



COMMERCE COMMISSION

Draft Determination on the application for determination for 'Interconnection with Telecom's fixed PSTN'

Draft Determination under section 26 of the Telecommunications Act 2001 ('the Act') in the matter of applications for determination of designated access services under section 27 of the Act by:

**TELECOM NEW ZEALAND LIMITED
VODAFONE NEW ZEALAND LIMITED**

The Commission: Douglas Webb
Anita Mazzoleni
Donal Curtin

Summary of Application: Vodafone New Zealand Limited applied for determination, under section 20 of the Act, with respect to 'interconnection with Telecom's fixed PSTN' designated access service.

Date of Determination: 19 June 2006

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LIST OF TERMS AND ABBREVIATIONS¹

ACCC	Australian Competition and Consumer Commission.
The Act	The Telecommunications Act 2001.
Access Provider	Telecom Corporation of New Zealand Limited, including any of its subsidiaries (together 'Telecom').
Access Seeker	The service provider who seeks access to the service. For the purposes of this determination, Vodafone New Zealand Limited ('Vodafone').
The Application	The Application filed by Vodafone New Zealand Limited on 13 January 2006 for determination of a designated access service under section 20 of the Act.
Bill and Keep	A pricing scheme for the two-way interconnection of two networks under which the reciprocal call termination charge is zero - that is, each network terminates calls from the other network at no charge.
Call Forwarding	A service whereby calls destined to a telephone number are re-directed by the network to another telephone number usually at the request of the customer.
Fixed PSTN	A PSTN, or that part of a PSTN, that connects an end-user's building to the local switches or equivalent facilities; and includes those local switches or equivalent facilities.
Hybrid Bill & Keep	Where a pure bill and keep method is applied to two-way traffic in balance (or to a specified margin of out-of-balance traffic) and a forward-looking cost-based pricing method is applied to out-of-balance traffic (or traffic beyond a specified out-of-balance margin).
Intra-LICA Call	A voice call made between local numbers within the same local interconnection calling area.
Inter-LICA Call	A voice call made between local numbers within separate local interconnection calling areas.
LICA	Local Interconnection Calling Area.
LICA Group	Local Interconnect Calling Area Group. A LICA Group consists of a primary or secondary Major LICA and its associated Minor LICAs

¹ Where a term or abbreviation is defined in the Telecommunications Act, the statutory definition is adopted for the purposes of this list.

(see Schedule 5 of the Interconnection Terms at Appendix 2 of Decision 477).

Local Call	A call where the number from which the call originates and the number of the intended recipient of the call are allocated to the same local calling area.
Local Calling Area	means an area adopted by a carrier for marketing purposes in relation to its local calling service.
Local Number	Means an 8 digit number, in the form: area code + NXXXXXX where area code equals 3,4,6,7 or 9 and “N” equals digits 2 to 9 (excluding 50AB).
NAD	means the Number Administration Deed authorised by the Commerce Commission on 17 May 1999.
The Parties	Means the parties bound by this determination. Those parties include Vodafone New Zealand Limited and Telecom New Zealand Limited.
Price Squeeze	A price or margin squeeze arises when a vertically integrated undertaking, with market power in the provision of an “essential” upstream input, prices it, and/or its downstream product or service, in such a way and for a sufficiently long period of time, to deny an equally or more efficient downstream rival a reasonable profit so that it can survive. ²
PSTN	Public Switched Telephone Network means a dial-up telephone network used, or intended for use, in whole or in part, by the public for the purposes of providing telecommunication between telephone devices.
TSLRIC	Total service long-run incremental cost, in relation to a telecommunications service.
TSO	Telecommunications service obligations. Obligations in relation to a TSO instrument.

² http://www.ofcom.org.uk/static/archive/oftel/publications/responses/2003/eu_dsl0403/bt4.pdf

Cited Commission Determination

Decision 477

The Interconnection Determination of 5 November 2002 made by the Commission in respect of an application by TelstraClear for the designated access service 'Interconnection with Telecom's fixed PSTN' and 'Interconnection with TelstraClear's fixed PSTN'. The determination is available at

http://www.comcom.govt.nz/telecommunications/Decisions_TelstraClearID.cfm

EXECUTIVE SUMMARY

1. This determination is made in relation to Vodafone's application for access to the designated access service of 'Interconnection with Telecom's fixed PSTN'. The service sought by Vodafone applies only to the interconnection of local calls between Vodafone local numbers and Telecom's fixed network, and does not apply to Vodafone's mobile numbers.
2. Vodafone is not required to operate a fixed PSTN in order to gain access to the interconnection service.
3. A local call is a call where the number from which the call originates and the number of the intended recipient of the call are local numbers that have been allocated to the same local calling area.
4. It is not necessary to define the features of a 'local call' beyond the link to a local number. In particular, the interconnection service should not be defined with reference to the characteristics of the proposed Vodafone retail services.
5. The Commission is not required to consider what happens to a local call from a Telecom customer to a Vodafone local number after the call has been handed over to Vodafone.
6. Local calls between the Parties shall be exchanged at a price of zero in accordance with the pure bill and keep pricing method. This pricing method should enhance efficiency and promote competition for the long term benefit of end users.
7. Telecom shall not charge its customers a higher price for calls from its local customers to Vodafone local numbers, relative to the price charged for other local calls made by its customers.
8. The determination will expire on the earlier of 24 months from the date of issue of the final determination; or the date on which interconnection with Telecom's fixed PSTN ceases to be a designated access service. Designation of this service is currently due to expire on 19 December 2006. The Commission is currently investigating whether to recommend to the Minister of Communications that this service, and other services, continue to be regulated.

