



**TELECOM NEW ZEALAND SUBMISSION  
ON NUMBER PORTABILITY**

**18 August 2004**

**Public Version**

## **NUMBER PORTABILITY SUBMISSION**

### **Introduction**

- 1 As requested in the Commission's letter dated 23 June, in connection with an application made by TelstraClear Limited and others for both local telephone number portability ("LTNP") and cellular telephone number portability ("CTNP"), set out below are Telecom's comments on:
  - 1.1 The relevant cost allocation principles; and
  - 1.2 Other matters relating to the application.
- 2 Telecom did not object to local telephone, toll free or cellular telephone number portability being included in the Telecommunications Act when the Act went through the Select Committee process. As a company, Telecom supports the introduction of efficient forms of portability and is committed to delivering portability solution in agreed, realistic timeframes.

### **Telecom's position on number portability**

- 3 Telecom's principle issues are to ensure that:
  - 3.1 Any portability solutions are efficient; and
  - 3.2 Any timeframes for implementation of portability solutions are realistic.

Where realistic and reasonable portability requirements are agreed (either through commercial or regulatory processes) Telecom will be fully committed to achieving these outcomes.

## **COST ALLOCATION PRINCIPLES**

### **Scope for discussion**

- 4 Telecom has previously alerted the Commission to the difficulties inherent in deciding issues related to cost apportionment when prior questions related to functions and standards have not been resolved. In particular, Telecom argued at paragraph 8 of its letter dated 30 May 2003:

If functions and standards are not settled, or do not at least form part of the application, a determination relating to cost apportionment becomes at best "academic" and, at worst, susceptible to outcomes contrary to the stated purpose of the Act. For example, how could the Commission assess whether a proposed cost apportionment will promote competition for the long-term benefit of end-users when that mechanism is to be applied in respect of an unknown cost? In addition, determining the costs in advance of the solution provides strong incentives for the parties to game the eventual solution to drive costs to the other parties.

- 5 Those concerns remain relevant and effectively limit the extent to which Telecom is able to comment on cost allocation at this point in time. Telecom reserves the right to comment further later in the Commission's process.

**What are the costs?**

- 6 The costs of providing both LTNP and CTNP can be usefully divided into the following categories:

6.1 *system set-up costs* – this is a fixed and common cost that each participating carrier incurs either individually or jointly, which is necessary to enable the continued operation of number portability. This would include amongst other costs the fixed and common cost of the industry portability management system. The main feature of these costs is that they will vary depending on the sophistication and capability built into the system, but once incurred are invariant to the actual volume of calls ported, subject to any upgrade necessary to provide for increased capacity demands.

6.2 *customer set-up costs* – once the number portability system is enabled, these costs are necessary to provision a request for a number to be ported, for example operational personnel processing each request for a port. These costs will depend on the volume of ported numbers, but they do not depend on the volume of calls made to a ported number.

6.3 *call costs* – these costs change with changes in the volume of calls made to ported numbers. This includes the cost of call transport and additional call costs related to determining the ported number's routing information.

**Cost allocation mechanism must be efficient**

- 7 The Number Administration Deed included as a fundamental premise the notion that numbering arrangements must be efficient. In particular, it provided at clause 2.1:

Numbering Principle 2

**Efficient use of numbering resources**

Allocated number resources are to be used Efficiently.

Numbering Principle 5

**Provision of number portability**

Number portability arrangements, including pricing and operational matters, are to be Efficient. Other arrangements may be made by mutual agreement.

- 8 And of course section 18(2) of the Telecommunications Act similarly emphasises the importance of efficiency. The Commission acknowledges

this in its May 2002 publication regarding access determinations. In particular, the Commission noted:

68 *Where there are tensions between short-term allocative efficiency and long-term dynamic efficiency, the Commission takes the view that the latter will generally better promote competition for the long-term benefit of end-users.*

69 *However, this is not to diminish the importance of static efficiency in telecommunications. In particular, the presence of economies of scale and density may limit the extent to which duplication of facilities will be efficient. The extent to which New Zealand is a technology taker is also likely to influence the relative importance of static and dynamic efficiencies.*

