



COMMERCE COMMISSION

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

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

VODAFONE NEW ZEALAND LIMITED

The Commission: Douglas Webb
Donal Curtin
Anita Mazzoleni

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: 28 September 2006

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LIST OF TERMS AND ABBREVIATIONS¹

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| 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 wholesale 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. |
| Designated Destination | A point in a receiving carrier’s network to which that carrier has allocated the network number provided by the other carrier as the called party number, disregarding the application of call forwarding or like functionality. |
| ESA | Exchange Service Area (also commonly referred to in the United States as a ‘wire centre’). |
| 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. |
| Homeline | Telecom’s residential local access product which includes unlimited local calling. |
| 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. |

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

| | |
|---------------------------|--|
| LICA | Local Interconnection Calling Area. |
| 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). |
| Local Voice Call | A call where the number from which the call originates and the number of the intended recipient are allocated to the same LICA. |
| MMS | Multimedia Messaging Service which is a standard for telephony messaging that allows users to send messages that include multimedia objects such as images, audio, video and rich text. |
| 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. |
| 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. |
| Pure Bill and Keep | Refer to Bill and Keep. |
| TSLRIC | Total service long-run incremental cost, in relation to a telecommunications service. |
| TSO | Telecommunications service obligations. Obligations in relation to a TSO instrument. |

Cited Commission Determination and Draft Determinations

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/IndustryRegulation/Telecommunications/InterconnectionDeterminations/InterconnectionDeterminations/telstraclear.aspx>

Draft Determination

The Draft Determination of 19 June 2006 issued by the Commission in respect of an application by Vodafone for determination of designated access services 'Interconnection with Telecom's fixed PSTN'. The draft determination is available at

<http://www.comcom.govt.nz/IndustryRegulation/Telecommunications/InterconnectionDeterminations/InterconnectionDeterminations/vodafone.aspx>

TSLRIC Draft Determination

Draft Determination on the Application for Pricing Review for Designated Interconnection Services – 11 April 2005. The Draft Determination is available at

<http://www.comcom.govt.nz/IndustryRegulation/Telecommunications/InterconnectionDeterminations/InterconnectionPricingReviews/ContentFiles/Documents/Interconnection%20Pricing%20Review%20Draft%20Determination%20FINAL%20PUBLIC%2011%20April%202005.pdf>

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 voice call is a voice 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 LICA.
4. It is not necessary to further define the features of a local voice 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 voice 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 local voice calls to Vodafone local numbers, relative to the price charged for other local voice 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 has recommended to the Minister of Communications that the designation of this service continues for a further two years.

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 final 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 final 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 originate or terminate on the Telecom fixed PSTN within the same LICA. The service does not apply to the interconnection of calls to and from Vodafone's mobile numbers.
14. This determination sets out the price and the non-price terms that will apply to the access service.
15. This 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.

THE APPLICATION

16. 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').² Vodafone requests access to interconnection with Telecom's fixed PSTN under Schedule 1 of the Act.
17. 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 Vodafone³ and Telecom⁴ in respect of the Application.
18. The Commission issued a draft determination on 19 June and received submissions from Vodafone and Telecom on 3 July. Cross-submissions were received on 12 July.
19. 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
20. 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 or from Vodafone's mobile numbers, nor to data calls such as calls to ISPs.⁵
21. Vodafone proposed that such calls be handed over in the LICA Group to which the local number for the originating network's customer is allocated.⁶ The handover terms for other call types, such as national tolls and mobile to fixed calls are outside the scope of this determination.
22. Vodafone requested that the Commission adopt a bill and keep pricing methodology for the purposes of this determination.
23. Vodafone also requested that the Commission apply a condition preventing Telecom from retail 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.

² Vodafone, *Section 20: Application for Determination for Designated Access Service*, 13 January 2006

³ Vodafone, *Submission on Commission Decision to Investigate Local Service Application*, 4 April 2006.

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

⁵ Vodafone, *Section 20: Application for Determination for Designated Access Service*, 13 January 2006, page 5, 23, 24

⁶ *Ibid*, Annex 2 page 5

BACKGROUND

24. 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 voice calls while the customer remains within a geographic area surrounding the customer's home or business (the 'homezone').
25. Customers may, as an additional service offering, be able to receive calls to their local number while outside of their homezone.
26. Vodafone's local customers will expect to make local voice calls to, and receive calls from, Telecom's customers. Therefore Vodafone needs an interconnection agreement with Telecom for local voice calls between Vodafone local numbers and Telecom's fixed PSTN.
27. Vodafone and Telecom ('the Parties') have been unable to agree on an interconnection arrangement since 2003, when the previous agreement for the supply of this service expired.⁷

⁷ The current mobile termination interconnection agreement between Telecom and Vodafone specifically excludes calls made from or to Vodafone local numbers.

FRAMEWORK FOR THE DETERMINATION

28. This section sets out the legislative framework under which the determination is made.
29. 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.
30. 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.
31. 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.
32. 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; and
 - (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.
33. 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.
34. 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)

35. 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

36. 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

37. 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.
38. 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.⁸ 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.⁹
39. The draft determination adopted the definition of a local call previously used in Decision 477:¹⁰

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.

