



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

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A EXECUTIVE SUMMARY

- 1 Telecom is committed to the implementation of number portability in New Zealand in accordance with the Telecommunications Act 2001 (the "Act"). The Telecommunication Carriers' Forum (TCF) working parties on number portability (which include representatives from Telecom, TelstraClear and Vodafone) have largely agreed on the functions and standards on which local and cellular telephone number portability services should be provided.
- 2 Telecom endorses the Commission's approach of seeking submissions only on the areas of disagreement indicated in the LMNP Code and the Network Code (attached to the application) by square brackets.¹
- 3 Two key areas that the Commission will need to determine are:
 - 3.1 Fixed to mobile telephone number portability; and
 - 3.2 How to ensure Equivalent Service obligations are met for internationally-originated text messages in the context of cellular telephone number portability.
- 4 The Act does not permit fixed to mobile number portability and this was what Parliament intended. There are strong policy reasons behind the Act, favouring keeping the local number portability and the cellular number portability services discrete. If fixed to mobile number portability were permitted, this would create significant customer confusion, as customers could no longer rely on the number to indicate the charge they will incur for a call. Local and cellular number portability services have similarly been dealt with discretely in overseas jurisdictions.
- 5 In relation to internationally-originated SMS, the issue concerns how Equivalent Service obligations can be met. Equivalent Service is dealt with in clause 14 of the Network Code. The Network Code requires carriers to offer ported customers the same service as native customers. The concept of Equivalent Service underpins the Codes: without it, the incentives on customers to port would be significantly altered. The Network Code expressly says that the requirement for Equivalent Service applies to outgoing and incoming SMS.² The issue arises because the two mobile carriers do not have agreements with the same parties with regard to termination of internationally-originating SMS. Vodafone has suggested

¹ Letter from the Commission dated 18 February 2005.

² Clause 14.3, Network Code

that each carrier should have the ability to discard internationally-originated text messages which are destined for customers which have ported. Telecom accepts that this is a very complex issue, but is not yet ready to accept that international texting services should be excluded from the Equivalent Service obligations.

6 Telecom's position in relation to the remaining areas upon which submissions have been sought are summarised as follows:

6.1 **Relaxations:** The issue in relation to relaxations relates to the scope of relaxations, rather than the process. Relaxations should extend to any obligation under the Network Code, not just the Equivalent Service criteria set out in the Network Code. This allows for maximum flexibility and encourages technology investment and innovation. There are no negative consequences for making the scope of relaxations wide, because there is a rigorous process for obtaining a relaxation.

6.2 **Geographic boundaries:** The working parties agreed that the current proposed restrictions on geographic portability were appropriate with respect to fixed to fixed portability. This is consistent with the approach taken overseas. Telecom remains of this view.

6.3 **Enforcement:** The parties have agreed that enforcement of service levels and Equivalent Service should be by way of warning, letter of caution, public censure and enforcement by the High Court. TelstraClear and Vodafone have suggested additional enforcement mechanisms before enforcement through the High Court, namely suspension from the IPMS and fines. Telecom considers that these remedies would be inappropriate and that they are unnecessary. A second issue relates to the use of a dispute resolution procedure in relation to relaxations and the audit process. Telecom considers that the use of the dispute resolution procedure in this context is unnecessary.

B WHAT IS THE APPROPRIATE PROCESS FOR REQUESTING AND GRANTING EXEMPTIONS AND COMPLIANCE RELAXATIONS?