- 9 For number portability, based on efficiency principles, the costs are best recovered by setting cost equal to price for each transaction that causes the cost. This first best approach is straight forward to implement for the recovery of the customer set-up costs and the call costs. Customer set-up costs can be charged when a number is ported, and call costs can be charged when a call is made to a ported number. It seems reasonable that these costs are charged to the service provider with the ported number.
- 10 Number portability system set-up costs seem likely to make up a significant proportion, if not the majority, of the total cost of providing number portability. As there is not a direct causal relationship between this cost and individual customer transactions, a second best solution needs to be found in order to recover this cost.
- 11 A second best recovery is one that least distorts consumption decisions relative to the level of consumption that would occur when customer set-up costs and call costs are charged in accordance with marginal/incremental costs. This implies that system set-up costs are recovered in proportion to the level of benefit derived from the number portability service.

#### **Basis for allocation of system set-up cost**

- 12 Options for allocating the total system set-up cost, which is the sum of all the system set-up costs incurred by each service provider, include:
- 12.1 **Option 1 – system set-up costs lie where they fall** – a service provider's share of the total system set-up cost is the cost that the service provider actually incurs. This option is the simplest of the three consider here to administer, however the allocation does not give any consideration of who might benefit from the number portability.

- 12.2 **Option 2 – total system set-up cost allocated in proportion to the share of numbers ported** – a service provider’s share of the total system set-up cost is the share of all ported numbers that are ported to their network. The system set-up costs of providing number portability on the cellular network will be allocated in proportion to the share of ported numbers on each cellular network, and the system set-up cost of providing number portability on the fixed network will be allocated in proportion to the share of ported numbers on each fixed network. In addition, allowance may need to be made for any common costs as between networks. This option is based on the proposition that customers who port numbers to another service provider are the only customers who benefit from the number portability functionality enabled by the system set-up costs. It is assumed that each service provider will determine how to best recover their allocation of the system set-up cost.
- 12.3 **Option 3 – total system set-up cost allocated in proportion to the share of customers** – a service provider’s share of the total system set-up cost is their market share of customers connected to their network. The system set-up costs of providing number portability on the cellular network will be allocated in proportion to the number of customers on each cellular network, and the system set-up cost of providing number portability on the fixed network will be allocated in proportion to the number of customers on each fixed network. In addition, allowance may need to be made for any common costs as between networks. This option is based on the hypothesis that all customers – i.e. those who port and do not port numbers – benefit from number portability, due to any additional competition induced by number portability. As with option 2, each service provider will determine how to best recover their allocated share of the system set-up costs.
- 13 The central distinction between the cost allocation option 1, and options 2 and 3, is that options 2 and 3 explicitly take into account the benefits of number portability whereas option 1 does not. As discussed below, this has significant implications for the incentives operating with respect to number portability going forward.

#### **Analysis of allocation options**

- 14 Inevitably, access seekers focussed on the short-term will recognise that the burden of providing number portability will fall most heavily on Telecom. In that case, the cost allocation mechanism providing greatest benefit to access seekers in the short-term will be “costs lie where they fall” – a mechanism favoured internationally on the basis that it incentivises cost minimisation. However, Telecom disagrees that this mechanism would necessarily deliver the best outcome in New Zealand.