INTRODUCTION

9. The Act regulates the supply of telecommunications services in New Zealand.
10. The Commerce Commission has a range of responsibilities under the Act, including making determinations in respect of designated access services. An application may be made to the Commission under section 20 for a determination of all or some of the terms on which a designated access service must be supplied during the period of time specified in the application.
11. This draft determination is made with respect to Vodafone's application for determination of a designated access service under section 20 of the Act, namely "Interconnection with Telecom's fixed PSTN".
12. In making this draft determination, the Commission has investigated the Application and considered the submissions received from Telecom and Vodafone.
13. The service sought by Vodafone applies only to the interconnection of voice calls made to or from Vodafone local numbers that are originated and terminated within the same LICA. The service does not apply to the interconnection of calls to and from Vodafone's mobile numbers.
14. The draft determination sets out the Commission's views on the price and the non-price terms that will apply to the service.
15. The draft determination is set out as follows:
 - (a) The Application – a description of the Application received by the Commission
 - (b) The Framework for the determination – a description of the legislative framework under which this determination is made
 - (c) Discussion of the Commission's views on key issues raised in submissions
 - (d) Duration of the determination; and
 - (e) Principles for non-price terms and conditions.

Commission process and timetable

16. The Commission invites submission from interested parties on this draft determination by 3 July 2006. Cross-submissions are due by 11 July 2006.

Address for submissions and cross-submissions

17. Submissions and cross-submissions on the draft determination should be sent to:

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THE APPLICATION

18. On 13 January 2006 Vodafone New Zealand Limited ('Vodafone') filed an application with the Commission for determination of a designated access service under section 20 of the Act (the 'Application').³ Vodafone requests access to interconnection with Telecom's fixed PSTN under Schedule 1 of the Act.
19. On 14 March 2006, the Commission decided to investigate the Application, and requested submissions from Vodafone and Telecom. On 4 April, the Commission received submissions from Vodafone⁴ and Telecom⁵ in respect of the Application.
20. The designated access service of "Interconnection with Telecom's Fixed PSTN" is described in Subpart 1 of Schedule 1 of the Act as:

Origination and termination (and their associated functions) of voice and data calls (including dial-up internet calls) on Telecom's fixed PSTN
21. The Application only relates to intra-LICA voice calls made to or from local numbers assigned to Vodafone and does not apply to calls to and from Vodafone's mobile numbers.
22. Vodafone has proposed that such calls be handed over in the LICA Group of the originating and terminating party. The handover terms for other call types, such as national tolls and mobile to fixed calls are outside the scope of this determination.
23. Vodafone requested that the Commission adopt a bill and keep pricing methodology for the purposes of this determination.
24. Vodafone also requested that the Commission apply a condition preventing Telecom from price discriminating between local calls its customers make to Vodafone's local numbers, and those made to other networks. Vodafone argues that the Commission is empowered to impose this condition under section 30 of the Act.

³ Vodafone, *Section 20: Application for Determination for Designated Access Service*, 13 January 2006

⁴ Vodafone, *Submission on Commission Decision to Investigate Local Service Application*, 4 April 2006.

⁵ Telecom, *Submission in respect of the Application by Vodafone for Determination of a Designated Service*, 4 April 2006.

BACKGROUND

25. Vodafone intends to launch a geographically structured service over its cellular network. Customers subscribing to the service will be allocated a local number and can make or receive local calls while the customer remains within a geographic area surrounding the customer's home or business (the 'homezone').
26. Customers may as an additional service offering be able to receive calls to their local number while outside of their homezone.
27. Vodafone's local customers will make calls to and receive calls from Telecom's customers. Therefore Vodafone needs an interconnection agreement with Telecom for calls between Vodafone local numbers and Telecom's fixed PSTN. Currently Vodafone and Telecom ('the Parties') do not have such an agreement.⁶
28. The Parties have been unable to agree on an interconnection arrangement since 2003, when the previous agreement for the supply of this service expired. Accordingly, Vodafone has applied for determination by the Commission of the terms for the supply of 'Interconnection with Telecom's fixed PSTN'.

⁶ The current mobile termination interconnection agreement between Telecom and Vodafone specifically excludes calls made from or to Vodafone local numbers.

FRAMEWORK FOR THE DETERMINATION

29. This section sets out the legislative framework under which the determination is made.

30. Vodafone has applied for access to the designated access service of ‘Interconnection with Telecom’s fixed PSTN’, a service set out in subpart 1, Part 2 of Schedule 1 of the Act. The service is described as:

Origination and termination (and their associated functions) of voice and data calls (including dial-up internet calls) on Telecom’s fixed PSTN.

31. Section 18 provides that the purpose of Part 2 and Schedule 1, under which this determination is made, is to promote competition in telecommunications markets for the long-term benefit of end-users.

32. Section 27 requires that after investigating the matter, the Commission must:

- (a) Prepare a determination; and
- (b) Give a copy of the determination to the parties to the determination; and
- (c) Give public notice of the determination.

33. Section 29 requires that a determination must, in the opinion of the Commission:

- (a) Be made in accordance with-
 - (i) The applicable access principles and any limits on those applicable access principles; and
 - (ii) Any regulations made in respect of the applicable access principles and any limits on those applicable access principles
- (b) Comply with any relevant approved codes; and
- (c) In the case of a determination regarding a designated access service, be made in accordance with-
 - (i) The applicable initial pricing principle (as affected, if at all, by clause 2 or clause 3 of Schedule 1); and
 - (ii) Any regulations that specify how the applicable initial pricing principle must be applied.