Attributes of a Local Service

Telecom's submissions

40. In commenting on the Decision to Investigate 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:¹¹

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. CRA, on behalf of Telecom, argues that the proposed Vodafone service is a mobile service and that the interconnection arrangement should be considered as fixed to mobile interconnection. CRA provided international benchmarks for fixed to mobile and mobile to fixed interconnection rates.
42. 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.¹²

⁸ Vodafone, *Section 20: Application for Determination for Designated Access Service*, 13 January 2006, page 1, 5.

⁹ *ibid.*

¹⁰ *Decision 477*, Appendix 2: Interconnection Terms, page 7.

¹¹ Telecom, *Submission in respect of the Application by Vodafone for Determination of a Designated Access Service*, 4 April 2006, paragraph 114 and paragraph 49.

¹² *Ibid*, para 64

43. 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:¹³
- 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).
44. Telecom submits that ‘Vodafone has provided insufficient details to clearly define the service that Telecom must handover to, and terminate calls from’.¹⁴
45. In response to the draft determination’s comment on the issue of individual calls being reclassified as a result of any value added after handover, Telecom replies¹⁵:

We confirm that this is not Telecom’s concern, and that it is the nature of the service (rather than individual call) that is relevant in developing appropriate interconnection arrangements.

Vodafone’s submissions

46. Vodafone submits that the draft determination’s approach to defining “local calls” by reference to the use of local numbers is the only truly technology-neutral approach, and that to impose constraints on where a local call can be originated or terminated would limit competition.¹⁶
47. Vodafone argues that as the NAD’s numbering rules would give the Vodafone retail product a “geographic structure” that should address Telecom’s concerns about gaming.¹⁷
48. Vodafone submits:¹⁸
- 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.
49. Vodafone submits that any call forwarding offered as part of the proposed service is an additional option acquired at the election of the Vodafone customer. Vodafone argued that call forwarding should have no impact on interconnection agreements and cited industry practice as supporting this view.¹⁹

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

¹³ Telecom, *Submission in respect of the Application by Vodafone for Determination of a Designated Access Service*, 4 April 2006, para. 109

¹⁴ *Ibid*, paragraph 110

¹⁵ Telecom, *Appendix A: Assessment of the Business Impacts of the Commission’s Draft Decision*, 3 July 2006, para. 41

¹⁶ Vodafone, *Cross submission on Vodafone’s interconnection application*, 11 July 2006, para. 34

¹⁷ Gaming is discussed in this determination’s section on Application of the Initial Pricing Principle

¹⁸ Vodafone, *Submission on Commission Decision to Investigate Local Service Application*, 4 April 2006, paragraph 14

¹⁹ Vodafone, *Submission on Commission Decision to Investigate Local Service Application*, 4 April 2006, paragraph 3

term used in most interconnection agreements in the market to indicate the point to which the incoming call should be delivered.

Commission Assessment

50. 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.
51. 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.
52. As this Application only relates to local voice calls that originate or terminate on Telecom's fixed PSTN, it is unnecessary for this determination to consider pricing benchmarks for other call types such as fixed to mobile interconnection and mobile to fixed interconnection.
53. 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.
54. As the terminating carrier is retailing the value add provided after call handover (e.g. voice mail services), the originating carrier 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.

Business Impacts

Telecom's submissions

55. Telecom's submission on the draft determination raised a number of related issues regarding the definitions of call types and the Commission's approach to what happens after call handover.
56. Telecom specifically questions the appropriateness of the draft determination's definition of a "local call". Telecom submits that it is important to understand the distinction between a "local call", and an "Intra-LICA Call" which Telecom considered to be the interconnection input that facilitates the "local call"²⁰. This point

²⁰ Telecom, *Appendix A: Assessment of the Business Impacts of the Commission's Draft Decision*, 3 July 2006, para. 7,8

relies on the difference between a local calling area (retail construct) and its wholesale (interconnection) equivalent of the LICA.

57. Telecom argues that in Decision 477, the definition of an intra-LICA call relied on the Designated Destination, a point in the receiving carrier's network.
58. Telecom submits that the overall effect of the draft determination's recommendations would "undermine" the "foundations upon which interconnection rest"²¹ as it could result in interconnecting carriers avoiding interconnection charges over a range of call types. Telecom describes several 'arbitrage' situations where an interconnecting carrier structures its activities to minimise or avoid paying interconnection fees.
59. Telecom argues that these problems could be mitigated by:
 - a. Clearly distinguishing between the definition of a retail "local call" and the term used in the interconnection service definition – an "Intra-LICA Call"; and
 - b. Defining what occurs beyond the point of interconnection – including defining the "HomeZone" and clarifying what constitutes a "Local Call" for Vodafone's purposes.