- 7 **The issue:** Telecom, Vodafone and TelstraClear have agreed that the *process* for obtaining relaxations should be as set out in the Network Code. The paragraphs that have been allocated square brackets by the parties concern the *scope of any relaxations* rather the process. Accordingly, in answering the question set by the Commission, Telecom will focus on the scope of the relaxation process rather than the process itself.
- 8 **Telecom's position:** Relaxations should extend to any obligation under the Network Code. If a relaxation under the Network Code affects the ability of a party to meet an obligation under the LMNP Code, then the obligation under the LMNP Code should be relaxed also.
- 9 We understand that the opposing argument is that a relaxation would only ever need to be granted in respect of the Equivalent Service criteria set out in the Network Code and that, accordingly, the relaxation process should be limited to those criteria. It would follow that there would be no need to have any relaxation of the LMNP Code because the Equivalent Service criteria are contained in the Network Code only.
- 10 The primary reasons for Telecom's view are set out below:
- 10.1 *Maximum Flexibility:* The relaxation process should be able to be adapted to future circumstances. The myriad of future circumstances that may arise and the technology the Codes may have to adapt to are currently unknown. Telecom's proposal ensures that the Code is "future proof". For example, it is conceivable that relaxations could be granted so as to provide that a carrier does not need to comply with Equivalent Service at all – thus in effect suggesting that number portability is not required to be provided. However, this would be in direct conflict with clause 2.1.4 of the LMNP Code which requires a carrier to provide number portability. By allowing a wide scope for relaxations, the industry can address any anomalies that may arise.
- 10.2 *A wide relaxation provision gives rise to no concern:* The process is robust so relaxations will only be granted if the circumstances warrant such a relaxation. Relaxations will only be permitted for legitimate reasons.
- 10.3 *Encourages Innovation and Technology Investment:* There is a very real risk that innovation and technology investment will be stifled because of number portability restrictions in place for a limited time. For example, the Network Code provides that each carrier is

responsible for maintaining the integrity of their own Networks in relation to Porting.³ This obligation is not linked to the Equivalent Service criteria set out in clause 14. If a new technology or commercial changes would temporarily affect how a carrier ports a number, that technology may not be pursued, or might be too risky to implement, if the Carrier could not obtain a relaxation in relation to the above provision of the Network Code. In other words, even if a relaxation were granted in relation to Equivalent Service, it may still be in breach of the Network Code. The Codes should not inhibit legitimate commercial avenues but should be sufficiently flexible to work with a dynamic industry. To impose such restrictions would not sit with the purpose in section 18 of the Act.

10.4 Similarly the LMNP Code imposes an obligation on a carrier to provide number portability.⁴ If a new technology is implemented which temporarily renders number portability impossible, then a relaxation from Equivalent Service will be inadequate to prevent a carrier from breaching the LMNP Code.

11 In summary, by allowing the scope of relaxations to be wider than Equivalent Service, the industry will be providing itself with a flexible way of addressing anomalies which may arise from the relaxation process. In addition, Telecom believes that the process is robust enough to ensure that the broad nature of potential relaxations would not be abused and, in fact, would be more consistent with encouraging innovative technologies. This would be for the long-term benefit of end-users of telecommunications services within New Zealand.

³ Network Code, clause 6.1.5

⁴ LMNP Code, clause 2.1.4

C DO THE DESIGNATED MULTINetwork PORTABILITY SERVICES IN THE ACT ALLOW FOR A LOCAL TELEPHONE NUMBER TO BE PORTED FOR USE ON A CELLULAR NETWORK?

Introduction

- 12 **The issue:** Vodafone contends that the local telephone number portability service in Part 2 of Schedule 1 of the Act (“local portability service”) is not clearly defined and enables an end user to port a local telephone number between a fixed network and a cellular network where the cellular network provides a local telephone service. Vodafone has also raised this issue in the Implementation review of the Act.
- 13 **Telecom’s position:** There are good policy reasons for not permitting fixed to mobile portability and Telecom considers that the Act clearly excludes fixed to mobile portability.
- 14 Telecom notes that its participation in the working party was based on the understanding that fixed to mobile number portability was excluded and many elements of the Code were agreed to on that basis. Vodafone only raised the issue of fixed to mobile portability late in the process. If the Commission were to determine that fixed to mobile portability is included, Telecom considers that the working party would need to re-examine and re-negotiate parts of the Code, for example Equivalent Service.

Policy reasons favouring exclusion of cellular services from local telephone number portability service

- 15 There are very good policy reasons behind the Act’s exclusion of fixed to cellular portability. New Zealand’s numbering system divides the numbering plan into a series of different numbering ranges, with each number range being allocated for a different purpose. A key feature of the numbering plan is that the number dialled indicates the type of service that is being called. The dialled number is also relied on by carriers in setting and signalling their retail charges to customers.
- 16 If fixed to cellular portability was introduced, the dialled number could no longer be relied on to inform the caller of the applicable charge. In a world of fixed to mobile number portability, in a caller pays environment, a customer dialling a local number (a call which is otherwise free in New Zealand for residential customers) could be charged if that number (unknown to the caller) had been ported to a mobile. This would create substantial customer confusion. The free calling provisions for local residential voice telephone service in the TSO Deed are not based on dialled numbers and expressly exclude calls to devices connected to cellular, mobile radio, paging or other similar networks.

