

TELECOMMUNICATIONS ACT 2001

**SCHEDULE 3 INVESTIGATION
INTO THE EXTENSION OF
REGULATION OF
DESIGNATED AND
SPECIFIED SERVICES**

Draft Report

30 May 2006



COMMERCE COMMISSION

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COMMERCE COMMISSION

Draft Report on whether to extend the period of regulation of ten designated and specified services

Draft report under clause 2 of Part 1 of Schedule 3 of the Telecommunications Act 2001 (“the Act”) in the matter of whether or not to extend the period of regulation of ten designated or specified services.

Designated services under investigation:

- Retail services offered by means of Telecom’s fixed telecommunications network;
- Residential local access and calling service offered by means of Telecom’s fixed telecommunications network;
- Bundle of retail services offered by means of Telecom’s fixed telecommunications network;
- Retail services offered by means of Telecom’s fixed telecommunications network as part of a bundle of retail services;
- Interconnection with Telecom’s fixed PSTN;
- Interconnection with fixed PSTN other than Telecom’s;
- Local telephone number portability service; and
- Cellular telephone number portability service.

Specified services under investigation:

- National Roaming; and
- Co-location on cellular mobile transmission sites.

The Commission: Douglas Webb
Gowan Pickering
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Summary of Draft Report: The Commission recommends that the period of regulation of all ten services under review be extended for a period of two years in accordance with section 65 of the Telecommunications Act 2001.

Date of Draft Report: 30 May 2006

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List of Abbreviations

ACCC	Australian Competition and Consumer Commission
CDMA	Code-Division Multiple Access
FTN	Fixed Telecommunications Network
GSM	Global System for Mobile communications
IP	Internet Protocol
IPVPN	Internet Protocol Virtual Private Network
MED	Ministry of Economic Development
MNO	Mobile Network Operator
MVNO	Mobile Virtual Network Operator
PSTN	Public Switched Telecommunications Network
SME	Small/Medium Enterprise
2G	Second generation cellular network, characterised by digital transmission rather than analogue used by the first generation of cellular networks
3G	Third generation cellular network, based on the IMT 2000 set of radio technology standards as recognised by the ITU

Executive Summary

- i. The thirteen services originally regulated under the Telecommunications Act 2001 ('the Act') are due to expire on 19 December 2006. The Commission may make a recommendation to the Minister of Communications that any or all of these services should continue to be regulated under the Act for a further two year period.
- ii. The Commission decided that there were reasonable grounds to investigate whether to extend ten of the thirteen services, namely the four 'retail services', the two 'interconnection services', national roaming, co-location on cellular mobile transmission sites, and the local and cellular number portability services. The current investigation considers only whether these services should be extended, and not whether any amendments should be made to these services. The Commission continues to evaluate whether changes to the existing regulated services should be amended. The Commission has commenced a review into the mobile sector and this is likely to address whether an investigation should be launched into amendments to existing regulated mobile services.
- iii. In deciding whether or not to recommend extension of a service, the Commission must satisfy itself that such a recommendation best gives, or would be likely to best give, effect to the purpose of the Act, i.e. the promotion of competition in telecommunications markets for the long-term benefit of end-users. The Commission has assessed whether competition issues which existed prior to and during the initial period of regulation of these services are likely to continue for the period of the extension.
- iv. The Commission considers that a finding of limited competition in key markets associated with the ten regulated services, and/or the presence of other factors suggestive of competition concerns in the industry, means that there would be ongoing benefit to the availability of the regulated service for a further two year period.
- v. It is the Commission's view that in the case of all ten services under investigation, an extension of the period of regulation for a further two years will promote competition in telecommunications markets for the benefit of end-users of telecommunications services. Accordingly, the Commission recommends that all ten services be extended for two years from 19 December 2006.

Background and Process

1. The Telecommunications Act 2001 ('the Act') regulates the supply of telecommunications services in New Zealand.¹
2. The thirteen designated and specified services originally incorporated within Schedule 1 of the Telecommunications Act 2001 ('the Act') are due to expire on 19 December 2006 unless the period of regulation is extended.² Any investigation into whether or not to recommend extension of these services must have commenced at least one year prior to the expiry of the services.³
3. On 4 August 2005, the Commission sought comment on its preliminary view⁴ ('the Preliminary View Paper') as to whether the Commission should investigate the extension of the thirteen designated and specified services. The Commission received a number of submissions from interested parties on its Preliminary View Paper.
4. On 16 November 2005, the Commission released its Decision to Investigate⁵ concluding that there were reasonable grounds to investigate the extension of the following ten designated and specified services:
 - interconnection with Telecom's fixed PSTN;
 - interconnection with fixed PSTN other than Telecom's;
 - retail services offered by means of Telecom's fixed telecommunications network;
 - residential local access and calling service offered by means of Telecom's fixed telecommunications network;
 - bundle of retail services offered by means of Telecom's fixed telecommunications network;
 - retail services offered by means of Telecom's fixed telecommunications network as part of bundle of retail services;
 - local telephone number portability service;
 - cellular telephone number portability service;
 - national roaming; and
 - co-location on cellular mobile transmission sites.

¹ Section 5 of the Act defines telecommunication to mean (a) the conveyance by electromagnetic means from one device to another of any encrypted or non-encrypted sign, signal, impulse, writing, image, sound, instruction, information, or intelligence of any nature, whether for the information of any person using the device or not; but (b) does not include any conveyance that constitutes broadcasting.

² Section 65(1)(a) of the Act provides that every designated or specified service expires on 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.

³ Refer to clause 1(1)(b) of Part 1 of Schedule 3 to the Act.

⁴ Commerce Commission, *Review of Designated and Specified Services under the Telecommunications Act 2001: Preliminary view on decision to investigate and procedural matters*

⁵ Commerce Commission, *Review of Designated and Specified Services under the Telecommunications Act 2001: Decision to Investigate*, 16 November 2005

5. Full descriptions of these services are set out in Schedule 1 to the Act.
6. The Commission did not consider that there were reasonable grounds to investigate the following services:
 - national toll-free telephone number portability service;
 - Telecom's fixed PSTN to mobile carrier pre-selection service; and
 - co-location of equipment for fixed telecommunications services at sites used by Broadcast Communications Limited.
7. Accordingly, regulation of these three services will expire on 19 December 2006.

Consideration of proposed amendments

8. At the same time as releasing its Decision to Investigate, the Commission invited interested parties to submit proposals on whether amendments should be made to any of the ten services it decided to investigate. On 21 December 2005, the Commission received submissions on whether amendments should be made from Econet Wireless Limited ('Econet'), Telecom New Zealand Limited ('Telecom'), TelstraClear Limited ('TelstraClear'), Vodafone New Zealand Limited ('Vodafone') and Woosh Wireless Limited ('Woosh').
9. This draft report only sets out the Commission's views on whether or not to recommend to the Minister of Communications that the period of designation or specification of these ten services should be extended for up to two years.⁶
10. The Commission continues to evaluate whether changes to the existing regulated services which are the subject of this draft report should be amended. This draft report does not consider whether existing services should be amended.

Mobile Services Review

11. On 10 May 2006, the Commission informed the telecommunications industry that it had decided to gather views and relevant information in order to assist it to make a decision whether or not to commence an investigation under Schedule 3 of the Act into the addition of new regulated services required to promote competition in the mobile services market, or the alteration of the existing roaming and co-location services.
12. Should the Commission subsequently determine that reasonable grounds exist for an investigation into whether to amend any of the existing services, the Commission considers that it is most appropriate to consider such investigations separately. As discussed in Chapter 2, the Commission's view is that amendment to an existing service requires different analysis from the consideration of whether to extend an existing service for a period of two years. Furthermore, this will ensure that the Commission is able to deliver a report to the Minister of Communications in sufficient time to allow for

⁶ Refer to sections 65 and 68 of Act.

consideration of the Commission's recommendations prior to the expiry of the existing services on 19 December 2006.

Information Gathering

13. In order to conduct any relevant market and competition analysis for the purposes of this investigation, the Commission requested specific information from a number of telecommunications providers and other companies. The Commission requested this information by way of notices issued under section 98(a) of the Commerce Act 1986 and section 15(f) of the Telecommunications Act 2001.
14. On 19 January 2006, the Commission issued section 98 notices requesting specific revenue and customer information relating to the provision of a number of services relevant to the 'Retail Services'.
15. On 31 January 2006, the Commission issued further section 98 notices requesting revenue, volume and cost information in relation to the provision of mobile services. The Commission also issued section 98 notices, on the same day, to a number of companies requesting information regarding the number of transmission sites and/or towers structurally capable of co-location, the number that are actually used for co-location, and the costs associated with running and maintaining transmission sites and/or towers.

Commission process and timetable

16. The Commission's procedure for making a recommendation to the Minister of Communications is governed by Part 1 of Schedule 3 to the Act.
17. Clause 2 of Schedule 3 states that:
 - 2 Draft report**
 - (1) After public notice of the investigation has been given, the Commission must—
 - (a) prepare a draft report; and
 - (b) give public notice of the draft report; and
 - (c) include in the public notice—
 - (i) the closing date for submissions, which must not be later than 20 working days after the date of giving public notice; and
 - (ii) the date of any public hearing to be held under clause 3.
18. The Commission must make reasonable efforts to hold a conference or public hearing in relation to the proposed alteration within 10 working days of the closing date for written submissions. Following the conference or public hearing, the Commission must deliver a Final Report to the Minister of Communications on the proposed alteration to Schedule 1. It must make reasonable efforts to do this within 120 working days of the commencement of the investigation.
19. Table 1 sets out the Commission's proposed timetable for the remainder of the investigation.