Vodafone's submissions

60. Vodafone submits that Telecom has misrepresented the significance of the definition and use of "Designated Destination" in interconnection agreements. Vodafone argues that in Vodafone's interconnection agreements with Telecom, this term is not used to define the relevant call type, but rather describes the point to which the terminating party must deliver the relevant call and certain handover obligations.
61. Vodafone claims that the risks to the stability of New Zealand's interconnection regime are an "old problem" and do not arise from the Commission's definition of a local call. Vodafone notes that both its commercially negotiated contract with Telecom and Decision 477 have clauses designed to prevent artificial manipulation of call types.²²

Commission Assessment

62. The Commission agrees with Telecom that it is important to distinguish between the retail and wholesale constructs of local calling. Having a distinction between the retail and wholesale concepts allows carriers to design their own local calling areas within which a customer can make a local call, while maintaining a common set of boundaries for interconnection purposes.
63. Should a carrier define one of its local calling areas to encompass multiple LICAs, some of the calls which its customers make as local voice calls to customers of other networks will cross a LICA boundary. In this situation the use of the LICA structure will mean these calls will not be local voice calls for the purposes of this determination.

²¹ Telecom, *Appendix A: Assessment of the Business Impacts of the Commission's Draft Decision*, 3 July 2006, para. 37, 38

²² Vodafone, *Cross submission on Vodafone's interconnection application*, 11 July 2006, para 27-32.

64. None of the arbitrage situations that Telecom identifies are unique to this Application. Rather all of the examples are of interconnection practices which could occur in the existing fixed PSTN environment. Specifically these risks all existed when Telecom proposed using bill and keep for local calls in their submissions in Decision 477. Telecom does not explain why the risks would be greater when one of the carriers uses mobile technology. Several of Telecom's examples, such as toll by-pass²³ and fixed broadband VOIP calling²⁴, relate to services that Vodafone does not offer in New Zealand.
65. Given the interconnection regime has remained stable while the arbitrage risks which Telecom identifies have existed concurrent with the use of pure bill and keep for local voice calls, it is reasonable to assume that the interconnection regime would remain stable if a comparable arrangement existed between Telecom and Vodafone. Hence these risks do not justify defining what happens beyond the point of interconnection.

Conclusion

66. This determination is made in relation to the interconnection of local voice calls between Vodafone's network and Telecom's fixed PSTN. The defining characteristics of these calls are that they are voice calls, and that the number from which the call originates and the number of the intended recipient of the call are allocated to the same Telecom local calling area or LICA. How Vodafone handles such a call beyond the point of interconnection is not relevant to Telecom's obligation to supply the designated access service.
67. Accordingly, it is neither necessary to further define the features of a local voice call, nor to define the designated access service in relation to a specific Vodafone retail service.
68. Decision 477 does not support Telecom's argument that the management of a local voice call after handover is relevant to this determination.
69. Should Vodafone adopt local calling areas that differ from Telecom's LICA structure, interconnecting voice calls which cross LICA boundaries will not be local voice calls for the purposes of this determination.
70. Neither Party shall attempt to artificially manipulate call presentation information provide to the other Party, so as to cause a call to be or appear to be a local voice call, when it would not be a local voice call but for the artificial manipulation.

²³ Telecom, *Appendix A: Assessment of the Business Impacts of the Commission's Draft Decision*, 3 July 2006, para. 24

²⁴ Telecom, *Vodafone Local service - Cross Submission*, 11 July 2006

APPLICATION OF THE INITIAL PRICING PRINCIPLE

71. 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.
72. 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).
73. 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.
74. Under a pure bill and keep approach, interconnecting 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 currently use this arrangement for local calls in New Zealand.
75. Under hybrid bill and keep, interconnecting calls have a zero interconnection price if the net volume of call minutes exchanged between the two carriers is within specified limits. However 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

76. The forward-looking cost-based pricing method can provide an effective pricing principle in a range of situations, including pricing non-local calls.
77. 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. Telecom and TelstraClear agreed that pure bill and keep would be used for the interconnection of local calls.

Submissions

78. Vodafone submits that termination costs on its network are significantly higher than termination costs on Telecom's fixed PSTN. Accordingly, the adoption of 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 discouraging Telecom customers from making calls to Vodafone local numbers.

79. 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:²⁵

...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.

80. In responding to the Decision to Investigate, 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.
81. Telecom argues that the cost characteristics are not similar between Telecom's and Vodafone's networks, and that it is not clear that the call volumes in either direction will be comparable.²⁶ Accordingly, Telecom submits that the Commission cannot be satisfied that a forward-looking cost-based pricing methodology does not give best effect to section 18.²⁷
82. In responding to the draft determination, Telecom submits that the use of bill and keep in New Zealand was an "exception" and that its use in Decision 477 was to address a specific problem of call sinks.²⁸

Bill and keep was originally adopted in New Zealand to address a ... callsink situation created by the requirement that Telecom offer free local calling to residential customers under the TSO.

83. Vodafone does not consider that the use of bill and keep in Decision 477 was an "exception" and notes that in the past Vodafone and Telecom had interconnected mobile-to-mobile calls on a bill and keep basis and that Vodafone and Telecom currently use bill and keep to exchange MMS traffic on their mobile networks.
84. In its Application, Vodafone notes that it had agreed with another fixed carrier to exchange traffic with the proposed local access service on a bill and keep basis.
85. During the consultation stage preceding Decision 477, Charles River Associates ('CRA')²⁹ submitted on behalf of Telecom that a forward-looking cost-based methodology was appropriate for many call types, but that pure bill and keep was preferable for local calls. CRA argued that pure bill and keep leads to greater compatibility of incentives 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

²⁵ Vodafone, *Submission on Commission Decision to Investigate Local Service Application*, 4 April 2006, paragraph 37.