- 17 The concerning issues around consumer confusion and number portability have been recognised by other regulators. For example, when Oftel examined Mobile Number Portability in 1997⁵, it was concerned to ensure that the UK national numbering scheme met future demand for numbers, provided sufficient flexibility for the future and was meaningful to customers. In relation to mobile numbers, Oftel required all mobile phones to have one easily identifiable number range to eliminate consumer confusion about when they were actually calling a mobile phone (up until that time there was no such identifiable number range for mobile telephones in the UK). Oftel recognised that the different costs associated with calling a mobile as opposed to an ordinary fixed telephone call was of particular concern for end-users. Oftel proposed a new (07) code for all mobile numbers so that a call to a mobile number was easily identifiable for end-users. Mobile numbers remain identifiable on this basis in the UK.⁶
- 18 The pre-1997 situation in the UK, where consumers could not easily identify whether they were calling a local number or a mobile number is analogous to a situation where, due to fixed to mobile porting, a consumer who thought they were dialling a local number was actually dialling a mobile number (and was charged accordingly). Since free local calling is mandated by the TSO (but excludes calls to mobile device), a customer might dial what appeared to be a local number and expect a free call, but they would be charged for a mobile call. The position is therefore further exacerbated for New Zealand end-users.
- 19 Fixed to mobile number portability is available in the US but an important distinction is that in the US the receiver pays. This means that there are no issues of caller confusion about the charges the caller will incur when calling a number that has been ported. In the US, mobile networks use geographic numbers for the provision of mobile services and callers pay the same amount for calls to mobile phones as to calls to fixed phones (with the recipient mobile user paying the remainder of the call charge). In addition, the US does not have unique code groups for fixed and mobile, which makes mixed portability easier.

⁵ Number portability in the Mobile Telephony Market – July 1997, available at: http://www.ofcom.org.uk/static/archive/oftel/publications/1995_98/numbering/noport.htm

⁶ Mobile services are identified within the number ranges 077 to 079 while geographic numbers are identified in the ranges 01 to 02. See Ofcom's National Telephone Numbering Plan dated 28 October 2004. Available at: http://www.ofcom.org.uk/licensing_numbering/numbers/num_plan_0904.pdf

The Act

Relevant definitions⁷

- 20 *Access seeker/ access provider:* The access seeker and access provider definitions for the local telephone number portability service both require the person to:
- 20.1 operate a PSTN to which numbers have been allocated; and
 - 20.2 Operate a telephone service that relates to that number portability service.
- 21 *Local number portability:* The local number portability service is defined as "*a service that enables an end-user of a **fixed telephone network service** to change providers **of that service** but to retain the same telephone number **within a local calling area***" (Emphasis added).
- 22 *Fixed telephone network service:* Part (b) of the access provider definition requires the access provider to operate a fixed telephone network service. The service description specifically refers to a "*fixed*" service, not a "*local*" service. It is irrelevant that a person may offer a service that it describes as a "*local*" service, unless that service is a "*fixed telephone network service*". A local service that uses a cellular network cannot be a "*fixed telephone network service*".
- 23 "*Fixed telephone network service*" is not defined in the Act. Similar terms such as "*fixed telecommunications network*" and "*fixed PSTN*" are defined. Those definitions require telecommunications links or lines between an "*end user's building*" or a "*user's premises*" and a local telephone exchange. These definitions would not cover cellular networks.
- 24 "*Fixed*" also has a well acknowledged industry meaning. That meaning clearly includes fixed-wire copper or cable networks, such as those deployed by Telecom or TelstraClear for the purpose of conveyance between two fixed points.
- 25 The Act is also clear in distinguishing between a "*Fixed telephone network service*" and a "*cellular telephone network service*" (as appears in the cellular number portability service description in subpart 2 of Schedule 1 to the Act) and a "*third generation cellular telephone network*" and a "*fixed*

⁷ Telecommunications Act 2001, Schedule 1, subpart 2

telecommunications network". It is therefore clear that a cellular service is not the same as a fixed telephone network service.