34. There is currently no relevant approved industry code in respect of the requested service. The applicable access principles are set out in clause 5 of subpart 1, Part 1 of Schedule 1 of the Act. The following standard access principles apply to designated access services:

- (a) principle 1: the access provider must provide the service to the access seeker in a timely manner:
- (b) principle 2: the service must be supplied to a standard that is consistent with international best practice:
- (c) principle 3: the access provider must provide the service on terms and conditions (excluding price) that are consistent with those terms and conditions on which the access provider provides the service to itself.

35. The applicable initial pricing principle is described in Schedule 1 of the Act as:

Benchmarking against interconnection prices in comparable countries that result from the application to networks that are similar to the access provider’s fixed PSTN of-

- (a) a forward-looking cost-based pricing method; or
 - (b) if the Commission considers that a forward-looking cost-based pricing method does not best give effect to the purpose set out in section 18, whichever of the following methods that the Commission considers best gives effect to that purpose:
 - (i) a pure bill and keep method; or
 - (ii) a pure bill and keep method applied to two-way traffic in balance (or to a specified margin of out-of-balance traffic) and a forward-looking cost-based pricing method applied to out-of-balance traffic (or traffic beyond a specified out-of-balance margin)
36. Schedule 1 Part 2 subpart 1 of the Act requires that the Commission in applying the initial pricing principle must consider the:
- (a) incentives to terminate dial-up internet traffic and other similar one-way traffic streams must be efficient; and
 - (b) the effect of any obligation under the TSO instrument to provide price-capped unlimited calls
37. Section 30 requires that a determination must include:
- (a) the terms on which the service must be supplied; and
 - (b) the reasons for the determination; and
 - (c) the terms and conditions (if any) on which the determination is made; and
 - (d) the actions (if any) that a party to the determination must do or refrain from doing; and
 - (e) the expiry date of the determination.

THE INTERCONNECTION SERVICE

38. The parties disagree about whether Vodafone's proposed service is a local service, and whether the Commission should define the interconnection service in relation to the proposed Vodafone retail service.
39. The Application sought interconnection with Telecom's fixed PSTN. Vodafone requires access in order to launch a new service that it considers to be a local service.⁷ The Application provided details of the proposed service, such as the use of cellular technology, Local Numbers and the Homezone, but defined the requested interconnection service in terms of a specific type of call.⁸

Submissions

40. Telecom submits that the service proposed by Vodafone is not a local service, and should not be defined by the Commission as such, but rather is a mobile service. Telecom argues that:⁹

Vodafone has provided no evidence that its [proposed local] service is anything but a mobile service

...While Vodafone's proposed service would use local numbers, there can be no doubt that termination on Vodafone's proposed service is termination on a mobile network.

41. Telecom argues that Vodafone is asking the Commission to define a local call in a way that extends the free local calling requirement under the TSO and that the Commission does not have jurisdiction to extend the scope of the TSO by redefining what a "local call" is in this context.¹⁰
42. Further, Telecom submits that it is important for Telecom to understand how a call from its PSTN is handled beyond the point of interconnection for the purpose of:¹¹
- Defining the service for which Telecom must terminate and handover calls;
 - Determining the appropriate termination cost-based pricing methodology; and
 - In order for Telecom to identify the call type for retail charging purposes (including ensuring that Telecom meets its TSO obligations).
43. Telecom submits that 'Vodafone has provided insufficient details to clearly define the service that Telecom must handover to, and terminate calls from'.¹²

⁷ Vodafone, *Section 20: Application for Determination for Designated Access Service*, 13 January 2006, page 5.

⁸ *ibid.*

⁹ Telecom, *Submission in respect of the Application by Vodafone for Determination of a Designated Access Service*, 4 April 2006, paragraph 114 and paragraph 49.

¹⁰ *Ibid*, para 64

¹¹ Telecom, *Submission in respect of the Application by Vodafone for Determination of a Designated Access Service*, 4 April 2006, para. 109

¹² *Ibid*, paragraph 110

44. Vodafone submits:¹³

We do not see any reason in principle why what happens after the point of interconnection should be of any concern to the Commission. Once the call is handed over to Vodafone, where that call is terminated should not make any difference to Telecom in an interconnection sense.

45. Vodafone argued that call forwarding should have no impact on interconnection agreements and cited industry practice as supporting this view:¹⁴

Standard industry practice is to expressly carve-out the provision of call forwarding services from any conditions associated with local interconnection. The application of call forwarding or similar functionality is expressly excluded from the definition of “designated destination”, a term used in most interconnection agreements in the market to indicate the point to which the incoming call should be delivered.

46. Vodafone also submits that any call forwarding offered as part of the proposed service is an additional option acquired at the election of the Vodafone customer.

Analysis

47. The Act does not require that Vodafone operate a fixed PSTN in order to gain access to the designated access service for any specific call type. Further, the Act does not define the designated access service ‘Interconnection with Telecom’s Fixed PSTN’ with reference to either “local call” or “local service”. Nor does it require that an access seeker offer a local service to end users. In particular, the Act neither requires that the Commission determine the characteristics of the access seeker’s retail product, nor does it impose requirements of the characteristics of the access seeker’s retail product.

48. The Commission has previously defined a ‘local call’ and for the purpose of this determination, adopts the same definition:¹⁵

A call where the number from which the call originates and the number of the intended recipient of the call are allocated to the same local calling area.

49. The Application is made specifically in relation to voice calls made between Vodafone local numbers and Telecom local numbers allocated to the same calling area.¹⁶ The request is for interconnection of a specific call type, rather than for a specific retail product or its underlying technology.

50. The Number Administrator governs the assignment and use of local numbers, whereas the Commission is responsible for setting the terms for the interconnection of local calls between Vodafone’s network and Telecom’s fixed PSTN.