²⁶ Telecom, *Submission in respect of the Application by Vodafone for Determination of a Designated Access Service*, 4 April 2006, para. 35,36

²⁷ *ibid*, para. 8, 34

²⁸ Telecom, *Appendix A: Assessment of the Business Impacts of the Commission's Draft Decision*, 3 July 2006, para. 6, 9

²⁹ CRA, *Interconnection Pricing*, 7 June 2002, page 9

arbitrage as examples of the benefits of bill and keep pricing for the interconnection of local calls.

86. CRA's submission in response to the draft determination for this Application states that some of their previous comments on bill and keep only apply to voice and data calls and not calls to mobile networks.³⁰

Commission Assessment

87. The 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 net cash inflow from interconnection payments if call volumes were in balance.
88. 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), as these customers would generate a positive inflow of interconnection payments. This could lead to inefficient cross subsidisation of these net call receivers.
89. While a carrier's choice of network technology may impact its level of costs, it does not remove its incentives to game the system. For example, even if a carrier has relatively high overall costs, the presence of excess peak capacity or underutilised off peak capacity with low or zero short run incremental cost could lead to gaming behaviour.
90. Vodafone's Application proposed that for the purpose of setting the interconnection price, its network should be treated as if it were a fixed PSTN. Vodafone rather than Telecom would be absorbing its higher costs under either pricing method. This outcome casts doubts on arguments for using one pricing method or the other based on different cost structures flowing from differences in technology choice.
91. Reciprocal interconnection pricing provides a means to implement symmetrical usage based 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. The 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 PSTNs. Hence if call traffic was in balance, the interconnection payments would balance out. However, there would be a per call charge for interconnection which could impact the Parties' behaviour.
92. The risk of having individual customers incurring high net interconnection charges for local voice calling 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

³⁰ CRA, *Economic Advice on Aspects of Vodafone's Application for Interconnection with Telecom's Fixed PSTN*, 3 July 2006, page 4

volumes). Such a restriction, which is specific to one access provider, would limit the level of competition for these customer segments.

93. The use of forward-looking cost-based pricing incurs administrative costs due to the 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.

Call Traffic Patterns

94. Telecom³¹ initially argued that balanced traffic is a prerequisite for adopting bill and keep pricing, but later argued that in New Zealand, bill and keep was only introduced “to deal with the specific internet call sinks (asymmetric traffic) problem”³², a situation which by definition has out of balance traffic. In New Zealand the majority of local calls made to call sinks are data calls (internet usage) and thus are a call type not covered by this Application.
95. In 2002 the Commission issued a paper by Frontier Economics which proposed that bill and keep be used for call sink traffic, but that hybrid bill and keep be used for non-call sink local calls which includes most local voice calls, with out of balance traffic priced at its forward looking cost. TelstraClear and Telecom responded with a common view that pure bill and keep should be used for all local call traffic (i.e. that pure bill and keep should not be limited to addressing the call sink situations, but extended to all local calls).
96. While Decision 477 was made in the context of two fixed PSTNs, the cost to a network operator of terminating and originating local call traffic would be unaffected by the other network’s access technology.
97. Neither the Act nor industry practice indicates that it is inappropriate or exceptional to extend bill and keep beyond calls to call sinks. Telecom has on several occasions voluntarily chosen to use pure bill and keep pricing in contexts involving mobile technology and/or non-call sink calls.
98. While there is no reason to believe that local voice traffic between Vodafone and Telecom customers would intrinsically be materially out of balance, forward-looking cost-based pricing could result in the introduction of retail plans that game the interconnection payments. By changing customer call behaviour and/or attracting certain customer calling profiles, such plans could lead to an imbalance of interconnection traffic. Hence the pricing method can itself influence whether or not traffic is in balance.

³¹ Telecom, *Submission in respect of the Application by Vodafone for Determination of a Designated Access Service*, 4 April 2006, para. 35,36

³² Telecom, *Appendix A: Assessment of the Business Impacts of the Commission’s Draft Decision*, 3 July 2006, para. 19

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

99. Subpart 1 of Part 2 of Schedule 1 requires that the Commission must have regard to the need for the incentives to terminate dial up internet traffic and other similar one-way traffic streams to be efficient. As this Application only relates to local voice calls, the Commission does not need to consider data traffic such as internet calls.
100. Forward-looking cost-based termination charges would create incentives for carriers to attract customers who primarily receive one-way voice traffic, such as inbound call centres. The termination revenue from these calls could be used to inefficiently subsidise the customers' access services.

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

101. The Act also requires that, in applying the pricing principle, the Commission must consider the effect of any obligation under the TSO instrument to provide price-capped unlimited calls.
102. In the residential local voice calling market, having a cost-based termination charge for local calls would result in Telecom charging Vodafone for the interconnection service, while, as a result of the TSO instrument, Telecom's Homeline retail customers do not pay usage charges for local calls. In addition as local calls are exchanged between Telecom and TelstraClear using bill and keep, charging Vodafone a cost-based termination charge for local voice calls would result in a non-equivalence of input prices. 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 for residential customers seeking unlimited free local calling as part of the fixed periodic subscription.
103. While it is likely that interconnection payments for local calls between Telecom and Vodafone would net out over all customers, with cost-based termination charges, there is the risk that if Vodafone were the net receiver of calls, then Telecom would incur net interconnection costs. Telecom would not however be able to pass those costs onto its residential customers, since the TSO instrument caps monthly access charges and requires free local calling.