Fixed to cellular portability was not intended under the Act

- 26 It follows from the service descriptions and the scheme of the Act that:
- 26.1 The local portability service only applies where an end user of a fixed telephone network service is changing providers of that fixed telephone network service;
 - 26.2 The cellular portability service only applies where an end user of a cellular telephone network service is changing providers of that cellular telephone network service; and
 - 26.3 The Act does not apply where an end user of a fixed telephone network service wishes to change to a cellular telephone network service.
- 27 The local portability service will therefore not allow a Telecom fixed service customer to port its NXX XXXX number to a Vodafone cellular-based service. Doing so would be outside of the service description. An end user of Telecom's fixed telephone network service can only port its Telecom number to another provider of a fixed telephone network service.
- 28 The description of the local portability service also limits the service to circumstances where the end user is remaining in the same local calling area. Fixed to cellular portability would breach this requirement, as a cellular end user is not tied to a local calling area and is able to use its number to make or receive calls in any local calling area.
- 29 The fact that the Act has separate local and cellular number portability services clearly indicates that local to cellular portability was not intended. If it had been intended, a joint local and cellular portability service would have been included.

Vodafone is not an access seeker or access provider of local number portability

Cost allocation draft determination

- 30 The Commission's draft determination on the cost allocation application concluded that Vodafone was not currently an access provider for the local number portability service. Vodafone had told the Commission that "*[o]n the basis that the Act requires both numbers to be allocated to the PSTN and provision of a service that relates to local telephone number portability,*

Vodafone does not believe it satisfies the conditions of an access provider for local telephone number portability.”⁸

Vodafone’s position as an access provider

- 31 The allocation of seven-digit local numbers to Vodafone’s network satisfies part (a) of the access provider definition (referred to above), but will not by itself satisfy part (b). Vodafone will only satisfy part (b) and qualify as an access provider if it operates a fixed telephone network service. Accordingly, the cellular service operated by Vodafone does not satisfy the access seeker or access provider definitions for local number portability. Vodafone has agreed that it is not an access provider for local number portability.

⁸ Draft Determination dated 6 December 2004, paragraphs 25-28; Application for determination of “Local telephone number portability service” and “Cellular telephone number portability service”: Preliminary Statement on Eligibility of Access Seekers and Access Providers dated 19 March 2004, paragraph 72.

D IS THE LOCAL CALLING AREA AS DEFINED IN THE CODE AN APPROPRIATE GEOGRAPHIC BOUNDARY FOR PORTING LOCAL NUMBERS?

Introduction

- 32 **The issue:** Telecom is uncertain of the exact scope of this issue, as it was raised by Vodafone late in the working parties' discussions. Telecom understands it is closely linked to the fixed to mobile portability issue. Telecom assumes that, in line with its assertion that the local portability service allows fixed to cellular portability, Vodafone considers that geographic boundaries for porting fixed numbers to cellular networks are inappropriate (or that any boundaries should be wider than Local Calling Areas). This may be because Vodafone considers it unnecessary to insist on any link between a cellular phone number and a fixed carrier's local calling area (given that cellular phones are inherently mobile, and could be expected to move regularly in and out of fixed carriers' local calling areas). Telecom's response to this issue below is premised on these assumptions as to Vodafone's concerns. Telecom reserves the ability to respond further on this point once Vodafone has clarified this issue.
- 33 **Telecom's position:** Telecom is unaware of any suggestion that the current proposed restrictions on geographic portability, which are comparable to similar restrictions imposed in overseas jurisdictions, are inappropriate with respect to local telephone number portability. This position is consistent with the service description of the local telephone number portability service, which refers to: "*A service that enables and end-user of a fixed telephone network service to change providers of that service but to retain the same telephone number **within a local calling area.***" (Emphasis added).
- 34 Telecom believes this issue is consequential upon a view that the Act mandates fixed to mobile portability. Given this, and Telecom's view that fixed to mobile portability is not mandated by the Act, it does not consider it necessary to elaborate further on this issue at this stage. If Telecom's view as to the scope of the Act is not accepted, then all aspects of the Code, including the appropriate treatment of geographic boundaries, would need to be reviewed. This is because they are premised on the portability being limited as Telecom has set out – i.e. fixed to fixed and cellular to cellular.