¹³ Vodafone, *Submission on Commission Decision to Investigate Local Service Application*, 4 April 2006, paragraph 14

¹⁴ *ibid*, paragraph 3

¹⁵ *Decision 477*, Appendix 2: Interconnection Terms, page 7.

¹⁶ Vodafone *Section 20: Application for Determination for Designated Access Service*, 13 January 2006, page 5.

51. In Decision 477, the Commission was not concerned with what happened to local calls once they had been handed over (i.e. what happens beyond the point of interconnection). This approach is consistent with New Zealand industry practice for interconnection agreements.
52. Under these interconnection arrangements, calls are generally not reclassified as a result of any value added after handover, and the costs of the value add are incurred and borne by the terminating party. For example, if a local call to a Telecom residential customer is forwarded to a Telecom mobile number, the originating call is not (re)classified as a fixed to mobile call, even though the physical point of termination is the mobile handset. Having calls reclassified, and by extension re-priced at a wholesale level based on factors unknown to the caller when making the call could create problems in setting the retail price if the wholesale price is variable, and possibly customer uncertainty over the cost of the call.
53. Vodafone has proposed to provide national mobile coverage as an optional value added service to the customers of the proposed service. As Vodafone (and not Telecom) will be retailing this service, and any other value add provided after call handover (e.g. voice mail services), Telecom does not require details of what happens after call handover for its retail pricing. Further, the provision of any value add by Vodafone after handover does not impact on Telecom's ability to supply the designated interconnection service, or on the costs of supplying this service.
54. Defining the interconnection service in relation to a specific Vodafone retail service would constrain Vodafone in introducing new retail products to the market, such as products based on new technology or products designed to respond to consumer requirements or a competitor's product. This lack of flexibility may result in cost and delay, and in turn place the access seeker at a competitive disadvantage in terms of being able to quickly launch new products.

Conclusion

55. This determination is made in relation to the interconnection of local calls between Vodafone's network and Telecom's fixed PSTN. The defining characteristic of these calls is that the number from which the call originates and the number of the intended recipient of the call are allocated to the same local calling area. How Vodafone handles the call beyond the point of interconnection, is not relevant to Telecom's obligation to supply the designated access service.
56. Accordingly, it is neither necessary to further define the features of a local call, nor to define the designated access service in relation to a specific Vodafone retail service.

APPLICATION OF THE INITIAL PRICING PRINCIPLE

57. The initial pricing principle sets out the options that are available to the Commission for setting the price to be paid for origination and termination of call traffic.
58. The Commission is required to adopt a forward-looking cost-based pricing method; or if the Commission considers that a forward-looking cost-based pricing method does not best give effect to the purpose of the Act, either a pure bill and keep method or a hybrid bill and keep method (depending on which method best gives effect to that purpose).
59. Under a forward-looking cost-based method, the originating network operator is charged for termination of calls on the terminating network, regardless of whether the customer is billed at the retail level.
60. Under a pure bill and keep approach, interconnecting local calls are exchanged at zero wholesale cost, with each carrier keeping the revenue it receives from billing its retail customers and absorbing its own network costs. Telecom and TelstraClear use this arrangement for local calls in New Zealand.
61. Under hybrid bill and keep, interconnecting calls have a zero interconnection price if the net volume of call minutes exchanged between the two carriers are within specified limits, but any 'out-of-balance' calls exceeding this limit would incur an interconnection charge calculated on a forward-looking cost-based method.

Forward-looking cost-based Pricing Method

62. The forward-looking cost-based pricing method can provide an effective pricing principle in a range of situations, including pricing non-local calls.
63. In Decision 477, the Commission set the interconnection price for toll-free calls, toll bypass and standard calls, calls to 50XY numbers and premium rate services using benchmarking against interconnection prices in comparable countries derived by a forward-looking cost-based pricing method. However, pure bill and keep was used for the interconnection of local calls between Telecom and TelstraClear.

Submissions

64. Vodafone submits that termination costs on its network are significantly higher than termination costs on Telecom's fixed PSTN. Accordingly, the adoption of reciprocal cost-based termination pricing would result in the payment by Telecom to Vodafone of net interconnection charges. Telecom would then pass that cost on to its retail customers, which would retard competition by deterring Telecom customers from making calls to Vodafone local numbers.

65. Vodafone argues that forward-looking cost-based pricing will not best give effect to the purpose set out in section 18, and that bill and keep pricing is preferable. Vodafone submits that:¹⁷
- ...the ability for callers to ring a Vodafone local number at the price of a local call is likely to be important to the success of our local service initiative.
66. Telecom argues that bill and keep is intended to be used where the cost characteristics and economics of the respective networks are analogous, where call volumes going in each direction are comparable and there is a distortion that would be created by adopting a cost-based pricing methodology.
67. Telecom argues that the cost characteristics are not similar between Telecom's and Vodafone's network, and that it is not clear that the call volumes in either direction will be comparable.¹⁸ Accordingly, Telecom submits that the Commission cannot be satisfied that a forward-looking cost-based pricing methodology does not give best effect to section 18.¹⁹
68. During the consultation stage preceding Decision 477, Charles River Associates ('CRA')²⁰ submitted on behalf of Telecom that a forward-looking cost-based methodology was appropriate for many call types, but that for local calls pure bill and keep was preferable. CRA argued that pure bill and keep leads to a greater degree of incentive compatibility between interconnecting parties, which enhances dynamic efficiency. In particular, CRA argued that under pure bill and keep each carrier is required to bear its own costs for reciprocal traffic exchange, thus providing incentives to minimise costs. CRA also cited simplicity and avoidance of the risk of gaming or arbitrage as examples of the benefits of bill and keep pricing for the interconnection of local calls.