Conclusion

104. 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

Provisions of the Act

105. 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.
106. 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.³³
- ...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 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.
107. Vodafone argues that the Act allows the Commission to apply bill and keep pricing:³⁴
- ...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.
108. Vodafone submits that the Act does not limit the use of bill and keep to either the fixed PSTN or the free local calling option in the TSO instrument.
109. Vodafone noted that one option for implementing bill and keep was for the Commission to specify a condition under section 30 requiring reciprocity.³⁵
110. Bill and keep is a reciprocal pricing principle, and therefore it applies to both the originating and terminating carrier. It follows that for the designated access service, bill and keep pricing applies to both the access seeker and the access provider.
111. 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.
112. The Commission accordingly rejects Telecom's argument that it is unable to select a pure bill and keep method.

³³ Telecom, *Submission in respect of the Application by Vodafone for Determination of a Designated Access Service*, 4 April 2006, para. 41

³⁴ Vodafone, *Submission on Commission Decision to Investigate Local Service Application*, 4 April 2006, para. 35

³⁵ *ibid*, para. 6

Consideration received under bill and keep

113. Bill and keep has been described as a pricing regime in which each carrier bears its fixed costs for interconnection, and the payment for out of balance termination is set as zero. In this sense, the prices that are set under bill and keep approximate those that are incurred by carriers – large fixed costs and very small marginal costs for both origination and termination of local calls.³⁶
114. CRA argues that bill and keep is inappropriate because in this instance it does not involve “some form of interconnection payment” and sets the cost of interconnection “below marginal cost”.³⁷
115. Vodafone considers that Telecom would receive compensation for their costs in the form of reciprocal termination on Vodafone’s network, and notes that termination costs on a cellular network are higher than a fixed PSTN.³⁸
116. In an earlier paper CRA submitted that, like in barter, the absence of an explicit price does “not mean the price is zero” and that bill and keep did provide a price:³⁹
- In neither case (hybrid bill and keep or pure bill and keep), however is the price of interconnection (as opposed to the net payment) set to zero
117. In the earlier paper CRA argued that “it is inappropriate to assume that bill and keep prices interconnection at less than its true cost”⁴⁰ or that bill and keep sets prices “below cost”.
118. However CRA’s current submission argues that some of their previous comments on bill and keep only applied to “voice and data interconnection” and “not mobile networks”, the implication being that these earlier comments applied to interconnection between two fixed PSTNs.⁴¹
119. The underling proposition that reciprocal termination on another network is a form of consideration and thus the interconnection price is set above zero is a technology neutral proposition, and hence could be applied across a range of access technologies.⁴² Given Telecom has offered to pay the TSLRIC price of termination on Vodafone’s mobile network (which is several times greater than that for termination on Telecom’s fixed PSTN), it follows that termination on Vodafone’s network is a valuable form of consideration.

³⁶ CRA, *Comments on the Draft Access Determination: Interconnection Pricing*, 9 September 2002, pages 4-6.

³⁷ CRA, *Economic Advice on Aspects of Vodafone’s Application for Interconnection with Telecom’s Fixed PSTN*, 3 July 2006, page 10

³⁸ Vodafone, *Cross submission on Vodafone’s interconnection application*, 11 July 2006, para 23.

³⁹ CRA, *Interconnection Pricing*, 7 June 2002, page 7, 16

⁴⁰ *Ibid*, page 7

⁴¹ CRA, *Economic Advice on Aspects of Vodafone’s Application for Interconnection with Telecom’s Fixed PSTN*, 3 July 2006, page 4. This comment was made with reference to the paper by Quigley and Vogelsang *Interconnection Pricing: Bill and Keep Compared to TSLRIC*, CRA Report for Telecom New Zealand, 7 April 2003.

⁴² The proposition that consideration is received does not require that the consideration is identical in type and/or cost to deliver to that received in exchange. Taking CRA’s barter analogy, an example it is common for traders to exchange dissimilar items.

120. The Commission considers that as Telecom and Vodafone will both originate and terminate significant numbers of local voice calls, bill and keep will provide each party with a valuable form of compensation, for the costs which they incur in terminating the other carrier's calls.