Table 1: Proposed timetable for Schedule 3 investigation

Steps and procedures	Date
Publication of Draft Report	30 May 2006
Closing date for written submissions on Draft Report	28 June
Cross submissions	13 July
Public conference on Draft Report	19 July
Delivery of Final Report to Minister	End of August

Public availability of submissions

20. To promote an open and transparent process, the Commission intends to publish as many submissions as possible on its website. Accordingly, the Commission requests that all submissions are provided in electronic form.

Status of information supplied to the Commission

21. The Commission discourages requests for confidentiality over submissions on the Draft Report, as it is desirable to test all the information as fully as possible in a public manner. The Commission is unlikely to agree to any requests that submissions in their entirety remain confidential.
22. However, the Commission recognises that interested parties making submissions may wish to provide confidential information to the Commission. Accordingly, on 16 May 2006 the Commission issued a confidentiality order to apply to confidential information provided by interested parties making submissions in this proceeding. This confidentiality order allows interested parties making submissions to designate information as confidential.
23. Any person who wishes to receive confidential information must sign a deed of undertaking as to confidentiality in an appropriate form and be approved by the Commission in accordance with the confidentiality order. In the event that the Commission or another party challenges the confidentiality status of the information, the Commission will determine whether the challenged information should be subject to the order.
24. The confidentiality order can be viewed on the Commission's website at <http://www.comcom.govt.nz/IndustryRegulation/Telecommunications/Investigations/revi ewofregulatedservices.aspx#506>

25. Where it is necessary to include confidential information in written submissions, the material should be clearly marked as confidential, and preferably included in an appendix to the submission or enclosed in square brackets []. In addition to the confidential copy, submitters should provide the Commission with a public copy of such submissions, which is clearly marked as public, with the confidential material deleted or amended appropriately so it is suitable for release in both electronic and hard copy form.
26. After the expiry of the Commission's confidentiality order, the Commission will follow its usual practices in response to any request for information under the Official Information Act 1982.

Address for submissions

27. Submissions on the Draft Report are due on 28 June and should be sent to:

Kate Saunders
Network Access Group
Commerce Commission
PO Box 2351
Wellington

Email: kate.saunders@comcom.govt.nz

Decision Making Framework

The Legislation

28. Section 19 of the Act provides that:

19 Commission and Minister must consider purpose set out in section 18 and additional matters
If the Commission or the Minister (as the case may be) is required under this Part or any of Schedules 1 to 3 to make a recommendation, determination, or a decision, the Commission or the Minister must—

- (a) consider the purpose set out in section 18; and
- (b) if applicable, consider the additional matters set out in Schedule 1 regarding the application of section 18; and
- (c) make the recommendation, determination, or decision that the Commissioner or Minister considers best gives, or is likely to best give, effect to the purpose set out in section 18.

29. Section 18 describes the purpose of Part 2 and Schedules 1 to 3 as follows:

18 Purpose

- (1) The purpose of this Part and Schedules 1 to 3 is to promote competition in telecommunications markets for the long-term benefit of end-users of telecommunications services within New Zealand by regulating, and providing for the regulation of, the supply of certain telecommunications services between service providers.

Promotion of Competition

- 30. In assessing whether to recommend the extension of each service, the Commission must consider whether each recommendation best gives, or is likely to best give, effect to the promotion of competition in telecommunications markets, consistent with sections 18 and 19 of the Act.
- 31. The Commission must satisfy itself that, for the two year period of analysis between 19 December 2006 and 19 December 2008, there are benefits to end-users from extending the existing regulated service over allowing that service to expire.
- 32. In the Commission's previous Schedule 3 investigations, the Commission was required to consider whether there were net benefit effects from the designation or specification of services that were not within the regulatory ambit. In contrast, the services under consideration in this investigation are currently regulated. It is the Commission's view that the mere existence of these services in the Act suggests at the time of the enactment of the Telecommunications Act in 2001 it was decided that regulation of these services would be likely to promote competition during the period of designation or specification. For this reason, the Commission has decided not to undertake a quantitative cost-benefit analysis for the purposes of considering whether or not to recommend the extension of currently regulated services for two years. In any event, such an analysis would not have been possible given the tight timeframes for the completion of the review.

33. The Commission considers that it must satisfy itself that any competition issues which existed prior to and during the initial five year regulation period are likely to continue for the period of the extension. The regulated services that are the subject of this review have quite different characteristics, including some which are intermediate services such as interconnection and resale of retail services, and others which are aimed at facilitating entry into the telecommunications industry such as number portability, roaming and co-location. The Commission has taken the approach of assessing whether the level of competition in relevant markets is sufficient, such that an extension of the period of regulation would not provide any benefit. Further, the Commission has also considered whether extension of the period of regulation is required in order to provide benefit.
34. Three of the ‘Retail Services’⁷ under review are described in Schedule 1 of the Act in such a way that it is not feasible, in the context of the current investigation, to conduct a precise market definition exercise. These regulated services can be considered ‘umbrella’ services covering a large range of telecommunications services that are likely to fall within multiple markets, including markets that are yet to be identified by the Commission. In assessing whether there is ongoing benefit to the extension of these ‘umbrella’ services, the Commission has confined its analysis to an assessment of the features of the telecommunications industry; in particular the Commission has considered the degree of infrastructure competition and barriers to entry in telecommunications markets.
35. The Commission has previously assessed markets relevant to ‘Retail Services’ in the context of access determinations. However, the Commission notes that the retail markets that were assessed in previous bilateral access determinations were defined for a specific purpose – to ensure that access to resale was only granted in those precise geographic and customer markets subject to the application where Telecom faced limited competition for a particular service. The Commission considers that it is not necessary to apply this kind of comprehensive analysis in the context of an investigation into whether retail services in their entirety should continue to be regulated. This is explained in more detail in the section of the report on ‘Retail Services’.
36. The Commission considers that a finding of limited competition in key markets associated with the ten regulated services, and/or the presence of other factors suggestive of competition concerns in the industry, means that there would be ongoing benefit to the availability of the regulated service. In recommending regulation, the Commission’s concern is to encourage commercial outcomes to the extent possible, while providing a regulatory backstop where such negotiation fails.
37. It is arguable that a finding of limited competition in a market relevant to a particular designated or specified service might suggest that the regulation of that service has been ineffectual during the five year period. This could lead to a conclusion that continued availability of the service will not promote competition for the long term benefit of end-

⁷ Retail services offered by means of Telecom’s fixed telecommunications network; Bundle of retail services offered by means of Telecom’s fixed telecommunications network; and Retail services offered by means of Telecom’s fixed telecommunications network as part of a bundle of retail services.

users. However, the Commission does not consider that this necessarily follows. In these cases the Commission considers that, competition would be more limited if it were not for the presence of a regulated service.

38. The Commission has received submissions from interested parties that the existing services, as currently described, are deficient and that in some respects the services should be amended and extended simultaneously. However, the Commission is currently evaluating whether changes to certain existing regulated services should be made as a separate process. The Commission does not consider that it is feasible to undertake an analysis of whether to recommend the extension of the ten existing services concurrently with an analysis of any amendments to those ten services. To do so would entail a risk that the Commission would not complete its investigation in sufficient time for the Minister to consider whether to accept a recommendation before the service expires.⁸ The Commission will continue to keep a watching brief on the regulated services. It notes that it has commenced a review of mobile services which will involve consideration of whether there are reasonable grounds to launch an investigation into the regulation of mobile services under the Act, including whether existing mobile services should be amended.

⁸ The Commission notes that an Omnibus Bill has been introduced into the House which would, if passed by Parliament, grant automatic extension of the services

Services under Review

39. As noted earlier, the Commission has decided to investigate whether to recommend extension of the period of regulation of the following currently designated or specified services:
- Retail services offered by means of Telecom's fixed telecommunications network;
 - Bundle of retail services offered by means of Telecom's fixed telecommunications network;
 - Retail services offered by means of Telecom's fixed telecommunications network as part of a bundle of retail services;
 - Residential local access and calling service offered by means of Telecom's fixed telecommunications network;
 - Interconnection with Telecom's fixed PSTN;
 - Interconnection with fixed PSTN other than Telecom's;
 - Co-location on cellular mobile transmission sites;
 - National Roaming;
 - Local telephone number portability service; and
 - Cellular telephone number portability service
40. Each of these services is considered below. Where appropriate, the Commission has reached a view on the level of competition in relevant upstream and/or downstream markets for these services.

Retail Services

Introduction

41. This section concerns the following three designated access services (together 'Retail Services'):
- Retail services offered by means of Telecom's fixed telecommunications network ('Single Service Resale');
 - Bundle of retail services offered by means of Telecom's fixed telecommunications network ('Bundles'); and
 - Retail services offered by means of Telecom's fixed telecommunications network as part of a bundle of retail services ('Parts of Bundles').
42. It is appropriate to consider these three services together as they all concern 'retail services offered by means of Telecom's fixed telecommunications network'. Also, as noted in the section on decision making framework, these three services can be considered 'umbrella' services which cover a large range of telecommunications services that are likely to fall within separate markets. Accordingly, the Commission has

conducted a different analysis from the other more specific services in Schedule 1 of the Act in determining whether to recommend extension.