E WHAT IS THE APPROPRIATE ENFORCEMENT MECHANISM?

Introduction

35 **The issues:** There are two issues that require consideration under this question:

35.1 First, the parties have agreed that the failure to meet Service Levels under the LMNP Code and the failure to meet Equivalent Service criteria in the Network Code should have consequences.

TelstraClear, Vodafone and Telecom have agreed the following consequences:

- (a) A warning;
- (b) A letter of caution;
- (c) Public censure; and
- (d) Enforcement by the High Court pursuant to section 61 of the Act.

TelstraClear and Vodafone have requested additional consequences be inserted into the process, after public censure (c) but before the High Court remedies (d) would be exercised. The two consequences suggested so far have been:

- (a) Suspension from the IPMS; and
- (b) Fines.

35.2 The second issue relates to whether the audit procedure should include the ability for the parties to use the dispute resolution procedure if there is a disagreement over the Enforcement Agency's view as to whether an approved relaxation under the Network Code exempts a carrier from meeting its obligations under the Code.

36 **Telecom's position:** The agreed procedure provides the appropriate balance and incentives. The two additional proposed consequences for non-compliance are unnecessary, inappropriate and inconsistent with the scheme of the Act.

37 The dispute resolution procedure should not be available to parties which disagree with a decision as to whether an approved relaxation exempts a carrier from meeting its obligations.

Proposed penalties for non-compliance with service levels set out in the Codes⁹

Suspension from the IPMS

38 Suspension from the IPMS as a penalty for carriers who fail to meet service levels set out in the Codes is inappropriate for the following reasons:

38.1 *Effect on End-User:* The proposal for a carrier to be suspended from in-porting customers punishes end-users for a carrier's failure to comply with Equivalent Service/Service Levels. If an end user wants to port to an operator, but cannot because that operator is suspended, then that customer will not get the benefit promised from a competitive environment. This is inconsistent with section 18 of the Act.

38.2 *Disproportionate Effect on Smaller Carriers:* It seems counter intuitive to suspend a smaller carrier from the IPMS, as this merely reduces their ability to compete and grow their business to allow for continual improvement. Smaller carriers may well therefore be disproportionately punished by a suspension from the IPMS. Removing a smaller operator from the competitive environment is not consistent with section 18 of the Act.

38.3 *Other implications for Carriers:* If suspension occurred, there could well be Fair Trading Act issues for carriers. For example, if a product is advertised but customers cannot switch to the advertising carrier because it has been suspended from the IPMS, then the advertising could be characterised as "*misleading and deceptive*" during the period of the suspension. It would impose a significant cost on the industry if advertising and related marketing had to be removed and/or issued or re-issued to deal with a suspension period.

Fines

39 Fines are not appropriate for the following reasons:

39.1 *No Authority to impose Penalties:* The Act does not permit the imposition of fines for breach of a determination or Code (which forms part of a determination). Section 61 of the Act provides that the remedy for breach of a determination is for a party to enforce the

⁹ Clause 7.5, LMNP Code; Clause 14.5.4, Network Code

determination in the High Court. That position can be contrasted with Part 3 of the Act, which expressly provides for a financial remedy for non-compliance with a TSO instrument in the form of a potential reduction in the amount that the TSP receives from liable persons. Any power in the Codes to impose a fine, in the absence of any statutory authority, would be ultra vires and have no effect. It would also be inconsistent with the scheme of the Act.

- 39.2 In addition, contractual penalties for non-compliance are generally unenforceable on the basis that they are contrary to public policy. An exception applies where there is an agreed payment that is a genuine pre-estimate of loss (a liquidated damages clause) rather than a penalty to incentivise compliance. The proposal for fines is not in the nature of a liquidated damages clause, as the proposed fine does not correspond with any measure of loss.
- 39.3 *Complexity:* Even if there were authority to impose fines, it would be a controversial and complex process. For example, who would administer fines, how would they be calculated and according to what principles? Such implementation issues would not be easy to resolve. This could result in the serious delay of the Codes while details are worked through.
- 39.4 *Contrary to commercial relationships:* The philosophy of the Act is that commercial relationships have primacy. It would be detrimental to commercial relationships to have parties procuring the enforcement of fines on other parties and could lead to perverse incentives.