Pure Bill and Keep

121. 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 of the Act.
122. Since calls are exchanged without payment under pure bill and keep, this avoids the problem of Vodafone having a marginal or per call cost disadvantage relative to Telecom and TelstraClear for termination of local voice calls on Telecom's fixed PSTN. Equivalence of input prices allows Vodafone to compete more effectively for residential customers who want uncapped or a large number of free local call minutes.
123. As pure bill and keep removes the potential for the Parties to generate a positive net flow of interconnection payments, it removes the incentives for the Parties to game by targeting customers who are net receivers of local voice calls. Pure bill and keep removes the inefficient cross-subsidies that such gaming would create.
124. As pure bill and keep applies to both Parties 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 termination, pure bill and keep addresses any potential terminating monopoly problem.
125. CRA⁴³ previously submitted that pure bill and keep reduces ongoing regulatory and administrative costs. Pure bill and keep does not require the Commission to undertake benchmarking or TSLRIC modeling to determine the interconnection rate.
126. The Parties agree that termination on Vodafone's network would cost more than termination on Telecom's fixed PSTN.
127. Vodafone may choose to recover its higher termination costs through its retail charges, such as fixed monthly subscriptions. 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

128. Pure bill and keep removes the incentives for the Parties to inefficiently subsidise customers that have large net inbound traffic streams. Under pure bill and keep, each network operator would bear the network termination costs from attracting these customers, and the operator using a technology with higher costs would absorb these higher costs. Accordingly, pure bill and keep reduces the incentive to target individual customers or design other strategies to 'game' the interconnection payment system.

⁴³ CRA, *Interconnection Pricing*, 7 June 2002, page 9

129. The Commission agrees with CRA⁴⁴ 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

130. 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

131. 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.
132. 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.
133. If there was no 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 purpose of the Act.
134. While hybrid bill and keep with some threshold for out-of-balance traffic may reduce opportunities for gaming, it may still create some incentives for the Parties to game in order to avoid paying out-of-balance charges.

Conclusion

135. The Commission is satisfied that the pure bill and keep method would best give effect to the purpose set out in section 18 of the Act. 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.

⁴⁴ *Ibid*, page 8

TELECOM RETAIL PRICING

136. 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.⁴⁵
137. Vodafone is concerned that Telecom will charge its customers a premium for making calls to Vodafone local customers. 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.
138. The effect of Vodafone's proposal is that voice 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.
139. In the Application and the earlier submissions, the Parties raised issues over the impact that a price premium would have on the market and whether the Act allowed the Commission to set a condition preventing Telecom from charging such a premium.
140. Telecom's submission on the draft determination and Vodafone's cross-submission both considered whether a price premium for calls to the proposed Vodafone service was required for Telecom to recover its costs including recovery of TSO related costs.

Submissions on the Market Impact and the Act

141. Vodafone submits that:⁴⁶
- 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.
142. 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 under bill and keep pricing.
143. 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.⁴⁷

⁴⁵ Vodafone, *Section 20: Application for Determination for Designated Access Service*, 13 January 2006, para. 131

⁴⁶ Vodafone, *Submission on Commission Decision to Investigate Local Service Application*, 4 April 2006, para. 43

⁴⁷ Vodafone, *Section 20: Application for Determination for Designated Access Service*, 13 January 2006, para. 156

144. 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 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.⁴⁸
145. Telecom notes that Vodafone practices differential retail pricing for calls between Vodafone mobile customers and Telecom's mobile customers.⁴⁹
146. Telecom also argues that the Commission does not have the power to impose the retail pricing restriction Vodafone requested and submits that:⁵⁰

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.

147. 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:⁵¹

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

Commission Assessment of the Market Impact and the Act

148. 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:

Homeline

Covers the services in your Line Rental, including unlimited local calling, for \$42.20 including GST a month.

149. 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.⁵²
150. If Telecom charged a premium for local voice calls to Vodafone local numbers, this would discourage Telecom customers from calling Vodafone numbers and would reduce Vodafone's ability to compete against Telecom's local access services.
151. For Vodafone's service to be an effective substitute for existing local access services, customers would expect that people could call them at rates comparable to other local calls. Potential users of the Vodafone service would recognise that any additional

⁴⁸ Telecom, *Submission in respect of the Application by Vodafone for Determination of a Designated Access Service*, 4 April 2006, para 65.

⁴⁹ *Ibid*, paragraph 99.

⁵⁰ *Ibid*, paragraph 70.

⁵¹ *Ibid*, paragraph 73.

⁵² Page headed "Homeline", <http://www.telecom.co.nz/content/0,8748,100005-1007,00.html>, 5 September 2006

charge incurred by callers to Vodafone local numbers would make it less likely that callers will choose to call those numbers.

152. Given many of Telecom's local access customers also buy other Telecom services, 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 access customers from switching to the Vodafone service.
153. If Telecom were to charge specifically for calls to Vodafone local numbers, 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, if the Vodafone service has been launched by then, as Telecom local numbers may be ported to Vodafone and vice versa.
154. 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 benefit of end users and is likely to best give effect to the purpose set out in section 18. Telecom as an integrated provider with its own mobile network is capable of responding to the competitive challenges that the proposed Vodafone service may present.
155. Section 30 (d) of the Act states that a determination may include the actions that a party to the determination must do or refrain from doing. The Act does not impose any restrictions on the scope of the actions that this section applies to.
156. Section 18(2) requires that the Commission must consider any efficiencies when determining whether an act will result in the promotion of competition for the long term benefits of end-users. As Vodafone already has an extensive cellular network in New Zealand, the introduction of the proposed Vodafone service is likely to be achieved at relatively low incremental cost. 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 may require a lower cost to the customer than the cost of laying cable to the property's demarcation point with Telecom's fixed PSTN.