43. Since the inception of the Act in 2001, the Commission has received a number of applications for access determinations concerning all the Retail Services, and has made determinations in relation to Single Service Resale services and Bundles.
44. Schedule 1 of the Act contains service descriptions for all designated and specified services, with a number of services having ‘conditions’ upon them. Single Service Resale services and Bundles have similar conditions, as set out below:

Retail services offered by means of Telecom’s fixed telecommunications network

Conditions: That either-

- (a) Telecom faces limited, or is likely to face lessened, competition in a market for the particular retail service offered by Telecom to end users; or
- (b) Telecom does not face limited, or is not likely to face lessened, competition in a market for that particular retail service, and the Commission has decided to require that particular retail service to be wholesaled in that market

Bundle of retail services offered by means of Telecom’s fixed telecommunications network

Conditions: That either-

- (a) Telecom faces limited, or is likely to face lessened, competition in a market for the particular bundle of retail services offered by Telecom to end users by means of its fixed telecommunications network; or
- (b) Telecom does not face limited, or is not likely to face lessened, competition in a market for the particular bundle of retail services, and the Commission has decided to require that particular bundle of retail services to be wholesaled in that market

45. These conditions act as a competition threshold, whereby the Commission must determine the terms of access to any service that falls within the service description, where it is satisfied that Telecom faces limited, or is likely to face lessened competition, in a market for that service. The Commission also has the discretion to require regulated access to a service where Telecom does not face limited competition. The Commission has previously indicated that it would only require such access if it is satisfied of significant long-term benefits for end-users of requiring such wholesale provision.⁹
46. The Commission notes that the Parts of Bundles service does not have any conditions set out in the service description. However, the service itself is described as:

A retail service that –

- (a) is, or has previously been, offered separately by Telecom to end-users by means of its fixed telecommunications network; and
- (b) is offered by Telecom to end-users as part of a bundle of retail services -

⁹ Commerce Commission, *Determination on the TelstraClear Application for Determination for “Wholesale” Designated Access Services* (Decision 497), 12 May 2003, paragraph 107.

- (i) **in markets in which Telecom faces limited, or is likely to face lessened, competition for that service;** and
- (ii) if the effect of the bundled price is likely to significantly reduce the ability of an efficient rival to contest the market [emphasis added]

47. As a result of these competition thresholds, the Commission has been required to define the markets for a number of retail services, and conduct competition analyses in relation to those markets, for the purposes of making access determinations.

Market Analysis during bilateral determinations

48. In the TelstraClear Business Wholesale Determination (Decision 497)¹⁰, TelstraClear sought access to over 150 ‘retail services offered by means of Telecom’s fixed telecommunications network’. In that decision, the Commission defined ten product markets, distinguishing between type of customer (SME and corporate) and geographic location of customers (metropolitan and non-metropolitan) for some of these product markets.
49. In the TelstraClear Residential Resale Determination (Decision 525)¹¹, the Commission was also required to conduct a market definition and competition analysis exercise for a number of retail services including access to ‘retail services’, the ‘residential local access service’, and ‘bundles of retail services’. In Decision 525, the Commission defined three product markets, and distinguished between geographic location of customers for one of those product markets.
50. Finally, the Commission again looked at markets relevant to the retail group of services for the purposes of the TelstraClear ‘Private Office Networking’ Determination (Decision 563)¹². In that decision, the Commission newly defined a national retail market for the supply of private IPVPN data services.
51. In considering applications for access to regulated services under Schedule 1, the Commission has necessarily considered specific markets, such as a market for local access and calling services for SME customers in metropolitan areas, with ‘metropolitan’ itself having a very precise meaning (i.e. areas within 200 metres of competing local access infrastructure).¹³ To date, the access determination process has required this specificity as a large number of individual retail services have been applied for. As a result of the conditions in the service description for the regulated retail services, the Commission has had to reach a conclusion on market definition for each of these individual services.

¹⁰ Commerce Commission, *Determination on the TelstraClear Application for Determination for “Wholesale” Designated Access Services* (Decision 497), 12 May 2003

¹¹ Commerce Commission, *Determination on the TelstraClear Application for Determination for “Residential Wholesale” Designated Access Services* (Decision 525), 14 June 2004

¹² Commerce Commission, *Determination on the TelstraClear Application for determination of designated access services (including Private Office Networking* (Decision 563), 9 December 2005

¹³ Decision 497

52. The bilateral nature of the access determination process has also, in part contributed to these specific market definitions. In particular, the Commission was required to define precise geographic boundaries for a number of the services requested in both the Business Wholesale and Residential Resale Determinations in order to allow the determinations to be implemented by the parties. For some services, it was also necessary to carve out geographic regions due to the access seeker only requesting access to that particular service in some areas.¹⁴
53. For these reasons, the Commission does not believe that it is necessary to conduct a market definition and competition assessment exercise of the kind undertaken in the context of access determinations. The Commission will be required to carry out this analysis for individual services which may be the subject of future applications for an access determination. At that time it will be appropriate to re-examine the market definitions that have previously been determined by the Commission.
54. Accordingly, the Commission considers that in the case of Retail Services, any risk of regulatory overreach is minimised by the requirement for the Commission to conduct a market and competition exercise for each service applied for by an access seeker in relation to an access determination.
55. There are a number of observations that can be made in the present telecommunications market place that might suggest that the previously defined markets are no longer as relevant. For example, there appears to be an increasing level of bundling of telecommunications service offerings, suggesting that drawing market boundaries by specific service type is less meaningful.
56. Also, the line traditionally drawn between voice and data services is likely to become increasingly blurred with the convergence of services, particularly with the emergence of IP networks. Finally, the Commission has observed a shift towards uniform national pricing, including identical pricing for residential and business customers, in relation to some services. This indicates that drawing a distinction between geographic region and type of customer is less appropriate.

Analysis

57. For the purposes of deciding whether or not to recommend extension of regulation of the 'Retail Services', the Commission has decided to undertake a broad analysis of the features of the telecommunications industry that may give rise to competition issues across a wide range of telecommunications markets.
58. Most notably, there continues to be a lack of infrastructure, or full facilities-based competition in relation to the delivery of telecommunications services to end-users in most areas of New Zealand. Facilities-based competition is limited to pockets of the

¹⁴ For example, in its application for access to residential wholesale services, TelstraClear did not seek access to Telecom's residential local access and calling service in the metropolitan areas of Wellington and Christchurch where TelstraClear had its own network (i.e. 'Networked Metropolitan' areas).

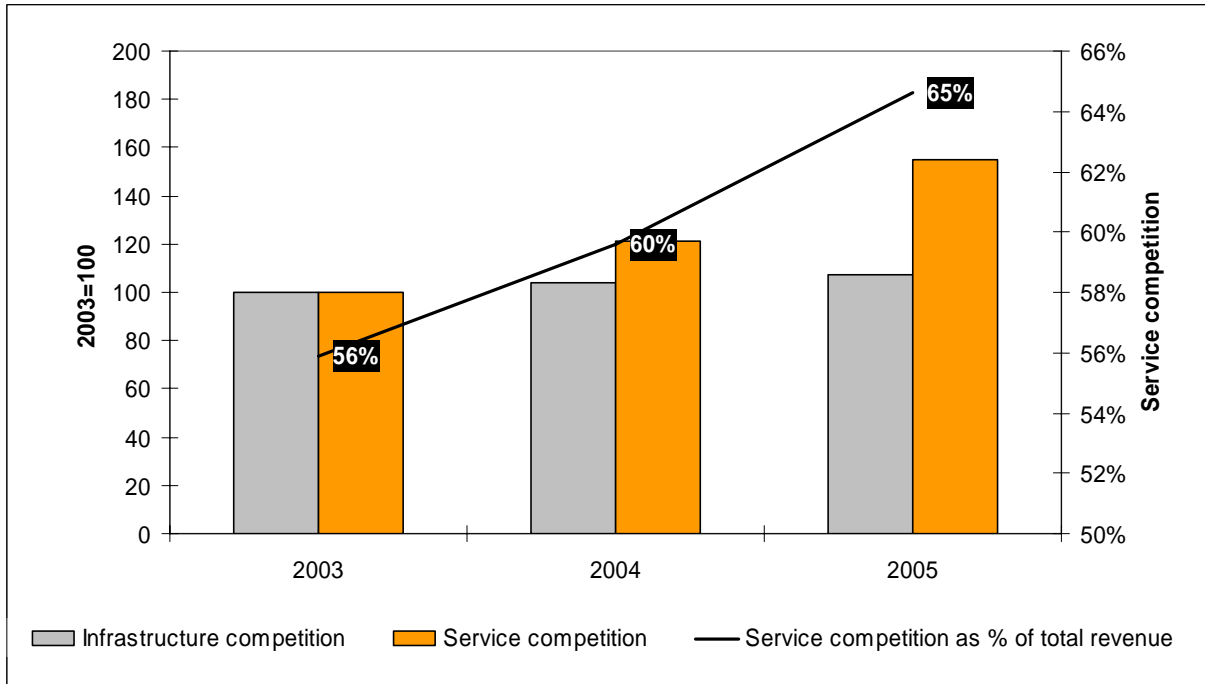
country, and in some cases the competing infrastructure is only used to deliver a certain type of service and/or to a certain type of customer. Telecom remains the only telecommunications provider of fixed services in New Zealand that has a ubiquitous network.

59. TelstraClear has competing network infrastructure to deliver services to residential customers, but only in the Wellington and Christchurch regions. TelstraClear also has limited infrastructure in the central business districts of Auckland and a number of smaller provincial centres.
60. A small number of competitors have rolled out networks for the purpose of delivering data services to business customers in certain metropolitan areas. For example, CityLink has a fibre network in the Wellington CBD and provides access to services such as dedicated private circuits, ethernet and private local area networks. Vector Communications Limited is an independent owner, operator and wholesaler of open-access fibre optic networks in Auckland and Wellington. Other infrastructure competitors include Counties Power Limited and Broadcast Communications Limited (both wholesale services providers).
61. In addition, fixed wireless operators such as Woosh Wireless offer a degree of infrastructure competition in some telecommunications markets, but only in relatively small pockets of the country.
62. The Commission considers it unlikely that there will be a significant increase in the level of infrastructure based competition in the telecommunications industry during 2007-2008.
63. The Commission has considered the material received in response to the notices issued under section 98 of the Commerce Act and has drawn on some of this information to highlight the lack of facilities based competition within the industry. The Commission requested revenue information for three types of services (local access/calling; best efforts internet services; and business grade data services) and asked that the revenue be broken down into 'on-net' and 'off-net' revenue.¹⁵ The Commission also asked for the information to be broken down by region and type of customer, but this data has been aggregated for current purposes.
64. The data collected can be used to assess the level of facilities-based competition for delivery of these services against the level of service-based competition, i.e. competition that results from the resale of another provider's services. Because the revenue data requested was broken down by 'off-net' and 'on-net' the Commission has been able to assess whether those alternative providers to Telecom are generating revenue as a result of delivering services using their own infrastructure.