Analysis

69. Both parties agreed that if separate forward-looking cost-based calculations were done for each Party's network, the cost of termination on Vodafone's cellular network would be greater than that for Telecom's fixed PSTN. This would result in asymmetrical pricing, whereby Vodafone would have a positive cash inflow from interconnection payments if call volumes were in balance.
70. Reciprocal pricing provides a means to implement symmetrical per call pricing. Under this approach the price Telecom charges Vodafone for termination would be set as the forward-looking cost-based price for Telecom's fixed PSTN, and Vodafone would then charge Telecom the same price for termination of local calls to Vodafone local numbers. This effect of this would be that the interconnection price would be the same as the forward-looking cost-based price of interconnection between two fixed

¹⁷ Vodafone, *Submission on Commission Decision to Investigate Local Service Application*, 4 April 2006, paragraph 37.

¹⁸ Telecom, *Submission in respect of the Application by Vodafone for Determination of a Designated Access Service*, 4 April 2006, para. 35,36

¹⁹ *ibid*, para. 8, 34

²⁰ CRA, *Interconnection Pricing*, 7 June 2002, page 9

PSTNs. Hence if call traffic was in balance, the interconnection payments would balance out. However, there would be a per call cost of interconnection which could impact the Parties' behaviour.

71. The risk of having individual customers incurring high net levels of interconnection payments for local calls would restrict Vodafone's ability to compete for some customer profiles such as those who make large numbers of outbound local calls or who prefer a calling plan which allows for unlimited calling (even if they have moderate call volumes). Such a restriction, which is specific to one access provider, would limit the level of competition for these customer segments.
72. The presence of interconnection payments would encourage both Telecom and Vodafone to target customers who are net receivers of calls (i.e. customers who receive more call minutes than they make). This targeting of net receivers could occur as these customers would generate a positive inflow of interconnection payments. This could lead to inefficient cross subsidisation of these net call receivers.
73. Telecom²¹ argues that balanced traffic is a prerequisite for adopting bill and keep pricing. While there is no reason to believe that local call traffic between Vodafone and Telecom customers would intrinsically be materially out of balance, forward-looking cost-based pricing is likely to result in the introduction of retail plans that game the interconnection payments. By changing customer call behaviour and/or attracting certain customer profiles, such plans could lead to an imbalance of interconnection traffic. Hence the pricing principle itself can influence whether or not calling is in balance.
74. The use of forward-looking cost-based pricing incurs administrative costs due to support billing and recovery of interconnection charges. Forward-looking cost-based pricing would also incur the regulatory cost of the Commission having to undertake benchmarking or TSLRIC modeling to determine the interconnection rate.

Incentives to terminate dial-up internet traffic and other similar one-way traffic streams

75. Subpart 1 of Part 2 of Schedule 1 requires that the Commission must consider that the incentives to terminate dial up internet traffic and other similar one traffic streams must be efficient. As this Application only relates to voice calls, the Commission does not need to consider data traffic such as internet calls.
76. As noted above, forward-looking cost-based pricing creates incentives for carriers to attract users who are net receivers of calls. This includes incoming one way voice traffic streams such as inbound call centres. The termination revenue from these calls could be used to inefficiently subsidise the customers' access services. Such gaming would increase the costs of the other carrier, particularly Vodafone for whom off-network calls would represent a large percentage of all local calls, and could result in Vodafone having to increase prices to their customers. Such a result would be detrimental to competition.

²¹ Telecom, *Submission in respect of the Application by Vodafone for Determination of a Designated Access Service*, 4 April 2006, para. 35,36

The effect of any obligation under the TSO instrument to provide price-capped unlimited calls

77. The service description for ‘Interconnection with Telecom’s fixed PSTN’ set out in the Act also requires that, when selecting the pricing principle, the Commission considers the effect of any obligation under the TSO instrument to provide price-capped unlimited calls.
78. In the residential local calling market, having a cost-based termination charge for local calls would result in Telecom charging Vodafone for the interconnection service, while Telecom’s Homeline retail customers do not pay variable call charges. For Vodafone to have an interconnect price higher than Telecom’s retail price would mean that, on a per call basis, Vodafone would experience a price squeeze. This, combined with the likely high percentage of calls Vodafone’s customers would make to Telecom customers, would have a detrimental effect on Vodafone’s ability to compete in the residential local calling market.
79. A requirement that Telecom pay Vodafone for interconnection payments would result in call costs that Telecom would be unable to recover from its Homeline customer. While it is likely that interconnection payments for local calls between Telecom and Vodafone would net out over all customers, a forward-looking cost-based price is likely to result in Telecom incurring net interconnection costs for local calls made by Homeline customers who make large numbers of calls to Vodafone local numbers.

Conclusion

80. The Commission considers that forward-looking cost-based pricing for the interconnection service would be inefficient and detrimental to competition in the local calling market. Such an outcome would not best give effect to the purpose set out in section 18.

Bill and Keep Pricing

81. Telecom submits that the designated access service only allows for regulation of origination and termination on a fixed PSTN, and does not cover termination on a mobile network, such as that operated by Vodafone.
82. Telecom argues that applying bill and keep pricing would require the Commission to regulate origination and termination on Vodafone’s network, which is not a designated service. Telecom argues that the Commission is not able to apply bill and keep pricing.²²

...in order to mandate bill and keep, the Commission would need to regulate both Telecom and Vodafone’s networks. However, mobile networks are not currently regulated. Vodafone appears to be seeking reciprocity in order to sit with its request for bill and keep and to fill the gap in the Commission’s jurisdiction. The Commission’s ability to mandate bill and keep fits

²² Telecom, *Submission in respect of the Application by Vodafone for Determination of a Designated Access Service*, 4 April 2006, para. 41

neatly with fixed-to fixed interconnection (which can be regulated under the Act). However the Act, and the policy behind it, never envisaged that bill and keep be regulated as between a mobile and a fixed network.

