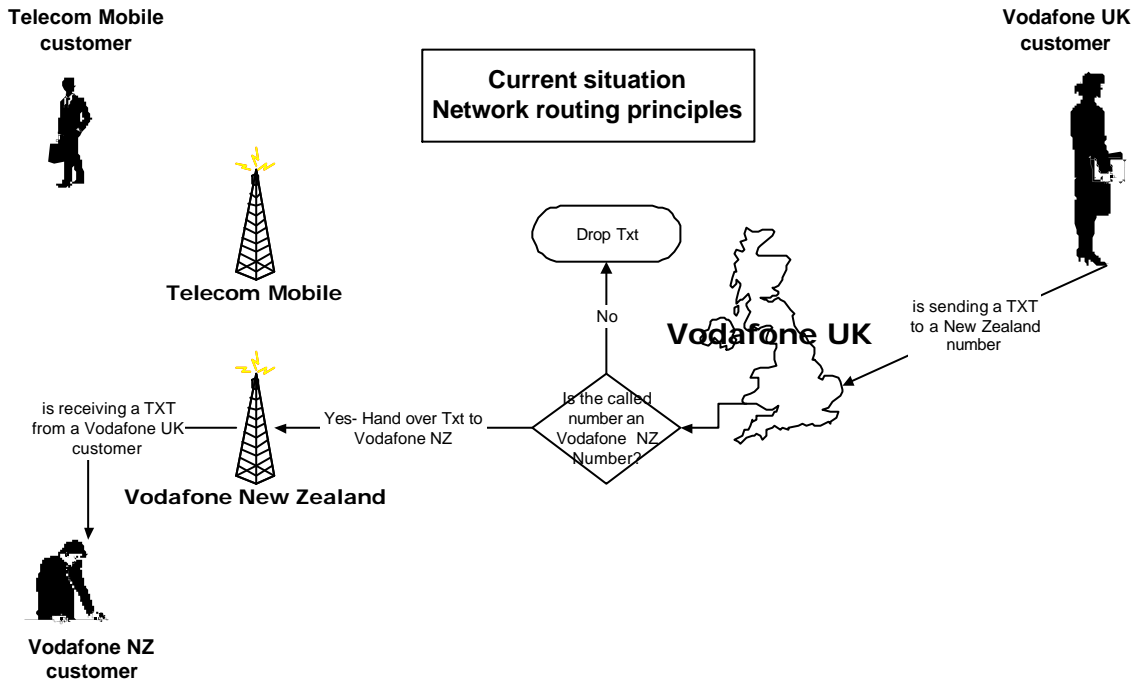
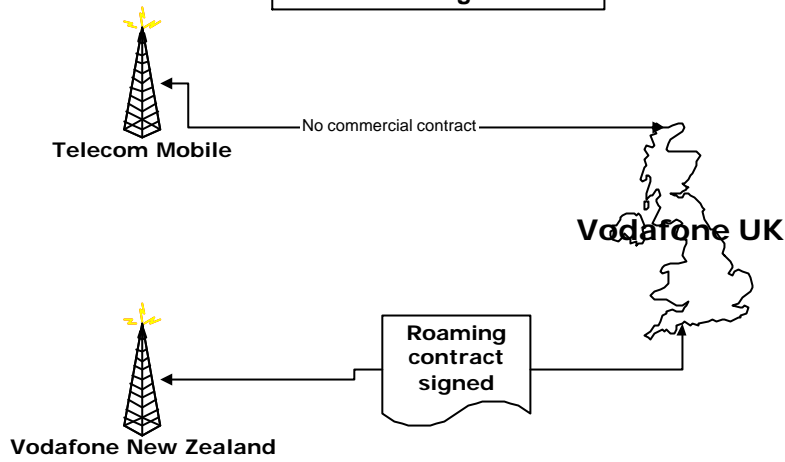
63. The Commission has inserted clause 1.4 into the Network Terms. Clause 1.4 states:
- 1.4 Establishment of IPMS
- On or before 1 April 2006, each party to the Determination must be able to connect to the IPMS and use it to test their systems and processes for:
- (a) Local Number Portability, in the case of a party who is an access seeker or an access provider in relation to local telephone number portability service; and,
- (b) Mobile Number Portability, in the case of a party who is an access seeker or an access provider in relation to cellular telephone number portability service.
64. Vodafone does not support the inclusion of clause 1.4 to the Network Terms.
65. While we understand the Commission's desire to establish some early major milestones as part of the determination, it is not clear to us why the Commission believes that 12 months will be required for all Carriers to