¹⁵ 'On-net' means that the service is delivered by a provider's own network, while 'off-net' refers to the provision of services via another provider's infrastructure.

65. Figure 1 illustrates the importance of service-based competition in the market for local access and calling services. During the period 2003-2005 'on-net' revenue grew by only 7% while 'off-net' revenue increased by more than 50%, thus representing in 2005 around 65% of total revenue for local access and calling services delivered by alternative providers through both infrastructure and service based competition.

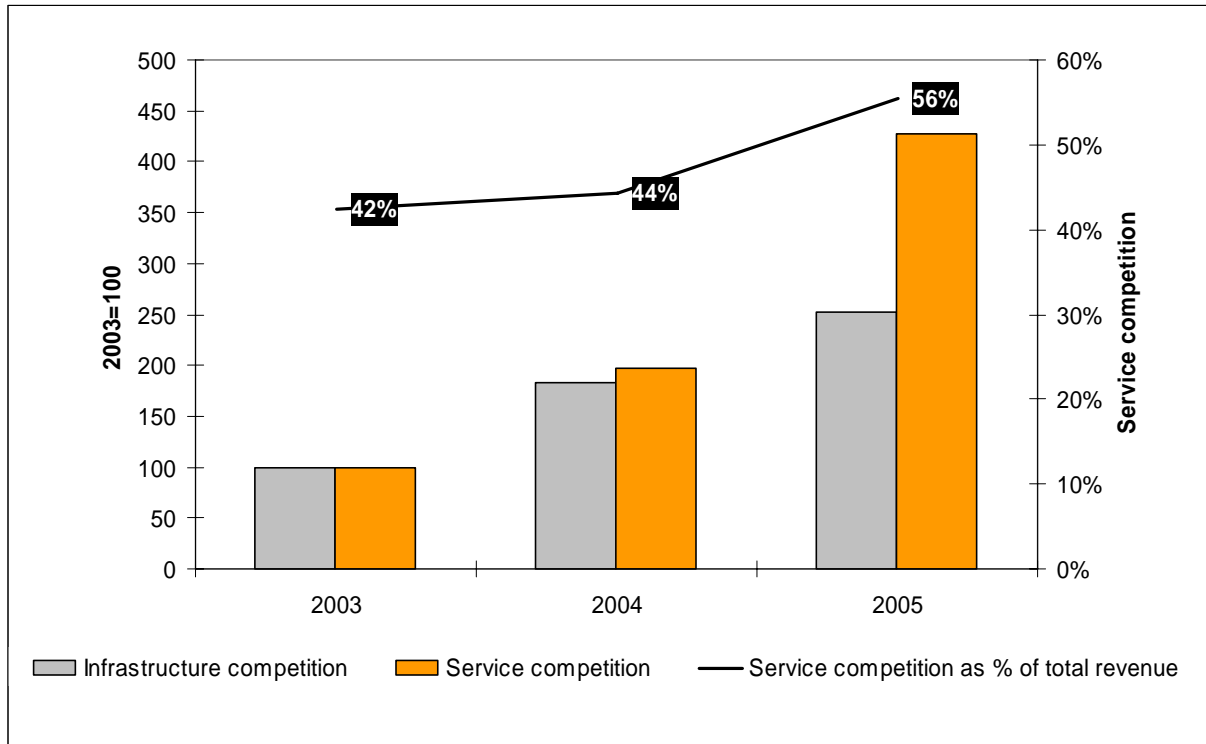
Figure 1: Local access and calling services delivered by alternative providers – 'off-net' vs 'on-net' revenue



Source: Commerce Commission, Industry data

66. Figure 2 shows again the importance of service-based competition during the period 2003-2005, this time in the market for best effort Internet grade services (residential and business broadband Internet access services). During the period 2003-2005 'on-net' revenue increased significantly by 153% but 'off-net' revenue grew by more than 320%. 'Off-net' revenue thus represented in 2005 around 56% of total revenue for best effort Internet grade services delivered by alternative providers, compared to 42% in 2003.

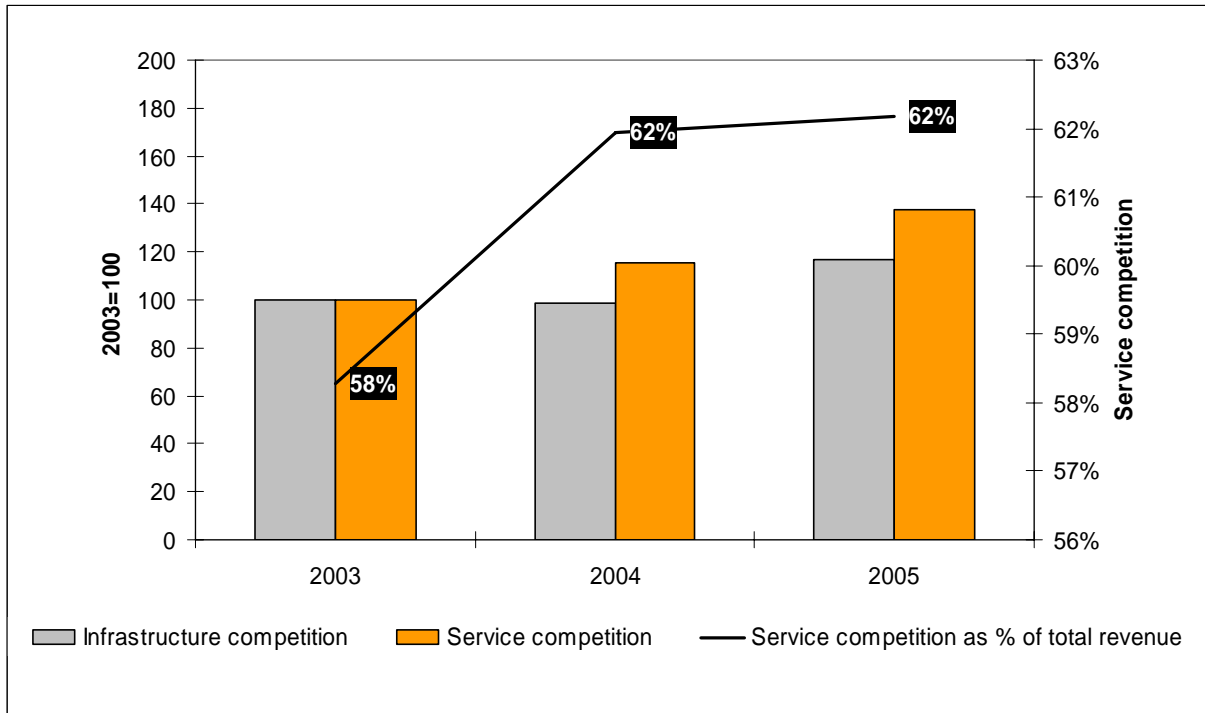
Figure 2: Best effort internet grade services delivered by alternative providers – ‘off-net’ vs ‘on-net’ revenue



Source: Commerce Commission, Industry data

67. Figure 3 presents the distribution of business grade services revenue delivered by alternative providers through infrastructure and service based competition during the period 2003-2005. During the period 2003-2005 ‘on-net’ revenue grew by 17% while ‘off-net’ revenue increased by around 37%, thus representing in 2005 more than 62% of total revenue for business grade services delivered by alternative providers.

Figure 3: Business grade services delivered by alternative providers – ‘off-net’ vs ‘on-net’ revenue



Source: Commerce Commission, Industry data

68. Another feature of the telecommunications industry that adds to limited competition in telecommunications markets is the significant barriers to entry that potential new suppliers of telecommunications services will face.
69. As noted in Decision 497, the first of these barriers to entry is the extent of sunk costs associated with developing a network for the purposes of delivering services to end-users in a range of telecommunications markets. Depending on the types of services that a potential operator may wish to offer, these costs may include the digging of trenches to house copper or fibre cables, the hanging of such cables from poles, or the rolling out of facilities to deliver fixed wireless services. Another form of sunk cost relates to the costs of obtaining necessary regulatory approvals for laying a new network. This consent process is also likely to delay any new entry.
70. The Commission also noted in Decision 497, that the second type of entry barrier is the presence of economies of scale and density in a local telecommunications network. Given the relatively high level of fixed costs in such a network, increasing the number of subscribers or traffic reduces the unit costs of such a network. Unless a new entrant can capture a significant share of the market, it is likely to operate at a higher unit of cost, and this is likely to limit the prospect of new entry.

71. Another feature of the telecommunications industry is that network operators tend to be vertically integrated, which can allow the incumbent to discourage competitors to enter by pricing access services inefficiently high, or refusing to wholesale its services altogether.
72. Finally, bundling of telecommunications services is also common within the industry and where it is possible for an incumbent to bundle contestable and non-contestable services together, this will provide the supplier of the non-contestable services with a significant advantage over its competitors.
73. The Commission considers that the presence of all these features of the telecommunications industry add to limited competition in telecommunications markets. The Commission believes that there will be benefits to end-users from the continued availability of access to regulated resale services in such markets. These features existed at the time of the Ministerial Inquiry into Telecommunications¹⁶, still exist today and are likely to continue to exist during the two year period under review.

Residential Local Access and Calling Service

Introduction

74. This section concerns the designated access service ‘Residential local access and calling service offered by means of Telecom’s fixed telecommunications network’.
75. As with ‘Retail Services’, the service description for the local access and calling service contains conditions which includes a competition threshold whereby the Commission must determine the terms of access to the service if it is satisfied that Telecom faces limited, or is likely to face lessened competition, in a market for the service.