Submissions on the TSO loss and cost recovery

157. Telecom submits that if Telecom cannot discriminate between calls to Vodafone local numbers and other local calls, Telecom would be unable to recover its costs for these calls, and that the Commission should consider the impact on the TSO loss in its deliberations.⁵³ CRA argues that the impact of a restriction on Telecom's retail pricing would largely be from reduced fixed to mobile calling. This would result in Telecom losing a contribution to its common costs, and an increased net TSO cost.

⁵³ Telecom, *Vodafone's Application for Interconnection with Telecom's Fixed PSTN: Submissions on Draft Report*, 3 July 2006, para. 7,8

CRA asserts that Telecom's "network costs might increase if the Vodafone service is successful" due to increased call traffic.⁵⁴

158. Covec, submitting on behalf of Vodafone, questions Telecom's assumptions about changes in call traffic on its network and its impact on Telecom's costs.⁵⁵ Covec argues that having customers switch to the Vodafone local access product would reduce traffic on Telecom's network, but that this may be partly offset by increased call stimulation. Covec submits that an overall net reduction of call traffic on Telecom's network is a plausible scenario. Covec argues that CRA's forecast of increased call traffic would only hold if access customers doubled the number of calls they received from Telecom customers after switching to the Vodafone service.⁵⁶
159. Vodafone argues that in considering Telecom's costs, the Commission should recognise that under bill and keep, Telecom would not have to pay Vodafone the current mobile termination rate, which is around twenty times higher than the per minute charge which Vodafone currently pay Telecom for fixed PSTN termination.⁵⁷
160. Vodafone submits that the TSO should not be a reason for implementing a sub-optimal pricing principle in this application. Covec argues that allowing TSO considerations to stand in the way of introducing competition and the resulting public welfare gains would be poor public policy.⁵⁸ Covec proposes that the TSO regime is sufficiently robust to deal with changing conditions.
161. Covec considers that the proposed Vodafone product would have minimal impact on the TSO and notes that:
- Some of the customers who switch to the Vodafone service may be commercially non-viable customers.⁵⁹ The overall effect of this switching would depend on call traffic patterns.
 - Under reciprocal TSLRIC, if call traffic was in balance, there would be no difference in the net effect on the TSO from either bill and keep or TSLRIC (assuming everything else equal). If Vodafone was the net receiver of call traffic, under TSLRIC this would increase the TSO loss.
 - Much of Telecom's TSO concerns are due to the loss of supplementary revenue as some fixed to mobile calls become local calls.

Commission Assessment of TSO Issues

162. Allowing price discrimination to address any increase in the TSO loss would reduce Vodafone's ability to compete in the local access and calling markets. This would soften the effects that such competition would have on Telecom, while denying consumers the benefits of additional competition. These outcomes are contrary to the

⁵⁴ CRA, *Economic Advice on Aspects of Vodafone's Application for Interconnection with Telecom's Fixed PSTN*, 3 July 2006, page 16

⁵⁵ Covec, *Vodafone Local Service: TSO and Cost Recovery Issues*, 11 July 2006, page 7-8

⁵⁶ The Covec argument refers to a change in customer behaviour, rather than a tendency for Vodafone to attract customers with a particular calling pattern.

⁵⁷ Vodafone, *Cross submission on Vodafone's interconnection application*, 11 July 2006, para. 22

⁵⁸ Covec, *Vodafone Local Service: TSO and Cost Recovery Issues*, 11 July 2006, page 2

⁵⁹ That is customers for whom the incremental cost of connection and local calls exceeds the revenue from line rental, plus profit that they generate from other services.

purposes of the Act which is to promote competition for the long-term benefit of end-users.

163. There are a number of reasons why Telecom and CRA may have overstated the impact on the TSO loss and Telecom's share of that loss:
- The TSO calculation is performed using the demand for service as of 20 December 2001. Each ESA's calculation of current average revenue per customer is applied to that area's 2001 customer demand, even if the number of customers has fallen over time. Hence, the averaging formulae means the loss of a non-viable customer (e.g. to a competitor) does not lead to a direct change in the TSO loss.
 - While CRA argues that the Vodafone local access product will reduce the supplementary revenues that Telecom earns from supplying fixed to mobile calls to non-viable customers, and hence increases the TSO loss⁶⁰, this effect will only occur where there is substitution of calls to Vodafone local numbers for fixed to mobile calls. However, to the extent that calls to the Vodafone local numbers replaces local fixed to fixed calls, there would be no detrimental effect on the supplementary revenues and hence no resulting change in the TSO loss.
 - The TSO is sufficiently robust to absorb changes in market dynamics which impact both the size of the TSO loss and shifts in market share. In particular, if a competitor is successful and as a result Telecom loses market share and/or supplementary revenue, the TSO mechanism will address this by allocating a larger share of the TSO loss to that competitor.