- 15 As stated above, if system set-up number portability costs are left to lie where they fall, those costs are not allocated in a manner that approximates the benefits accruing from the LTNP and CTNP services. In that case, supply and demand for both LTNP and CTNP will not be at the efficient level. In particular:
- 15.1 if Telecom is not appropriately compensated for its costs, it will be incentivised to do the minimum required to satisfy relevant regulatory criteria; and
- 15.2 if Telecom's competitors have the ability to request facilities for portability without incurring the cost, they will treat this as a free option, and demand portability on non-commercial terms, either with respect to specifications of the services to be provided and/or in relation to the ability to port much larger traffic volumes than are in fact likely to materialise.
- 16 Such an approach is unlikely to provide a robust platform from which sustainable market solutions can be established going forward. A better long-term approach will be for the regulated outcome to best approximate a commercial outcome where relevant benefits are recognised and paid for as a matter of course. In this regard, see the examples set out in paragraph 20 below. A commercially realistic mechanism such as that used in those examples would not only result in more efficient levels of uptake of both LTNP and CTNP, but also would lay the foundation for market development of both services, which, ideally, would supplant the regulatory framework in due course much in the way that has occurred for certain aspects of interconnection and wholesale. If Telecom is appropriately compensated for its costs in introducing LTNP or CTNP, then there will be no reason for Telecom not to agree, along similar commercial lines, to extensions of or changes to the regime that may be required in the future. But if Telecom bears the costs to a disproportionate extent, it will have an incentive not to facilitate expansion or development of the porting service, while its competitors will continue to demand higher levels of porting than are efficient.
- 17 So a "costs lie where they fall" mechanism for system set-up costs is likely to:
- 17.1 Result in additional costs relative to an optimal solution due to:
- (a) either over or under subscription in number portability relative to a second best solution due to the granting of free options to other firms; and

- (b) reduction in investment in services other than number portability due to capital constraints.

- 17.2 Reduce the scope for number portability arrangements to be conducted on a commercial (rather than regulated) basis going forward.
- 17.3 Slow the development of new services as service providers are required to bear all the system set-up costs to enable number portability for new services.
- 18 In addition, a “costs lie where they fall” mechanism incentivises access seekers to make an application for number portability with the specific purpose of driving cost into competitors’ business. This risk is particularly great in the case of TelstraClear making an application for CTNP. In that case, TelstraClear would want costs to lie where they fall because virtually all “its” costs would fall on Vodafone – its competitor. Meanwhile, TelstraClear’s main competitor in fixed line businesses – Telecom – also incurs significant cost in another part of its business. So, irrespective of whether TelstraClear considers CTNP to be a valuable service in the market or whether it ultimately offers CTNP to its customers, a “costs lie where they fall” allocation methodology virtually ensures that TelstraClear will make an application.
- 19 In summary, Telecom submits that costs should be allocated in a manner which reflects those who stand to benefit most from the number portability services.

#### **Precedent for cost sharing across beneficiaries**

- 20 It is standard practice in the New Zealand telecommunications industry that the costs of developing functionality for new services is apportioned amongst those carriers that will benefit from the introduction of the new service. The following are just a few of the most relevant examples of such apportionment.
- 20.1 ***Toll-Free Number Portability:*** Toll-Free number portability was introduced following the entry by the major carriers into an industry Joint Venture Agreement. That JVA set out the arrangements for allocating amongst the JVA members the costs for commissioning the centralised TNAS system. The parties’ own network costs were left for allocation under bilateral agreements. Telecom has entered into agreements with other carriers regarding capital contributions towards Telecom’s costs and has obtained substantial contributions towards those costs. Where appropriate, the amount that Telecom sought was a net amount that incorporated an allowance for costs incurred by the other carrier.

- 20.2 **Non-Code Access:** Telecom introduced non-code access in the early 1990s. A significant capital contribution to Telecom's costs of establishing NCA functionality was paid by Clear, with the amount of the contribution set by arbitration. Telecom's subsequent interconnection agreements with other carriers contained an acknowledgement from the other carriers that Clear had made this contribution and may seek to recover some of its contribution from other carriers that also benefited from NCA.
- 20.3 **02 Non-Code Access:** When Telecom introduced 02 non-code access (i.e. non-code access for land to mobile calls) it successfully obtained contributions from other carriers for its capital costs for establishing 02 NCA functionality. The costs were apportioned on the basis of the carriers' existing national NCA market shares, as that indicated how much benefit each carrier was likely to obtain from 02 NCA.
- 20.4 **50XY Service:** The determined TelstraClear Interconnection Terms include the new 50XY Nationwide Number Service. Telecom submitted that TelstraClear's 50XY model would require significant capital expenditure to implement. The Commission decided to impose that model, but included a procedure for determining and allocating those capital costs. That procedure involves the parties trying to agree on a forward-looking cost-based charge, with either party able to ask the Commission to set that charge if agreement cannot be reached.
- 20.5 **090X Service:** Telecom's interconnection agreements with other carriers contain the new 090X Premium Rate Service. They provide that the other carrier will pay Telecom's actual and reasonable costs for implementing premium rate service functionality in its network (see clause 4.1z of Schedule 3 of Telecom's reference interconnection offer at [www.telecom.co.nz](http://www.telecom.co.nz)). The 090X service was offered because it was included as a new service in the determined TelstraClear Interconnection Terms and it was thought that there may be some demand for it. However, no carrier has yet requested 090X services. This illustrates the efficiency of allocating costs to those that will benefit from the service, as the service is only requested (and the expenditure is only incurred) if there is a genuine demand for the service.
- 21 These examples illustrate that it is not appropriate to use a "costs lie where they fall" approach. Instead, the approach should be consistent with the industry practice that implementation costs are allocated amongst the participants based on the amount of benefit that they will each obtain from the service. This approach has avoided the need for Telecom to cross-