Residential local access and calling service offered by means of Telecom’s fixed telecommunications network

- Conditions:* That either-
- (c) Telecom faces limited, or is likely to face lessened, competition in a market for price-capped residential local access and calling service offered by Telecom to end users; or
 - (d) Telecom does not face limited, or is not likely to face lessened, competition in a market for price-capped residential local access and calling service, and the Commission has decided to require that price-capped residential local access and calling service to be wholesaled

76. The risk of regulatory overreach will be minimised in the case of this service by the requirement for the Commission to conduct a market and competition exercise during any future determination process.

¹⁶ Ministerial Inquiry into Telecommunications, 27 September 2000

77. The Commission has decided that it is appropriate to conduct a market definition and competition analysis exercise for the purposes of deciding whether to recommend that the residential local access and calling service continue to be a designated service under the Act. The conditions in the service description for this service specifically refer to ‘a market for price-capped residential local access and calling service offered by Telecom to end-users’. The Commission, therefore, considers that the uncertainty around market boundaries for the other retail services, referred to in the previous section, do not apply to the same extent to this particular service.

Market Definition

78. The Commission has made one access determination in relation to the residential local access and calling service, namely the TelstraClear Residential Wholesale Determination (Decision 525). In that determination, the Commission defined a product market for residential local access and calling services. The Commission also defined separate geographic markets, distinguishing between metropolitan and non-metropolitan areas for residential local access services. The Commission made a further distinction between networked and non-networked metropolitan areas. The Commission considered that a relevant geographic market boundary for residential access should be set with reference to TelstraClear’s fixed residential network in Wellington and Christchurch.¹⁷
79. Accordingly, the Commission defined the following geographic markets for residential local access services:
- Networked metropolitan market for areas lying within 100 metres of TelstraClear’s residential access network in Wellington and Christchurch;
 - Non-networked metropolitan market which includes those areas of Wellington and Christchurch that are between the 100 metre boundary and the outer limits of Telecom reduced residential line rentals; and
 - Non-metropolitan market which includes the remainder of New Zealand
80. For the purpose of the current investigation, the Commission requested relevant revenue and customer information from all industry participants in order to assess the level of competition in the local access services market. In deciding how to frame the data request, the Commission took the view that it would not be necessary to define geographic markets at the level of precision used in its previous access determinations. In this investigation, the Commission has used less specific boundaries which nevertheless are expected to capture the main differences between ‘metropolitan’ and ‘non-metropolitan’ areas, in terms of where competing infrastructure is located. The Commission also notes that most of the recipients of the section 98 notices would not have had the necessary information to enable them to provide data in accordance with the 100 metre boundary rule set out above. Industry participants were therefore requested to present the data separately for Auckland, Christchurch, Wellington and Other geographic areas.

¹⁷ Decision 525, paragraph 191

81. The Commission considers that the geographic dimension in relation to the residential local access markets should consist of separate networked metropolitan (Christchurch and Wellington) and non-networked (Auckland and Other) geographic areas.
82. In defining geographic boundaries, the Commission has been consistent with the definitions of ‘Auckland’, ‘Christchurch’, ‘Wellington’ and ‘Other’ as set out in the instructions accompanying the section 98 notices. These definitions are as follows:
- ‘Auckland’ means the Auckland free local calling area;
 - ‘Christchurch’ means the Christchurch free local calling area;
 - ‘Wellington’ means the Wellington 04 calling region; and
 - ‘Other’ means all other regions outside ‘Auckland’, ‘Christchurch’ and ‘Wellington’

Competition Assessment

83. The Commission notes that it has not previously been required to assess the level of competition in networked metropolitan areas, as TelstraClear did not seek regulated access to the residential local access service in these areas. The Commission does not consider that it is necessary to form a view on the level of competition in this market in the context of the current investigation. The Commission considers that it is sufficient to update the assessment of the level of competition in the non-networked areas, i.e. those areas outside Wellington and Christchurch (‘Auckland’ and ‘Other’ regions).

Decision 525

84. In Decision 525, the Commission defined a retail market for residential local access services in non-metropolitan areas. This market referred to the areas beyond the networked and non-networked metropolitan areas of Wellington and Christchurch.
85. In the context of this determination, Telecom and TelstraClear agreed that Telecom faced limited competition in the non-metropolitan market for residential local access services.
86. The Commission noted in the determination that Telecom is currently the only direct supplier of local access to residential customers in non-metropolitan areas. However, Telecom had recently announced that it is offering a wholesale residential access service.¹⁸
87. As with the non-networked metropolitan market, the Commission considered that new entry in the non-metropolitan market for residential local access is likely to be limited in the near future. The Commission noted that there was likely to be some entry, particularly at a localised level, within the period of the Determination (14 June 2004-14 December 2005), but it was not convinced that the scale of this entry would be sufficient to constrain Telecom in providing residential local access services.¹⁹

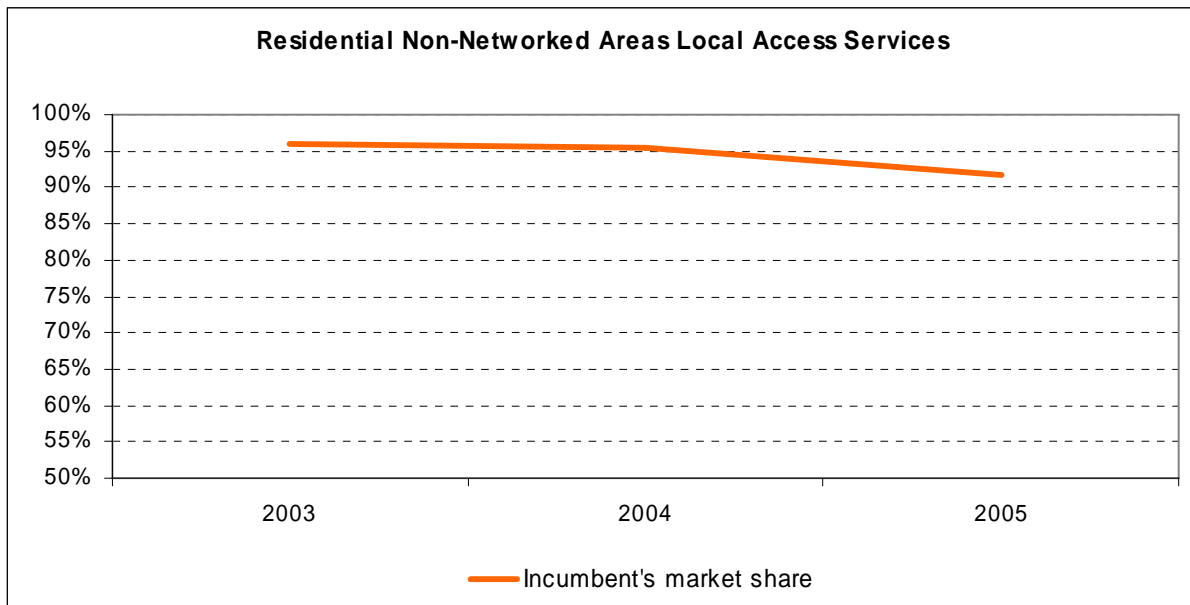
¹⁸ Decision 525, paragraph 227

¹⁹ Decision 525, paragraphs 228 and 232.

Updated Assessment

- 88. Figure 4 shows the trend in Telecom’s market shares in the retail market for residential local access services in non-networked areas in terms of number of customers.
- 89. The alternative providers in the market appear to have gained market share in the recent period, but the incumbent still appears to account for a large majority of the market, providing local access and calls services to more than 90% of residential customers in non-networked areas.

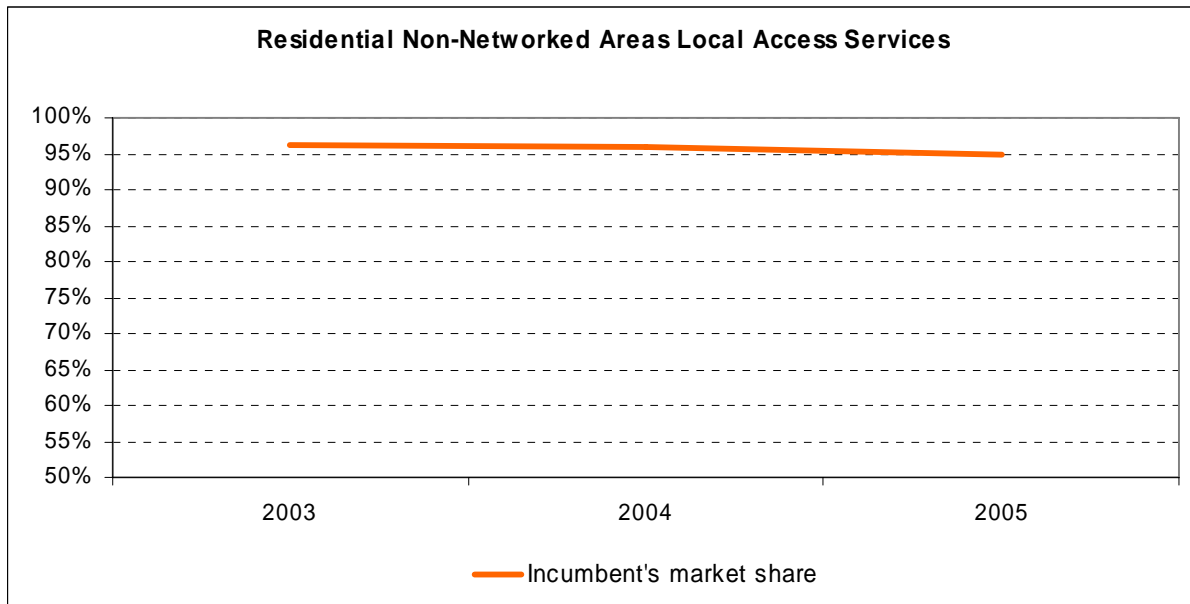
Figure 4: Telecom’s market share in the Retail Market for Residential Local Access Services in Non-Networked Areas – number of customers



Source: Commerce Commission, Industry data

- 90. Figure 5 shows the trend in Telecom’s market shares in the retail market for residential local access services in non-networked areas in terms of revenue.
- 91. Telecom’s market share has remained relatively stable over the period, decreasing by only 1%. The incumbent still appears to account for a large majority of the revenue in this market, earning 95% of the total revenue from the provision of local access and calling services to residential customers in non-networked areas.