83. Vodafone argues that the Act allows the Commission to apply bill and keep pricing.²³
- ...The pricing principles for the Requested Service expressly provide for bill and keep where it is considered that forward-looking cost-based pricing will not give effect to the Act's purpose set out in section 18
84. Vodafone noted that one option for implementing bill and keep was for the Commission to specify a condition under section 30 requiring reciprocity.²⁴
85. Bill and keep is a reciprocal pricing principle, and therefore it applies to both the originating and terminating carrier. It follows that in the interconnection service, bill and keep pricing applies to both the access seeker and the access provider.
86. Under the interconnection service, the requirement to operate a fixed PSTN only applies to Telecom as the access provider. The Act does not impose any restrictions on the type of network technology operated by the access seeker, nor does it link the choice for the initial pricing principle to the access seeker's network technology.
87. The Commission accordingly rejects Telecom's argument that it is unable, notwithstanding the plain language of the designated service, to select a pure bill and keep method.

Pure Bill and Keep

88. A pure bill and keep pricing method would address the above limitations of forward-looking cost-based pricing and would best give effect to the purpose set out in section 18.
89. Since calls are exchanged at a price of zero under bill and keep, this avoids the problem of Vodafone having a marginal or per call cost disadvantage relative to Telecom and TelstraClear, and thus allows Vodafone to more effectively compete for residential customers who want uncapped free local calling.
90. As pure bill and keep removes the potential for the Parties to generate a net positive flow of interconnection payments from customers who are net receivers of calls, it removes the incentives for the Parties to game by targeting such customers. Pure bill and keep removes the inefficient cross-subsidies that such gaming would create.
91. As pure bill and keep applies to both networks it is effective at resolving the price for termination on both networks, hence removing a barrier to launching the new competing service. In the absence of any term requiring the access seeker to provide termination on its network on comparable terms to what it pays the access provider for

²³ Vodafone, *Submission on Commission Decision to Investigate Local Service Application*, 4 April 2006, para. 35

²⁴ *ibid*, para. 6

termination, pure bill and keep would address any potential terminating monopoly problem.

92. CRA²⁵ previously submitted that pure bill and keep reduces ongoing regulatory and administrative costs. Pure bill and keep would not require the Commission to undertake benchmarking or TSLRIC modeling to determine the interconnection rate.
93. The Parties agree that termination on Vodafone's network would cost more than termination on Telecom's fixed PSTN, but differ on the relevance of this cost asymmetry.
94. Vodafone may choose to recover its higher termination costs through a retail fixed access charge for the service. In that event, Vodafone's higher termination costs will be recovered from its retail customers and not from Telecom.

Incentives to terminate dial-up internet traffic and other similar one-way traffic streams

95. Pure bill and keep removes the incentives for the parties to inefficiently subsidise customers that have large inbound one-way traffic streams. Under pure bill and keep, each network operator would bear the network termination costs from attracting these customers. Accordingly, pure bill and keep reduces the incentive to target individual customers or design other strategies to 'game' the interconnection payment system. The Commission agrees with CRA²⁶ that this benefit of pure bill and keep enhances dynamic efficiency.

The effect of any obligation under the TSO instrument to provide price-capped unlimited calls

96. Pure bill and keep is compatible with Telecom's obligation under the TSO to provide residential customers with price-capped local calling. The adoption of bill and keep removes the potential for Telecom to have individual customers who incur high net interconnection costs for local calls to Vodafone local numbers.

Hybrid Bill and Keep

97. Hybrid bill and keep, when used in conjunction with a forward-looking cost-based price for out of balance traffic above a threshold, can preserve some termination revenue for a network operator that is a net call recipient.
98. However, the implementation of hybrid bill and keep requires the calculation of the forward-looking cost-based price and the measurement of call traffic volumes, even when in practice call traffic is within the thresholds for being in-balance. As such it is at least as costly to administer as a forward-looking cost-based regime. A hybrid bill and keep method also requires that the Commission determine the threshold for out of balance traffic, a task which adds to the costs of regulation.

²⁵ CRA, *Interconnection Pricing*, 7 June 2002, page 9

²⁶ *Ibid*, page 8

99. If there was no margin or threshold for out-of-balance traffic, the hybrid bill and keep approach would have the same effect as a forward-looking cost-based pricing method and thus the same outcome in terms of best giving effect to the purposes of the Act.
100. As noted by CRA²⁷, while hybrid bill and keep with some threshold for out-of-balance traffic may reduce some opportunities for gaming, it may still provide some incentives for parties to game in order to avoid paying out-of-balance charges.

Conclusion

101. The Commission is satisfied that the pure bill and keep method would best give effect to the purpose set out in section 18. The alternative of a hybrid bill and keep approach shares several limitations with the forward-looking cost-based pricing method and thus would not give best effect to that purpose. The pure bill and keep method is also compatible with the effect of the TSO obligation to provide price-capped local calling and is more efficient in terms of the incentives to terminate one-way traffic streams.

²⁷ *Ibid*, page 9.

TELECOM RETAIL PRICING

102. The Application requests that the Commission impose a condition preventing Telecom from discriminating between the price it charges its customers for local calls made to Vodafone's local customers, and those made to other networks.²⁸
103. The effect of Vodafone's proposal is that calls from Telecom's residential customers to Vodafone local customers within the same local calling area would not attract a calling charge. Calls from Telecom's business customers to Vodafone's local customers within the same local calling area would cost no more than the current prices for calls to other Telecom customers within the calling area.
104. Calls made to cellular networks are specifically excluded from the local free calling requirement set out under the TSO Deed. Accordingly, Telecom is not prevented by the TSO Deed from charging its residential and business customers a premium for calls made to Vodafone local numbers.