Process is sufficient without further consequences

- 40 The public censure process is sufficient to ensure that carriers comply with Equivalent Service/Service Levels. Telecom is swayed by public perception and uses public confidence of its services as a platform for success. Other carriers are no doubt the same. The incentives created by the ability to “name and shame” should not be underestimated in ensuring that a carrier will comply with Equivalent Service/Service Levels.
- 41 In addition, Telecom, as a publicly listed company, will be very conscious of its ability to meet the standards of number portability as Telecom’s ability to meet its obligations could affect investor confidence and ultimately its share price.
- 42 Even so, there is a backstop enforcement mechanism without adding in additional enforcement layers, in that a determination is enforceable as a

judgment of the High Court in its civil jurisdiction, pursuant to section 61 of the Act.

- 43 For these reasons, Telecom proposes the removal of Clauses 7.5 of the LMNP Code and Clause 14.5.4 of the Network Code.

Disputes over relaxations and audit procedure¹⁰

- 44 The parties have agreed an audit process to investigate and report whether a carrier is meeting Equivalent Service (under the Network Code) or Service Levels (under the LMNP Code). Of relevance to this is whether a relaxation was granted in respect of the Equivalent Service or Service Levels – if a relaxation is granted in respect of Equivalent Service/ Service Levels then the Carrier will not “fail” the Audit.
- 45 However, the current drafting of the Codes allows the ability of a carrier to dispute whether a relaxation does allow a carrier to pass an audit process. Such a dispute is then referred to the dispute resolution procedures under the respective Codes. A dispute such as this will require an examination of the scope of the relaxation.
- 46 Telecom believes that this is not an appropriate place for such a dispute as it merely allows for a re-litigation of the relaxation that has been granted. If a relaxation has been granted and an arbitrator decides in a dispute process that the relaxation does not apply, there is an irreconcilable conflict. Similarly, does the view of the enforcement agency auditing the Equivalent Service criteria have primacy over the TCF management committee which originally granted the exemption?
- 47 Telecom considers that if a carrier does not agree with a relaxation that has been granted it should pursue its remedies in respect of the relaxation, rather than in the context of the application of that relaxation in the audit procedure. In addition, given the robust nature of the process for deciding a relaxation, the likelihood of any disputes in an audit context should be low.
- 48 For these reasons, Telecom proposes the removal of Clause 7.6.2 of the LMNP Code and Clause 14.5.5(b) of the Network Code.

¹⁰ Clause 7.6.2, LMNP Code; Clause 14.5.5(b), Network Code

F WHAT IS THE APPROPRIATE PROCESS FOR TERMINATING INTERNATIONAL SMS

International SMS

- 49 **The Issue:** Telecom and Vodafone are unable to agree whether mobile carriers should have any Equivalent Service obligations in relation to internationally-originated short message services ("SMS", or text messages). The current wording of clause 6.7, proposed by Vodafone, places no Equivalent Service obligations on mobile carriers in respect of internationally-originated SMS.
- 50 **Telecom's position:** Telecom accepts that this is an extremely complex issue, but is not prepared at this stage to accept that international SMS should be excluded from Equivalent Service (and hence number portability). Telecom remains confident that a solution which provides full Equivalent Service for international SMS can be implemented, and therefore recommends that the Commission remove section 6.7 in its entirety.

SMS Equivalent service requirements

- 51 The current draft of the Network Code requires that Carriers and Service Providers provide the same services and features to ported customers as those provided to customers on their networks without ported numbers ("native customers").¹¹ This ensures that customers who port between carriers are not disadvantaged as compared to those who switch carriers but change numbers at the same time, and hence that number portability is an attractive option to end-users.
- 52 In particular, section 14.3.1 requires Telecom, Vodafone and TelstraClear (and any future mobile service providers) to offer the same texting services and features to in-ported customers as to native customers – if a Telecom native customer can text to, and receive texts from, any other mobile in New Zealand, as well as any O2 customer in the UK, then a customer who ports to Telecom with their 021 number must be able to do the same.
- 53 This requirement of the Network Code does not pose mobile operators any problems in relation to domestically-originated SMS, as existing domestic mobile operators all have interconnection agreements for SMS with each other, and will have access to the IPMS (which will enable them to identify which network any particular number is on). It does however pose a

¹¹ Criterion 1 of section 14.3, Equivalent Service Criteria for Short Message Services.

problem in relation to internationally-originated SMS, for the following reasons.