Figure 5: Telecom's market share in the Retail Market for Residential Local Access Services in Non-Networked Areas – revenue



Source: Commerce Commission, Industry data

92. The Commission notes that subsequent to the release of Decision 525, wholesaling of Telecom's local access services to residential customers has increased. The Commission considers that the incumbent's small loss of market share during 2003-2005 is likely to be largely attributable to the increased importance of wholesaling. This suggests an ongoing reliance on Telecom's fixed network to deliver services to end-users, whether they be delivered directly by Telecom or by a Telecom wholesale customer. Absent the availability of Telecom's network, this wholesaling would not be possible.
93. The Commission also notes that Vodafone intends to launch, in future, a local call service over its existing mobile telecommunications network infrastructure. Vodafone intends to compete in the local services market by enabling Vodafone local customers to make and receive local calls from their mobile handset using a local number, when in a pre-defined geographical zone around their home or business. Vodafone has not yet been able to reach agreement with Telecom for local service interconnection. On 13 January 2006, Vodafone applied to the Commission for determination, requesting that Telecom be required to provide interconnection with its fixed PSTN for calls to and from Vodafone's local numbers.
94. The Commission considers that Vodafone's local call service is likely to have some impact on the level of competition in the retail market for residential local access services in non-networked areas. However, at this stage it is unclear exactly when and where Vodafone's service will be available so it is difficult to predict whether it will act as a constraint on Telecom in this market during the period under review.

95. The Commission's view is that during the period under review, Telecom is likely to continue to face limited competition in the retail market for residential local access services in non-networked areas.

Interconnection Services

Introduction

96. This section of the draft report concerns the following two 'Interconnection Services':
- Interconnection with Telecom's fixed PSTN; and
 - Interconnection with fixed PSTN other than Telecom's
97. When there is more than one telecommunications network, there is a need for networks to interconnect so that calls made from one network can be terminated on another. Access to interconnection with Telecom's ubiquitous network is therefore essential for any new network operator in order to provide any-to-any connectivity to its customers.
98. Where competition is not effective, or where substantial market power exists in telecommunications markets, regulatory intervention may be required to facilitate efficiently priced interconnection between networks.

Market Definition

Wholesale Markets

Product Dimension

99. Both interconnection services allow for the origination and termination of voice and data calls on either Telecom's fixed PSTN, or a fixed PSTN other than Telecom's. The Commission believes that there are no substitutes for either interconnection service. For example, if a customer connected to TelstraClear's fixed PSTN wishes to place a call to a customer connected to Telecom's fixed PSTN, the network operator can only facilitate this if there is an agreement in place for termination of that call on Telecom's network.
100. Accordingly, the Commission considers that there are separate product markets for origination and termination (and their associated functions) of voice and data calls (including dial-up internet calls) on each fixed PSTN. For example, there are separate markets for:
- Origination and termination (and their associated functions) of voice and data calls (including dial-up internet calls) on Telecom's fixed PSTN; and
 - Origination and termination (and their associated functions) of voice and data calls (including dial-up internet calls) on TelstraClear's fixed PSTN

101. It is not necessary for the purposes of this investigation to determine all those operators whose networks qualify as being a ‘fixed PSTN’ under the definition provided in the Act. Instead, it is sufficient to state that there are separate product markets for origination and termination of voice and data calls on each fixed PSTN.

Functional Dimension

102. Both interconnection services are provided to network operators at the wholesale level – the services are purchased by interconnecting networks in order to be able to complete the delivery of a call. Accordingly, the Commission considers that the relevant functional level for these markets is wholesale.

Geographic Dimension

103. The Commission considers that the markets for both interconnection services are geographically national. In the TelstraClear Interconnection Determination²⁰ (Decision 477) the Commission set a uniform national price for origination and termination of toll bypass, standard, toll-free and payphone calls, and calls to premium rate services and 50XY services on Telecom’s fixed PSTN. This price also applied to origination and termination on TelstraClear’s fixed PSTN. Telecom also offers a uniform national price for origination and termination of voice and data calls on its fixed PSTN in its commercial agreements with other network operators.

Customer and Temporal Dimensions

104. The customer and temporal dimensions are not relevant to the market analysis for interconnection services.

Relevant Downstream Markets

105. The following product markets are relevant downstream markets for the purposes of investigating whether to extend the interconnection services:
- Fixed-to-mobile/tolls market;
 - Local access market; and
 - Market for mobile subscription and origination services
106. Interconnection is used as an input by toll by-pass operators in order to provide toll services to their customers, by providers of local access services and also by mobile operators.

²⁰ Commerce Commission, *Determination on the TelstraClear Application for Determination for Designated Access Services* (Decision 477), 5 November 2002

107. As part of the investigation into regulation of mobile termination rates²¹, the Commission defined a combined fixed-to-mobile and tolls national retail market based on evidence that a high proportion of customers tend to purchase both tolls and fixed-to-mobile calls from the same supplier.²² The Commission considered that this market is a relevant downstream market for the purposes of the investigation because mobile termination is used as an input to supplying fixed-to-mobile services. The Commission considers that the same market definition that applied in the Commission's mobile termination report should be adopted for the purposes of this investigation.
108. As part of that investigation, the Commission also defined a national retail market for mobile subscription and origination services. As this market encompasses mobile-to-fixed calls, the Commission considers that this is also a relevant downstream market for the interconnection services. Mobile operators require an interconnection agreement with the relevant fixed PSTN operator in order to provide this service to their customers. The Commission considers that the same market definition that applied in the Commission's mobile termination report should be adopted for the purposes of this investigation.
109. The Commission notes that one dimension of the local access market has been addressed in the section on 'Residential local access and calling service' and the Commission has defined the following markets:
- Retail market for residential local access services in networked metropolitan areas ('Christchurch' and 'Wellington'); and
 - Retail market for residential local access services in non-networked areas ('Auckland' and 'Other').
110. The Commission acknowledges that local access services are also delivered to business customers and that a number of relevant business markets were defined in the Business Wholesale Determination. However, as noted in the section on 'Retail Services', the Commission decided that it is not appropriate in the context of the current investigation to attempt to define specific markets relevant to this group of services, and has only referred to the local access market in the context of considering whether to recommend extension of the 'Residential local access and calling service'. For the purposes of considering downstream markets for 'Interconnection Services' it is sufficient to refer to the residential local access market.

Conclusion

111. For the purposes of deciding whether or not to extend regulation of the two interconnection services, the Commission has defined the following markets:

²¹ Commerce Commission, Schedule 3 Investigation into regulation of Mobile Termination, Final Report, 9 June 2005

²² *ibid* page 40

- National wholesale market for the supply of origination and termination (and their associated functions) of voice and data calls (including dial-up internet calls) on each fixed PSTN;
- National retail market for fixed-to-mobile and toll call services;
- Retail market for residential local access services in non-networked areas; and
- National retail market for mobile subscription and origination services.

Competition Assessment

National Wholesale Interconnection Markets

Existing Competition

112. As the wholesale interconnection markets defined in the preceding section relate to the supply of the same service, but on different networks, these can be considered together for the purposes of the competition assessment.
113. The particular fixed PSTN operator (i.e. Telecom or another operator) supplying the origination and termination services is the sole supplier of those services. Calls made by, or to, that operator's subscribers cannot be originated or terminated by another fixed PSTN operator. There is not any constraint from existing competition in either of the wholesale interconnection markets.

Potential Competition

114. These wholesale interconnection markets are for the supply of origination and termination services on a particular fixed PSTN. No other party can facilitate origination or termination on these networks in order to provide any-to-any connectivity to subscribers. In the absence of technological developments that might allow direct access to a fixed PSTN subscriber for the purposes of origination or termination of voice and data calls, there appears to be an absolute barrier to entry into the wholesale interconnection markets.
115. The Commission therefore considers that existing suppliers of origination and termination on a fixed PSTN will not be constrained by potential competition.

National Retail Market for Fixed-to-Mobile and Toll Call Services

116. The Commission has recently assessed the competitiveness of this market during its mobile termination investigation. The Commission concluded that the retail market for the supply of tolls and fixed-to-mobile calls is subject to limited competition.²³ The Commission has retained this view in the context of the mobile termination reconsideration.

²³ Commerce Commission, *Schedule 3 Investigation into Regulation of Mobile Termination: Final Report*, 9 June 2005, pages 58-66.

117. As part of its assessment of this market, the Commission requested revenue and volume information from a number of toll and fixed-to-mobile service providers. In summary, the Commission noted that the retail prices of toll and fixed-to-mobile calls have been declining, although the rate of decline appears to have moderated compared to the period of entry in the mid to late 1990s. A further factor which is likely to have enhanced competition in this market is the introduction of carrier pre-selection.
118. The Commission noted that although prices have been declining, prices are still significantly above the Commission's estimate of cost for both tolls and fixed-to-mobile services. The extent of price reductions has diminished in recent years.
119. The Commission therefore considered that the retail market for the supply of tolls and fixed-to-mobile calls is subject to limited competition.

Residential Local Access Retail Market

120. The Commission has provided its view on the level of competition in the retail market for residential local access services in non-networked areas ('Auckland' and 'Other') and has concluded that there is likely to continue to be limited competition in this market. The Commission decided it was not necessary for the purposes of this investigation to assess the level of competition in the corresponding retail market for residential local access services in networked areas ('Christchurch' and 'Wellington').
121. Refer to the section on 'Residential local access and calling service' for the Commission's reasons for finding limited competition in this market.