Commission Assessment on Cost Recovery, Contribution to Overheads, and Margins

164. As CRA noted, much of the negative financial impact of the determination on Telecom will result from the substitution of Vodafone local calls for fixed-to-mobile calls. This is because the current margin on fixed to mobile calls is several times greater than the margin which Telecom could earn under a cost based pricing principle from the termination of interconnecting local call minutes or the margin from billable fixed to fixed local calls.⁶¹
165. At an interconnection level, pure bill and keep would result in Telecom making no interconnection payments on local voice calls, unlike Telecom's preference for cost based interconnection pricing which would result in interconnection costs being incurred for these calls.
166. For Telecom, a loss of margin on a per call basis would occur when residential users switch some usage from fixed to mobile calling to local voice calling. Such a change between usage which can be billed for separately and that covered by the price capped residential monthly charge, is not unique to this Application and can happen in reverse (e.g. when dialup internet users migrate to broadband).

⁶⁰ CRA, *Economic Advice on Aspects of Vodafone's Application for Interconnection with Telecom's Fixed PSTN*, 3 July 2006, page 15

⁶¹ For the TSO this would be a loss of supplementary revenue.

167. For business customers, Telecom will still be able to recover its call origination costs, including overheads, through the per minute retail charges.⁶² Telecom's standard price for local calls by business customers almost certainly exceeds a TSLRIC calculation of the cost of call origination including an allowance for common costs.⁶³
168. A call from a Telecom residential user to a Vodafone local number that replaces a call to a Telecom local number is revenue neutral to Telecom. In both cases, the origination cost of the call is met by the line rental. As the majority of voice call minutes from residential users are local calls (and not fixed to mobile calls), there will be relatively limited substitution of fixed to mobile calling.
169. The Commission agrees with Covec that for Telecom to experience increased network costs, customers switching to the Vodafone service would have to double the call minutes they received from Telecom customers. Telecom could also experience some increased costs if the Vodafone service stimulates local call minutes (e.g. from increased take up of local access products due to falling prices). On the other hand if the Vodafone product succeeds, Telecom's overall network costs could fall because network usage will shift from Telecom to Vodafone. In either case, due to the economies of scale inherent in call volumes on the local access network, the net impact would be minimal, and in any event no greater than those of other local voice calls.

Conclusion

170. The introduction by Telecom of a retail premium specifically for local voice calls made to Vodafone local numbers, compared to local voice calls to other networks, would be detrimental to competition in the local access market, and thus would deny end-users some of the benefits from increased competition. Given that such calls will not involve interconnection payments, and will not result in Telecom incurring costs beyond those caused by other local voice calls, any such discriminatory charge cannot be justified.
171. While the impact of the proposed Vodafone service on the TSO loss is likely to be relatively minimal, the TSO regime is sufficiently robust to absorb changes in market dynamics which impact both the size of the TSO loss and any shifts in market share.
172. Accordingly, the Commission requires that Telecom does not impose any charge on its retail customers that would discriminate between local voice calls made by those customers to Vodafone local numbers and local voice calls made to Telecom's and any other carriers' local numbers. This requirement applies to calling which is part of a retail bundle as well as to calls which are charged for on a usage basis.

⁶² For calls from Telecom local access business customers to Vodafone local numbers which replaces calls to Telecom local numbers the revenue received would be unchanged. If the call to the Vodafone local number replaces a call to a Vodafone mobile number, Telecom will receive less revenue, however the revenue received will exceed the incremental cost of call origination and Telecom will no longer incur an interconnection cost.

⁶³ *TSLRIC Draft Determination*, para. 1

EXPIRY DATE OF THE DETERMINATION

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

174. 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.

175. 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.

176. 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. The Commission has recommended to the Minister of Communications that the designation of this service continues for a further two years.

177. 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.

178. Vodafone considers that the requested duration:⁶⁴

...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.

179. 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.

180. The draft determination proposed extending the duration of the determination to 24 months from the date of determination, should such an extension be made to the designated service's expiry date. Telecom did not comment on this in its submission on the draft determination.

Conclusion

181. 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.

182. 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.

183. 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.

⁶⁴ Vodafone, *Submission on Commission Decision to Investigate Local Service Application*, 4 April 2006, paragraph 160.

OTHER TERMS AND CONDITIONS

184. The Parties have requested that they should be allowed to negotiate any remaining non-price terms that have not been dealt with in this determination.
185. Vodafone proposes that should the Parties fail to agree on any such terms within 30 days that either Party would be entitled to ask the Commission to resolve the outstanding issues.
186. Telecom proposes a twelve week implementation period to commence after Vodafone notifies Telecom that the service is ready to be tested.⁶⁵ Vodafone supports Telecom's proposal.
187. The Commission accordingly requires that the period of implementation of the access service must be no more than twelve weeks from the date on which Vodafone notifies Telecom that it is ready to commence testing.
188. The Parties have previously entered into commercial agreements in respect of network interconnection, though their current agreements do not deal with local voice calls of the kind dealt with by this determination. The Commission would anticipate therefore that, with the certainty provided by the determination on the issues raised by the Parties, the Parties would be able to enter into a comprehensive agreement within 30 days of the date of this determination. If any terms have not been agreed by the end of that period, the Commission will on the request of either Party decide on those outstanding terms.

DATED this 28th day of September 2006

Douglas Webb
Telecommunications Commissioner
Commerce Commission

⁶⁵ Telecom, *Vodafone's Application for Interconnection with Telecom's Fixed PSTN: Submissions on Draft Report*, 3 July 2006, para. 18