The issue with internationally-originated SMS in a number portability environment

- 54 SMS interconnection agreements typically involve an exchange of information concerning number ranges supported by each carrier. Thus when Telecom agrees an SMS interconnection agreement with an overseas network operator, that agreement will provide for the overseas operator to “open up” the +64 27 and +64 25 number ranges on its network for incoming and outgoing text messages, and to deliver all text messages from its customer base which are destined for those number ranges, to Telecom. Vodafone New Zealand does the same, with the +64 21 number range, and because there has always been a hard link between number ranges and underlying networks, both carriers have been able to ensure that all of their respective customers are equally served with respect to international texting services and features.
- 55 Breaking the link between number ranges and networks however, as number portability does, undermines the feasibility of the existing international SMS model, as:
- 55.1 Vodafone and Telecom will have customers on their networks whose numbers fall outside the number ranges covered by each of their international SMS interconnection agreements;
- 55.2 International operators will not have access to the IPMS, and even if they did, it is unlikely any would agree to make the changes necessary to their systems to allow them to deliver, e.g., some +64 21 traffic to Vodafone, and some to Telecom; and
- 55.3 Telecom and Vodafone do not currently have a bilateral donor routing agreement for SMS (so will not forward on text messages they receive from overseas carriers which are destined for numbers on the other’s networks).
- 56 This means that if an 021 customer ported to Telecom’s network, international operators would continue to send text messages destined for that customer to Vodafone, which would not forward them on to Telecom. Telecom’s agreements with overseas carriers in relation to internationally-originated SMS only relate to the 025 and 027 number ranges, so customers on Telecom’s network, but who have an 021 number, will not be able to receive texts from the overseas carriers with whom Telecom has agreements. The customer would in fact receive no internationally-

originated SMS. The result would be to disadvantage the ported customer vis a vis native 027 customers on Telecom's networks.

Telecom's comments on the current proposed solution to this issue

- 57 Vodafone's suggested solution to this issue is to allow network operators to terminate, forward on or drop text messages received from international operators at their discretion. In effect, this provides an exclusion from the fundamental principle underlying the proposed number portability regime - Equivalent Service. There is no requirement on network operators to do anything at all.
- 58 This is obviously a less than optimal solution for end-users. End-users considering changing their carrier will be required to choose between (a) porting their number and losing the ability to send or receive text messages to and from overseas numbers; or (b) changing their number.
- 59 As is evident from the discussion above (and as discussed further below), this issue is an extremely complex one, with no simple solution. However, Telecom would prefer that the parties fully canvassed all possible options before putting this issue in the "too hard" basket and excluding international SMS from Equivalent Service obligations, as the present section 6.7 of the Network Code does.
- 60 If however, Vodafone's proposed solution is implemented, Telecom considers the Commission should also:
- 60.1 Include in section 6.7 a statement to the effect that it overrides the requirement for Equivalent Service in section 14.3.1 of the Network Code; and
- 60.2 Include a provision in its determination preventing any New Zealand mobile carrier from opening up another New Zealand mobile carrier's number ranges in its international arrangements with international operators without that carrier's prior approval. Telecom is concerned that Vodafone might add the +64 27 and +64 25 number ranges to its current SMS interconnection agreements with international operators in order to maximise the international texting services and features it can offer its in-ported 027 customers (it could then just discard any text messages received for 027 numbers which are not on its network). If Vodafone were to do this, it would be very difficult for Telecom to convince those international operators to agree SMS interconnection contracts with Telecom, because they would already have agreed to forward all text traffic in the +64 27 number range to Vodafone. Telecom already struggles to convince international operators to enter into SMS interconnection agreements

with it due to its size, whereas Vodafone New Zealand is able to leverage off the Vodafone Group's size to get around this problem. If Vodafone opened up the +64 27 number range with those operators it already has interconnection agreements with, this would further decrease the likelihood they would be willing to agree interconnection agreements with Telecom for the same number ranges. As discussed above, international operators would be very wary of splitting delivery of any New Zealand number range, as this would introduce unwanted complexity into their network. Unless Vodafone were precluded from opening up the +27 64 number range with overseas carriers, competition would be significantly lessened, because the ability of Telecom to enter into agreements with overseas carriers in relation to international SMS would be severely constrained. This would not benefit end-users.