National Retail Market for Mobile Subscription and Origination Services

122. The Commission in its recent mobile termination investigation examined competition in the retail mobile services market. The Commission did not form a definitive view on whether the retail mobile services market is subject to limited competition, however, the Commission did not believe that existing or potential competition at the retail level was sufficiently intense to ensure that any excess profits were dispersed through competition at the retail level.

Co-location on Cellular Mobile Transmission Sites

123. In Schedule 1 of the Act, the co-location service is described as:

A service that enables co-location of cellular mobile telephone network transmission and reception equipment (including any necessary supporting equipment on or with the following facilities (**relevant facilities**)):

- (a) any towers, poles, masts, or other similar structures –

- (i) that are used for the transmission or reception of telecommunications via a cellular mobile telephone networks; and
 - (ii) that are owned, managed or leased by the access provider:
- (b) all sites, building, or utility services that are associated with the kinds of structures referred to in paragraph (a)
124. In other words, co-location on cellular mobile transmission sites is the sharing of space on cellular masts and in associated buildings/sites.
125. An option for existing providers and new entrants to the cellular market is to co-locate their cellular mobile transmission equipment with other cellular networks that have access to towers and/or masts.
126. Co-location has the ability to reduce the costs associated with the setting up of cell sites and the necessary associated infrastructure of a Mobile Network Operator (MNO) by the sharing of facilities.
127. The Commission considers that it is appropriate for the purposes of this investigation to define markets associated with co-location on cellular mobile transmission sites.

Product Dimension

128. The Commission notes that all cellular mobile telecommunication networks rely on a network architecture based around antennae that allows radio signals to be received and transmitted to end users within a certain cell radius.
129. The regulated co-location service is restricted to ‘relevant facilities’ that are used for the transmission or reception of telecommunications via a cellular mobile telephone network, and that are owned, managed or leased by the access provider (who must operate a cellular mobile telephone network).²⁴
130. The Commission notes that existing second and third generation cellular sites owned by the incumbent MNOs could be utilised for co-location by both incumbents as well as new entrants. The Commission considers that a new entrant into the mobile services market is more likely to deploy a third rather than a second generation network.
131. For the purposes of defining the product market for co-location of a cellular mobile telephone network and transmission equipment, the Commission must consider whether there are any substitutes for co-locating on cellular mobile transmission sites.
132. In theory the number of sites available for the co-location of cellular transmission equipment is unlimited. However, in practice, this is limited due to the suitability of sites for transmission, planning, resource management, health and environmental

²⁴ Refer to the description of the service above.

considerations and lease terms, which all require additional time and cost for a site to be suitable for cell site location.

133. There is scope for some substitutability as new cell sites can be co-located with sites used by organisations (broadcast, high voltage power transmission, and wireless operators) with towers/masts that are structurally capable of co-locating with cellular transmission equipment.
134. Broadcast transmission equipment are generally located on sites that lend themselves to a high level of geographic coverage transmitting at high power (tens of kilowatts as opposed to tens of watts for cellular sites) in order to achieve optimal population coverage using as few sites as technically possible.
135. Broadcast towers are also tall structures usually on elevated pieces of land to allow the achievement of the widest coverage possible, whereas cellular mobile transmission equipment are usually placed on towers with mast heights of between ten to twenty metres. For these reasons, the Commission considers that the number of broadcast sites that can be used for co-locating with cellular transmission sites are limited, and are therefore not true substitutes for co-locating with cellular mobile transmission equipment.
136. The Commission considers that high voltage power transmission towers are not suitable substitutes for co-locating with cellular transmission equipment. Most high voltage power transmission towers are located around areas that do not provide the best possible location for cellular transmission equipment especially in terms of traffic volumes to warrant the expense of installing a cell site. Furthermore, the Commission understands that high voltage transmission tower owners do not provide any other facilities apart from the towers themselves. Cellular operators would be responsible for any additional facilities that would be required to house base stations and other equipment. The Commission considers that this would make high power transmission towers unattractive for co-locating with cellular providers.
137. The Commission understands that wireless networks are deployed in only a few centres around New Zealand. Accordingly, co-locating with wireless networks does not offer a true substitute to co-locating on cellular mobile transmission sites due to the minimal coverage of such networks in New Zealand.
138. It is the Commission's view that there are no suitable substitutes for co-locating of cellular transmission equipment. The product market is restricted to co-locating on cellular mobile transmission sites.

Functional Dimension

139. Co-location services are supplied by a site owner to a mobile network operator for the purpose of supplying downstream services to retail customers.
140. The Commission considers that the relevant functional level is the wholesale level.

Geographic Dimension

141. The structure of demand for co-location is national given that the current geographic coverage of the two existing mobile networks is national. While potential operators may wish to enter the cellular market on a regional basis, absent roaming agreements, the demand for co-location is likely to be on a national basis in order to provide customers with ubiquitous coverage.
142. The Commission considers that the market for co-location is geographically national.

Conclusion

143. It is the Commission's view that the relevant market for co-location of cellular transmission equipment is the national wholesale market for co-location on cellular transmission sites.

Existing competition

144. The Commission considers that the co-location of mobile antennae on cellular towers/masts contributes towards removing barriers to entry into the mobile market and could lead to the improvement of the competitive conditions in the retail mobile services market.
145. The Commission considers that any new entrant is likely to enter the market with a third generation network. However, due to the frequencies used and the added capacity desired for third generation services, the Commission understands that the density of a third generation network is greater and may require up to twice as many sites as a second generation network²⁵.
146. The Commission notes that cellular mobile transmission equipment are cellular in nature, with each site providing sufficient but limited coverage for a given geographical area. The Commission understands that all cellular sites are set up to minimise inter-cell interference.
147. Whilst the number of cell sites available for co-location in theory is limitless, the Commission considers that the most optimal sites available for the location of cell towers are already in use and controlled by the incumbent mobile network operators.
148. Accordingly, the Commission's view is that competition in the market for co-location on cellular mobile transmission sites is limited.

²⁵ European Commission decision of 30 April 2003 relating to a proceeding under Article 81 of the EC Treaty and Article 53 of the EEA Agreement, Case COMP/38.370 – 02 UK Limited/T-Mobile UK Limited ('UK Network Sharing Agreement'), OJ L 200/59, 7.8.2003

Commission's view

149. The Commission's view on the co-location service is that there is limited competition in the market for co-location on cellular mobile transmission sites.

National Roaming

150. In Schedule 1 of the Act, the national roaming service is described as:

A service that enables an end-user who subscribes to a network operator's (**operator A's**) cellular mobile telephone service to use services (except value-added services) generally accepted as second generation cellular mobile services that are provided to the public by another operator (**operator B**), within the area where operator B has a cellular mobile telephone network (which must not be a third generation cellular mobile telephone network), but which is outside the coverage area of operator A's cellular mobile telephone network

151. National roaming provides the ability for a customer of one cellular mobile network to make and receive calls in areas where the customer's network is inaccessible due to poor coverage or lack of network reach.
152. Roaming is not currently being provided in the domestic mobile market as the different technologies in use by the two incumbent networks do not support roaming on each other's network. Telecom and Vodafone offer very similar coverage areas to their customers. The capability to provide roaming to a new entrant is limited to the choice between one of the two incumbent MNOs.
153. The Commission acknowledges that Telecom and Vodafone will have roaming agreements with international mobile operators to allow customers to roam on either network while in New Zealand. However, these agreements are not relevant to the current investigation into national roaming.
154. The Commission considers that it is appropriate for the purposes of this investigation to define markets associated with national roaming even though this service is not currently being provided in New Zealand.

Product Dimension

155. Mobile roaming occurs when customers use their mobile telephone handset on a different mobile network (visitor network) from that to which they subscribe (home network). It involves agreements between networks for the provision of roaming access to the visited network which is then passed on as a retail service by the home network to its subscribers.

156. In the ACCC investigation into roaming²⁶, mobile industry players suggested substitutes for roaming included infrastructure sharing and the resale of mobile services.
157. Infrastructure sharing covered several possibilities which ranged from co-location to the sharing of spectrum and base stations. In the Commission's view, infrastructure sharing is unlikely to be a substitute for national roaming in the short term as the access seeker will still bear much of the cost of network deployment which is unlikely to be attractive in areas of low traffic volume.
158. The Commission also notes that a reseller can only provide the range of services offered by the host MNO through a wholesale agreement, thereby being entirely dependent on the host operator's business model. On the other hand, an operator relying on roaming can independently determine the range of services available to its customers, which will create much greater scope for product/service differentiation from the host MNO's business model.
159. The Commission's view is that there are currently no substitutes available for roaming services in New Zealand.
160. New Zealand currently has two cellular mobile network service providers. Given the incompatibility of the GSM and CDMA technologies, it is the Commission's view that the market for roaming in New Zealand is made up of two wholesale markets, one for GSM roaming and another for CDMA roaming.
161. A potential entrant into the market has a choice of two markets to roam on to before making the decision on which technology to use. The Commission's view is that once in the market, the new entrant would be unlikely to switch technologies in response to a small but significant non-transitory increase in price of the roaming charges from the visitor network.
162. The Commission infers that once in the market, roaming services between the two MNOs are not substitutable and hence the conclusion that the market for GSM roaming is different from the market for CDMA roaming.

Functional Dimension

163. Roaming services are services supplied by one mobile carrier to another for the purpose of supplying downstream services to retail customers. Roaming is therefore an intermediate input to the provision of retail services. Accordingly, the Commission considers the relevant functional level to be the wholesale level.