subsidise its wholesale services by recovering its loss on implementing new services through increased charges to all wholesale customers for existing services. Allocation of cost on a rational basis according to respective benefits accrued:

- 21.1 avoids granting free options to some firms;
  - 21.2 ensures that new services are only implemented where there is a genuine customer demand for the service; and
  - 21.3 avoids costs being driven into carriers' networks for no gain to end users.
- 22 If the value that the benefiting carriers place on a service (based on their estimates of how much their end users value the service) is less than the cost of implementing the service, then implementing the service will not be in the long term interests of end users. If the benefiting carriers view the service's value as equal to or greater than its implementation cost, then those carriers should pay to receive that value, instead of simply regulating a wealth transfer from the implementing carriers to the benefiting carriers.

#### **Determination of system set-up costs**

- 23 If an allocation methodology other than "costs lie where they fall" is adopted, then the total system set-up costs need to be determined. In this regard, Telecom recognises that in previous regulatory processes the Commission has undertaken a variety of forward-looking costing exercises to resolve such issues.

#### **OTHER MATTERS RELATING TO THE APPLICATION**

- 24 In the Commission's *"Preliminary statement on eligibility of access seekers and access providers"* dated 19 March 2004 ("Preliminary Statement"), the Commission held that:
- 24.1 all of the applicants were access seekers of the local telephone number portability service; and
  - 24.2 TelstraClear was an access seeker in respect of the cellular telephone number portability service.

The Commission stressed in the cover letter to its Preliminary Statement that it was yet to make a final determination on eligibility.

- 25 On 25 March 2004, Telecom wrote to the Commission as follows:

Telecom appreciates that the preliminary view on the eligibility of access seekers and access providers was required in order to allocate costs

between the eligible access seekers and access providers under section 55 of the Act. Telecom accepts the use of the preliminary view for that purpose. However, Telecom reserves its right to comment further on the eligibility of access seekers and access providers as part of the Commission's determination process.

### **Local telephone number portability**

- 26 Although Telecom does not agree with the Commission's findings in the Preliminary Statement of who constitutes an access seeker of local telephone number portability, Telecom considers it inefficient to make further submissions on this point at this time. Telecom refers the Commission to its previous submissions on this point and again reserves the right to make further comment at a later date.

### **Cellular telephone number portability**

- 27 Telecom does not agree with the Commission's findings on eligibility in the Preliminary Statement and wishes to make further submissions on TelstraClear's status in respect of the cellular telephone number portability service.
- 28 The definition of "access seeker" for the cellular telephone number portability service is set out in Schedule 1, Part 2, Subpart 2 of the Telecommunications Act. The crux of the definition is the phrase "operates". To be an access seeker, TelstraClear must be a person who operates a PSTN to which numbers have been allocated and operates a telephone service that relates to that number portability service.
- 29 The Commission said in its Preliminary Statement that:
- 29.1 "in order to "operate" a PSTN, the Commission considers that an access seeker or provider must control the working of, or manage or direct the operation of, an element of a PSTN to which numbers have been allocated" (see paragraph 10);
- 29.2 in respect of TelstraClear, "an access seeker or access provider must exert an element of control over a PSTN in order that an access seeker or access provider can be said to operate a PSTN to which numbers have been allocated" (see paragraph 28); and
- 29.3 TelstraClear, through the use of its 029 number range, exerted some element of control over the Vodafone network and, accordingly, is a cellular telephone number portability access seeker (see paragraph 29).
- 30 Telecom agrees that "operating" requires an access seeker or access provider to "control the working of", "manage the direct operation of" or "exert control over". However, Telecom disagrees with the Commission's minimal application of this test. To "operate" something it is insufficient to

exert a notional level of control over a mere element of that thing. There must be a requisite threshold level of control.