Submissions

105. Vodafone is concerned that Telecom will charge its customers a premium for making calls to Vodafone local customers. Vodafone submits that:²⁹

If Telecom can require callers to Vodafone local numbers to pay higher rates than callers to other local numbers, there could be a significant disincentive to take up Vodafone's local service.
106. Vodafone argues that the exclusion under the TSO Deed was designed to protect Telecom from having to provide free local calls where it faced mobile interconnection charges. Vodafone submits that this provision is not relevant if Telecom does not face higher interconnection charges, as would be the case if bill and keep pricing was in place.
107. Accordingly, Vodafone argues that the Commission should set a condition under section 30 that prevents Telecom from discriminating between the price it charges its customers for local calls made to Vodafone's local customers, and those made to other third party networks.³⁰
108. Telecom considers that it should be allowed to discriminate in its retail charging between calls to Vodafone local numbers and those to other local numbers.
109. Telecom submits that the TSO recognises that Telecom is free to charge for calls to cellular networks from customers covered by the TSO regime. Telecom argues that a

³⁰ Vodafone, *Section 20: Application for Determination for Designated Access Service*, 13 January 2006, para. 156

retail charge for calls to Vodafone's network is necessary in order to allow for the recovery of costs associated with providing its customers with that calling service.³¹

110. Telecom notes that Vodafone practices differential retail pricing for calls between Vodafone mobile customers and Telecom's mobile customers.³²
111. Telecom also argues that the Commission does not have the power to impose the retail pricing restriction Vodafone requested and submits that:³³

Vodafone's request that the Commission determine, as a term of supply, that Telecom cannot charge its customers any more to call a Vodafone local number than to call any other local number on a third party fixed network is outside the Commission's jurisdiction, and outside the policy of the Act to regulate wholesale services.

112. In response to Vodafone's submission that section 30 gives the Commission the power to determine the retail price charged by Telecom for calls to Vodafone's network, Telecom argues that:³⁴

Section 30 does not give the Commission an unfettered discretion to impose whatever terms it might be asked, or choose, to determine.

Cost Recovery

113. The Commission does not believe that Telecom will incur any additional costs for originating calls to Vodafone local numbers in a bill and keep environment in comparison with local calls to other carriers' networks.
114. The cost to Telecom of calls to the proposed Vodafone service would be significantly less than the cost Telecom incurs when its local access customers call Vodafone mobile numbers. Under bill and keep pricing, Telecom will pay an interconnection charge of zero in respect of termination on Vodafone's network.
115. While Telecom would incur the incremental cost of originating the call on its fixed PSTN, that cost would be comparable to that of originating an interconnecting local call which terminates on another provider's fixed PSTN or the origination leg of a toll bypass call. It would also be less than the cost of many local calls between two Telecom fixed PSTN customers, as the latter incurs cost for both origination and termination, unlike calls to the proposed Vodafone service where Vodafone absorbs its own termination costs. Due to the economies of scale inherent in call volumes on the local access network, the incremental cost for handling voice calls to the Vodafone service would be minimal, and in any event no greater than those of other local calls.
116. Given this cost structure, for those business and residential customers who pay for local calls, Telecom should be able to recover its costs for calls to Vodafone local numbers using the same prices as used for other local calls.

³¹ Telecom, *Submission in respect of the Application by Vodafone for Determination of a Designated Access Service*, 4 April 2006, paragraph 65.

³² *Ibid*, paragraph 99.

Effect of a Price Premium on the Market

117. The prices advertised on Telecom's website for its local calls do not differentiate between calls to Telecom customers and calls to other carriers' local access customers.³⁵
118. While the TSO does not prevent Telecom from charging for calls to cellular networks, Telecom's Homeline product, which provides the residential service required by the TSO Deed, advertises local calling as included in the monthly charge.³⁶
- Homeline
Covers the services in your Line Rental, including unlimited local calling, for \$42.20 including GST a month.
119. If Telecom was to make a call charge specifically for calls to Vodafone local numbers, this would act as a disincentive for Telecom customers to call Vodafone numbers and would reduce Vodafone's ability to compete against Telecom's local access services.
120. Given many of Telecom's local access customers also buy other telecommunications products from Telecom, for Telecom losing an access customer could also result in a loss of toll, value add service (e.g. voice mail or caller display) and Internet-related revenue. Telecom therefore has a significant incentive to deter its local customers from switching to the Vodafone service.
121. For Vodafone's service to be an effective substitute for existing local access services, customers would expect that other users can call them at rates comparable to other local calls. Potential users of the Vodafone service would recognise that any additional charge incurred by callers to Vodafone local numbers would make it less likely that callers will choose to call those numbers.
122. The proposed Vodafone service will result in consumers having greater choice of local access providers, which will in turn encourage local access providers to deliver product innovation and reduced prices. Such increased competition would be in the long term interests of consumers and is likely to best give effect to the purpose set out in section 18.
123. If Telecom were to charge specifically for calls to Vodafone local customers, its customers may not recognize the unique Vodafone numbers, and would therefore be confused to find out later that they had incurred a charge for the local call. This confusion will be compounded by the introduction of number portability in April 2007, when Telecom local numbers may be ported to Vodafone and vice versa.