complete integration testing. We accept that it may take some Carriers longer than others to complete integration testing; however, it is not necessary for all Carriers to be required to be connected to the IPMS by April 2006.

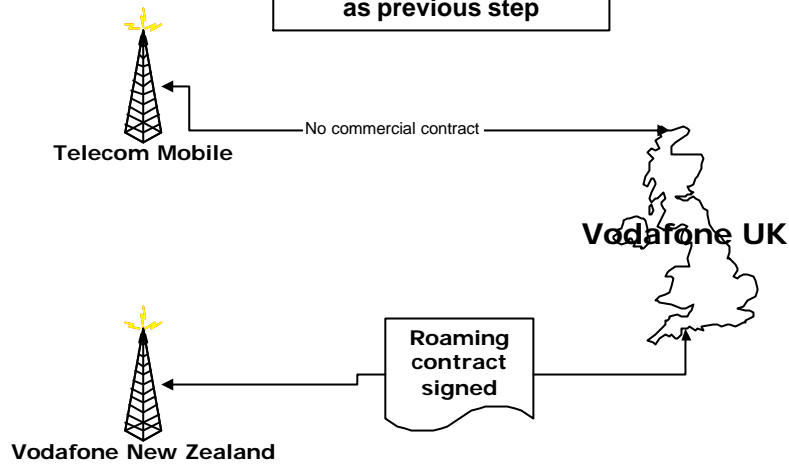
66. The TCF Project Plan for the implementation of number portability already accounts for integration testing such as that required by clause 1.4. The IPMS is scheduled to be delivered in May 2006 and the Project Plan schedules integration testing to take place in September 2006. Our view is that this timing allows sufficient time for integration testing to take place and for any problems discovered via the testing to be resolved.
67. If the Commission mandates that integration testing should take place five months prior to when it is currently scheduled for, this will lead to flow on effects that will negatively impact on the Project Plan. It throws out timing on development and delivery of the IPMS. It will create inefficiencies in terms of how the project is managed and impact on the timing of budget requirements for the project.
68. Vodafone does not believe that such a clause is required in the Network Terms. As outlined above, integration testing is something that the Project Manager has taken account of in the Project Plan. The Project Plan is the appropriate place to account for the integration testing.