Can Equivalent Service be provided for international SMS?

- 61 If all New Zealand mobile carriers had SMS interconnection agreements with exactly the same overseas carriers, the simplest solution to this problem would be for the Code to require them to forward on any text messages they receive which are addressed to numbers that have ported off their networks (i.e. donor routing for internationally-originated text messages destined for ported numbers).
- 62 Unfortunately, the lists of international operators with which New Zealand's mobile carriers have SMS interconnections agreements differ markedly, which means that even with such a requirement in place, ported customers would still be worse off than native ones:
- a. First, ported customers would not have access to the same international texting services and features as native customers. For example, Telecom has an SMS interconnection agreement with Telecom Cook Islands, but Vodafone does not. Therefore, even if Telecom and Vodafone were required to donor route internationally-originated text messages, an 021 customer who ported to Telecom could still not receive text messages from Telecom Cook Islands. Any text messages sent to +64 21 numbers by Telecom Cook Island customers would simply be dropped by Telecom Cook Islands -they would not get sent to either Telecom or Vodafone. Only where both the DNO and the RNO have SMS connectivity with the international carrier in question would ported and native customers on each network receive Equivalent Service.
 - b. Secondly, ported customers would receive text messages from overseas which they could not reply to, causing confusion and customer dissatisfaction. For example, if a Vodafone UK customer sent

a text message to an 021 customer who had ported to Telecom's network, Vodafone NZ would forward that text message on to the 021 customer, but as Telecom does not have an SMS interconnection agreement with Vodafone UK, that customer would not be able to reply by way of text message.

- 63 The only way mobile carriers can provide Equivalent Service for international SMS then is for:
- 63.1 Each to extend its SMS interconnection agreements with international operators to include the mobile number ranges of any other New Zealand mobile carrier which does not have an SMS interconnection agreement with those international operators. This would require that each mobile carrier inform the others of its international agreements. There would also need to be agreement that when one carrier ("Carrier A") added another carrier's ("Carrier B") number range to its agreements with any international operators, Carrier A would remove the number range from its agreement if Carrier B later signed an SMS interconnection agreements with any of those international operators; and
- 63.2 All to provide donor routing for all internationally-originated text messages – whether they are destined for ported or non-porting numbers.
- 64 Applying this solution to our earlier Telecom Cook Islands example, Telecom would extend its SMS interconnection agreement with Telecom Cook Islands to include the +64 21 and +64 29 number ranges, ensuring that the 021 customer who ported to Telecom would have the same text message access to Telecom Cook Island customers as Telecom's native customers. Vodafone and TelstraClear mobile customers would also obtain access to text messages received from Telecom Cook Islands customers as a result of this arrangement.
- 65 This would enable mobile Carriers to offer ported customers on their networks exactly the same texting services and features as native customers, and is directly comparable to how internationally-originated voice calls are presently handled.¹² However, it is not clear at this stage if

¹² International operators routinely send all voice traffic destined for any New Zealand numbers to one carrier, which acts as the "international gateway" for voice calls between that carrier and all New Zealand numbers. The "international gateway" is determined by the overseas carrier based upon the cost of delivering the traffic – it is very competitive and can change almost daily. This is essentially the model Telecom is suggesting for SMS.

such a solution is possible in practical terms at this stage. Firstly, it would require for example a re-negotiation of all New Zealand carriers' agreements with international operators, which may not be a simple matter. Telecom is currently reviewing its SMS interconnection agreements to ascertain whether they could be amended to include other carriers' number ranges. Secondly, it is not clear whether this proposal would encourage competition amongst New Zealand carriers to be the "gateway" carrier for international operators, or whether it would "lock in" particular carriers as the gateway to New Zealand.

- 66 However, while in theory the above steps would provide a full solution to this issue, further work is required in order to confirm if it will work in practice. It would require for example a re-negotiation of all New Zealand carriers' agreements with international operators, which may not be a simple matter. Telecom is currently reviewing its SMS interconnection agreements to ascertain whether they could be amended to include other carriers' number ranges.
- 67 At this stage, Telecom is confident enough that a solution can be found to recommend that the Commission remove section 6.7 from the Code, and therefore require mobile carriers to provide Equivalent Service for international SMS.