³⁵ Page headed "Local calling", <http://www.telecom.co.nz/content/0,8748,200607-1217,00.html>, 22 May 2006

³⁶ <http://www.telecom.co.nz/content/0,8748,100005-1426,00.html>, 10 May 2006

124. Section 18(2) requires that the Commission considers any efficiencies when determining whether an act will result in the promotion of competition and long term benefits to end-users. As Vodafone already has an extensive cellular network in New Zealand, the introduction of the proposed Vodafone product would not result in inefficient overlay of Telecom's existing fixed PSTN. For some customers who are within Vodafone's coverage, but who do not presently have access to the Telecom fixed PSTN, connecting to the proposed Vodafone service would require less upfront investment than laying cable to the property's demarcation point. Other efficiency gains could result from end-users not requiring phone wiring inside their home or office.

Conclusion

125. The introduction by Telecom of retail charges specifically for calls made to Vodafone local numbers, compared to local calls to other networks, would be detrimental to competition in the local access market. Given that such calls will not involve interconnection payments, and will not result in Telecom incurring any additional costs beyond those caused by other local calls, any such discriminatory charge cannot be justified.
126. The Commission requires that Telecom refrain from imposing any charge on its retail customers that would discriminate between local calls made to Vodafone local numbers and calls made to any other carrier's local numbers.

EXPIRY DATE OF THE DETERMINATION

127. The Commission is required under section 30(e) to determine the expiry date of the determination.

128. Section 62 provides that:

Every determination expires on the earlier of—

- (a) the expiry date stated in the determination; or
- (b) the date on which the designated service or specified service to which the determination applies ceases to have that status because it has either—
 - (i) expired under section 65; or
 - (ii) been omitted from Schedule 1 under section 66.

129. Section 65 is also relevant and provides that:

Expiry of designated services and specified services—

- (1) Every designated service or specified service expires on—
 - (a) the expiration of 5 years from the date on which the designated service or specified service came into force unless the period is extended in accordance with this section; or
 - (b) if the period is extended in accordance with this section, the expiration of that extended period, unless that extended period is again extended in accordance with this section.
- (2) Before the expiry of the period concerned, the Governor-General may, by Order in Council made on the recommendation of the Minister, extend—
 - (a) the period referred to in subsection (1)(a);
 - (b) any extended period.
- (3) Each extended period must not be more than 2 years.
- (4) The Governor-General may exercise the power conferred by subsection (2) more than once; but not more than once in respect of a particular period.

130. The designated access service of interconnection with Telecom's fixed PSTN came into force on 19 December 2001 and is currently due to expire on 19 December 2006.

131. Vodafone's application made the following request regarding the duration of the determination:

Vodafone proposes that the determination should apply from the date of the Commission's determination to 19 December 2006, or such later date within the period of any extension of the designated access service and being 24 months from the date of the determination. Vodafone considers this to be an appropriate horizon in that it provides certainty to the parties, while also recognising that the dynamic nature of the industry requires any determination to be flexible in the medium to long-run. Vodafone notes that the Commission has found these factors to be desirable in the TelstraClear and CallPlus interconnection determinations.

132. Vodafone considers that the requested duration:³⁷

...will provide a sufficient amount of time for Vodafone to prepare and commence operation of its local service, however the period will not be so long that it will hinder negotiation of different terms and conditions should this be necessary as a result of changing conditions in the industry.

133. Vodafone also requests that:

The Determination require the parties to commence negotiations of further terms of supply at least 6 months before expiry of the current term; and

If the parties have been unable to agree to new terms by the expiry of the current term, the Determination shall continue the existing terms on an interim basis until the new terms are agreed or determined. However, any terms applied on an interim basis should not prevent either party making an application for a further determination.

134. Telecom did not comment in its submission on the duration of the determination.

Conclusion

135. The Commission considers that the commercial reasons Vodafone proposes for extending the duration of the determination to 24 months from the date of determination, should such an extension be made to the expiry date for the designated service, are reasonable.

136. The determination will expire on the earlier of—

- (a) 24 months from the date of issue of the final determination; or
- (b) the date on which interconnection with Telecom's fixed PSTN ceases to be a designated access service because it has either—
 - (i) expired under section 65; or
 - (ii) been omitted from Schedule 1 under section 66.

137. The Commission requires that the Parties commence good faith commercial negotiations for continuing provision of the service at least six months prior to the expiry of the determination.

³⁷ Vodafone, *Submission on Commission Decision to Investigate Local Service Application*, 4 April 2006, paragraph 160.

OTHER TERMS AND CONDITIONS

138. The Commission requires that Telecom supply Vodafone with the designated access service of 'Interconnection with Telecom's fixed PSTN' in accordance with the following principles:
- (a) Telecom must provide to Vodafone origination and termination of local voice calls on Telecom's fixed PSTN.
 - (b) A local voice call means a call where the number from which the call originates and the number of the intended recipient of the call are allocated to the same local interconnection calling area.
 - (c) Local voice calls must be handed over, or offered for handover, from the originating network to the terminating network at the point of interconnection in the Major LICA which is the same as, or in the same LICA group as, the LICA to which the originating party's number is allocated.
 - (d) The Parties must adopt major and minor LICA boundaries that are consistent with Telecom's existing LICA structure.
 - (e) The Parties must agree on rules relating to the structure of LICAs and the boundaries of area code areas. The Local Calling Areas adopted by each party in designing its respective retail products may differ from the LICA structure.
 - (f) The obligation of Telecom to provide the designated access service is conditional upon the completion of appropriate testing. The Parties are required to commence testing within 30 days of the date of the final determination. The Parties shall use reasonable endeavours to complete that testing within 30 days of commencement of the testing.
139. The Commission expects the Parties to negotiate all outstanding terms within thirty days of the date of the final determination. If any terms are unable to be agreed by the Parties by the end of that period, the Commission will, at the request of either Party, make a decision on those outstanding terms.