31 Telecom's view continues to be that TelstraClear does not operate, or have a requisite level of control over, 029 resold cellular services provided on Vodafone's network. The 029 numbers may be TelstraClear's numbers, but Telecom understands that TelstraClear does not have the requisite level of control over Vodafone's network. As noted in Telecom's letter dated 7 October 2003, Telecom does not have full exposure to the resale arrangements between TelstraClear and Vodafone. Accordingly, Telecom is not able to provide comprehensive submissions on TelstraClear's ability to control Vodafone's network.

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33 Previous findings by the Commission and the wording in the Telecommunications Act both support a finding that TelstraClear does not operate a mobile PSTN. For example:

33.1 in the Commission's section 64 final report on unbundling dated December 2003, the Commission concluded that assets comprised in Telecom's fixed PDN are limited to those owned by Telecom, and network elements Telecom exclusively leases or controls for end-to-end transfer of data (see paragraphs 156 - 166);

33.2 in the Commission's TelstraClear residential determination dated 14 June 2003, the Commission found (based on the Commission's unbundling report) that Telecom's FTN does not include network elements of other parties which are the subject of normal commercial wholesaling arrangements that do not give Telecom exclusive control over those elements (see paragraphs 98 to 100);

33.3 the service description of "Co-location on cellular transmission sites" in the Telecommunications Act uses similar "operates a ...network" language. There the access provider is "every person who operates a cellular mobile telephone network". But the service is about co-location or infrastructure itself. In that context then it is clear that

TelstraClear is not a person who "operates a ...network". For consistency, it would be wrong to characterise TelstraClear differently under the cellular telephone number portability service description (which also refers to "operates a [network]"); and

- 33.4 also in the residential determination, the Commission held that a subdivision developer is not a wholesale customer, as the services offered to the subdivision developer are also offered by Telecom to other end-users (see paragraph 95).
- 34 TelstraClear further submitted that if it is not treated as an access seeker it would not qualify as an access provider, which would defeat the purpose of the cellular telephone number portability service to achieve portability access to all cellular number ranges.
- 35 In response, the Commission acknowledged at paragraph 31 of its Preliminary Statement:
- an outcome where a telecommunications provider has numbers under its exclusive contract and use of that provider and is unable to port such numbers, while other providers are able to do so, would be inconsistent with the purpose of number portability; namely that end-users are able to port their numbers from one service provider to another.
- 36 Telecom agrees that if cellular number portability is established it will be crucial that the porting of all cellular number codes is achieved, including 029 codes. However, to achieve this outcome it is not necessary to hold that "resellers" are access seekers. There are simpler means of achieving this outcome, which align with the wording in the Act. For example, if the Commission makes a determination in respect of a valid application for cellular telephone number portability, the Commission could include a condition that as part of any number portability determination made in accordance with section 40(1)(f) that access providers must ensure that, in respect of numbers belonging to any resellers, resellers also make their numbers portable. The Commission has used its ability to impose conditions in previous determinations under the Telecommunications Act. Accordingly, by holding that TelstraClear is not an access seeker, it does not follow that TelstraClear will be excluded from any cellular telephone number portability application.
- 37 Also significant in this regard are sections 40 and 61 of the Act, which make it plain that once a number portability determined regime is established the determination binds the entire industry for the duration of the determination – rather than only the access seekers and access providers in the application.
- 38 In addition to the submissions made above, Telecom also refers the Commission to Telecom's previous submissions made in:

38.1 Telecom's comments on the number portability application dated 30 May 2003; and

38.2 Telecom's submissions dated 7 October 2003.