# IX Annex – International SMS Diagrams

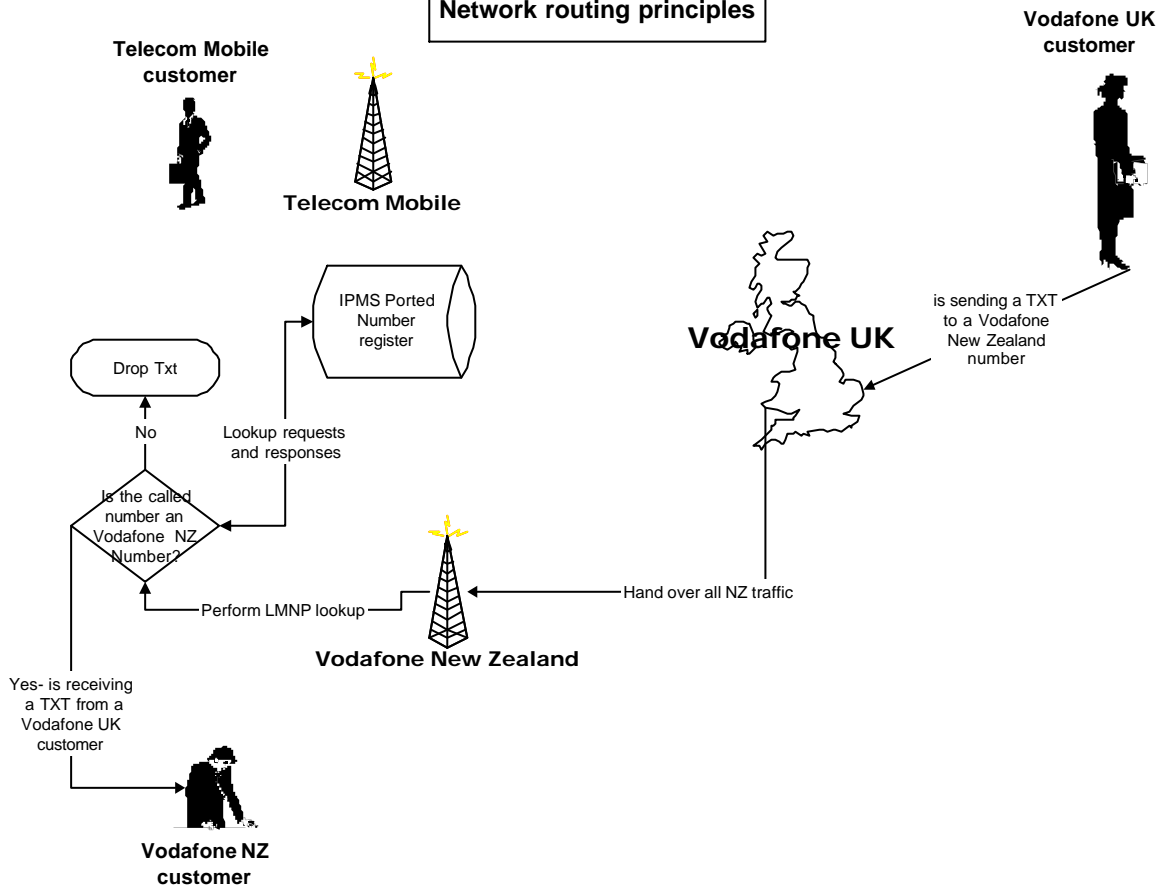
**DIAGRAM A**  
**Current situation**  
**Commercial agreements**



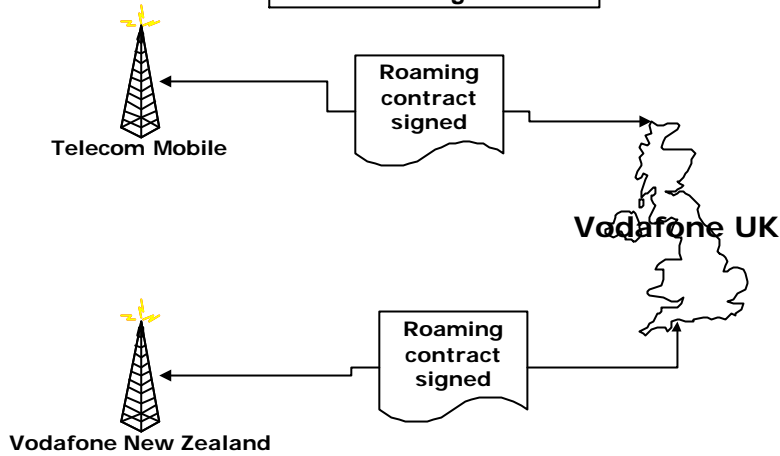
**DIAGRAM B**  
**LMNP context with same**  
**commercial agreements**  
**as previous step**



**LMNP context**  
**Network routing principles**



**DIAGRAM C**  
**LMNP context with new commercial agreements**



**LMNP context**  
**Network routing principles**