²⁶ ACCC, Mobile Services Review: Mobile Domestic Inter-carrier Roaming Service, Final report on whether or not the Commission should declare a mobile domestic inter-carrier roaming service, December 2004

Geographic Dimension

164. The current geographic coverage of the two existing mobile networks is national. The Commission considers that both cellular operators could offer roaming on a nationwide basis. The Commission acknowledges that a new entrant may choose to enter on a regional basis and may not require roaming throughout the whole country. However, the Commission considers it is more likely that a new entrant would prefer to offer nationwide coverage to its customers
165. The Commission's view is that the market for roaming is geographically national.

Customer Dimension

166. Most mobile operators have two categories of customers – pre-paid and post-paid. Supplying roaming services to pre-paid customers require billing information to be provided in 'real time'.
167. The Commission considers that it is unnecessary to discriminate between pre-paid and post-paid customers when considering the market for roaming services.

Temporal Dimension

168. Generally the Commission views markets as operating continuously over time²⁷. However, the Commission needs to consider whether there are future developments which may be likely to alter the market boundaries, or the range of substitutes within the market(s).
169. The Commission understands that there is the prospect of wide availability of dual mode handsets CDMA/GSM in the future. At this stage it is unclear if and when such handsets will become available in New Zealand. This could affect the market boundaries, as the Commission has defined two separate wholesale markets for roaming.

Conclusion

170. It is the Commission's view that the relevant markets for the national roaming service are the national wholesale market for roaming services on GSM cellular mobile network and the national wholesale market for roaming services on CDMA cellular mobile networks.

Existing Competition

171. Vodafone is the only access provider that uses the GSM standard for mobile communications in New Zealand. Likewise Telecom is the only access provider that uses the CDMA standard for mobile communications in New Zealand.

²⁷ Commerce Commission, *Mergers and Acquisitions Guidelines*, page 20

172. It is the Commission's view that both Vodafone and Telecom do not face competition for the provision of roaming services on their respective networks.

Potential competition

173. The potential for new entry to constrain existing operators in a market depends on the significance of any barriers to entry into or expansion of that market. Where those barriers are considered to be low, potential competition may be seen as a real constraint on existing businesses.
174. For facilities-based entry, access to radio spectrum is an essential requirement for the operation of cellular mobile networks. An auction of spectrum was run by the Ministry of Economic Development (MED) in 2000/01, in which Telecom, Vodafone, and TelstraClear purchased 15 MHz of 3G spectrum each. A further 15 MHz block was reserved for the pan-Maori Hautaki Trust, which was established to administer Maori telecommunications spectrum assets.
175. There are four blocks of spectrum available that could be used to support a third generation MNO. Of these, TelstraClear and Econet are considered possible entrants. Econet is owned by Econet Wireless Limited and the Hautaki Trust.
176. In the mobile services market, a new entrant would rely on gaining access to the Vodafone or Telecom network in order to provide nationwide coverage to its customers through roaming. If suppliers of roaming services were to engage in behaviour inconsistent with competitive outcomes (e.g. raising prices above competitive levels), this may not sufficiently incentivise market entry or network deployment by a new entrant.
177. If competition is ineffective in the wholesale market for the provision of roaming services, it is the Commission's view that this may affect the ability of carriers to compete in downstream retail mobile services markets.
178. Deployment of a MNO involves considerable upfront costs in establishing base stations, mobile switching centres and transmission links. There has been no new facilities-based entry into the mobile market in New Zealand since Vodafone bought the former network owned by Bell South in November 1998. However, Econet Wireless New Zealand Ltd (Econet) has recently announced plans to build a pilot third-generation network in Auckland.
179. The Commission considers that large-scale deployment of infrastructure is not immediately necessary to gain nationwide coverage as long as entrants can negotiate roaming agreements with the incumbents. However, the competitiveness of price and non-price terms for roaming may be reduced if the incumbents use their market power when negotiating the terms of roaming agreements.
180. The Commission's view is that incumbent suppliers of roaming would not be constrained by any new network entrant. Accordingly, the Commission considers that MNOs are

subject to limited competition in the wholesale market for roaming services on their respective networks.

Commission's view

181. The Commission's view in relation to the national roaming service is that there is limited competition in the wholesale market for national roaming on both the CDMA and GSM cellular mobile networks.

Number Portability

182. In Schedule 1 of the Act, the 'cellular telephone number portability service' is described as:

A service that enables an end-user of a cellular telephone network service to change providers of that service but to retain the same telephone number (including the same cellular network access code)

183. The 'local telephone number portability service' is described as:

A service that enables an end-user of a fixed telephone network service to change providers of that service but to retain the same telephone number within a local calling area

184. Number portability requires a method of determining, every time a customer makes a call, whether the called customer has switched to an alternative provider and, if so, to which provider. This requires a modification to the underlying network management and/or infrastructure and, depending on the chosen number portability solution, additional conveyance of calls.
185. The Commission considers that the ability for consumers to retain their telephone numbers when switching between telecommunications providers removes an impediment to the development of competitive markets by lowering switching costs. Number portability is expected to promote competition for the long-term benefit of end-users by enabling customers to switch service providers while maintaining their existing telephone numbers.²⁸
186. The absence of number portability hinders the competitive process by raising switching costs that customers must incur in order to change their service provider. Switching costs are generally detrimental to welfare because they make entry more difficult and markets less competitive.²⁹

²⁸ Commerce Commission, determination on the multi-party application for determination of 'local number portability service' and 'cellular number portability service' designated multinet network services. 31 August 2005

²⁹ Ibid.

187. The Commission has identified three broad categories that accrue to porting customers, non-porting customers and telecommunications providers as a result of the availability of number portability. These are:³⁰
- **Type 1 Benefits:** These benefits accrue to customers who port their numbers. These benefits include:
 - The benefits to customers who switch supplier as a result of number portability being available. For these customers, the benefits are defined as the benefits derived out of improvements in price, quality, and features that are provided by the competing service provider, less the cost of switching when number portability is available.
 - The benefits to customers who would have switched service providers even in the absence of number portability. For these customers, the benefit of number portability is the difference between the switching costs when moving to another service provider on a new number and the switching cost when moving to another service provider on a ported number.
 - **Type 2 Benefits:** These benefits correspond to efficiency improvements, price reductions and greater variety of products and services resulting from increased competitive pressures induced by the introduction of number portability. Because number portability facilitates switching and lowers its cost, it reinforces market competition. These types of benefits accrue to all users in those markets. Additionally, all operators also derive benefits from number portability as it makes customers more contestable.
 - **Type 3 Benefits:** These benefits correspond to the convenience and cost savings enjoyed by all users as a result of fewer numbers being changed (e.g. fewer misdialled calls, directory enquiry calls, updates to directory information and changes to information stored in customer equipment).
188. The Commission considers that the benefits of cellular number portability would be experienced in the retail markets for mobile services.
189. The Commission in its recent mobile termination investigation³¹ examined competition in the retail mobile services market. The Commission did not form a definitive view on whether the retail mobile services market is subject to limited competition, however, the Commission did not believe that existing or potential competition at the retail level was sufficiently intense to ensure that any excess profits were dispersed through competition at the retail level.
190. The Commission considers that for the purposes of this investigation, this is still the case.

³⁰ Ibid

³¹ Commerce Commission, Schedule 3 Investigation into regulation of Mobile Termination, Final Report, 9 June 2005

191. The Commission considers that the benefits of local number portability would be experienced in the retail markets for local access and other associated services.
192. The Commission has assessed the level of competition in one of the key downstream markets relevant to local number portability, namely the retail market for residential local access services in non-networked metropolitan areas and considers it likely that there will be limited competition in this market for the next two years. The Commission considers local number portability will enhance competition in this market, and is also likely to promote competition in other markets for local access services.

Recommendations

Retail Services

193. Having assessed the key features of the telecommunications industry, and considered such matters as the degree of infrastructure competition and barriers to entry in telecommunications markets, the Commission believes that there will be benefits to end-users of telecommunications services from extending the period of regulation of the three Retail Services, namely:
- Retail services offered by means of Telecom’s fixed telecommunications network;
 - Bundle of retail services offered by means of Telecom’s fixed telecommunications network; and
 - Retail services offered by means of Telecom’s fixed telecommunications network as part of a bundle of retail services.
194. The Commission considers that these three services should be extended for a further period of two years in accordance with section 65 of the Act.

Residential Local Access and Calling Service

195. In order to make a recommendation on whether the designated service of ‘residential local access and calling service offered by means of Telecom’s FTN’ should be extended, the Commission has assessed the level of competition in the retail market for residential local access services in non-networked areas. The Commission believes that Telecom is likely to continue to face limited competition in this market.
196. Accordingly, it is the Commission’s view that there will be benefits to end-users of telecommunications services if the period of regulation of this service is extended for a further period of two years in accordance with section 65 of the Act.

Interconnection Services

197. In order to make a recommendation on whether the designated Interconnection Services should be extended, the level of competition in the national wholesale market for the supply of origination and termination of voice and data calls on each fixed PSTN, the national retail market for fixed-to-mobile and toll call services, and the retail market for residential local access services in non-networked areas was assessed. All of these markets are subject to limited competition. The Commission also considered that the national retail market for mobile subscription and origination services is a relevant downstream market for the Interconnection services. The Commission noted that, in the context of the mobile termination investigation, the Commission did not believe that existing or potential competition at the retail level was sufficiently intense to ensure that any excess profits were dispersed through competition at the retail level.

198. Accordingly, it is the Commission's view that there will be benefits to end-users of telecommunications services if the period of regulation of these services is extended for a further period of two years in accordance with section 65 of the Act.

Co-location on Cellular Mobile Transmission Sites

199. In order to make recommendation on whether the specified service of co-location on cellular mobile transmission sites should be extended, the Commission assessed the level of competition in the national market for co-location on cellular mobile transmission sites. This market is subject to limited competition.
200. Accordingly, it is the Commission's view there will be benefits to end-users of telecommunications services if the period of regulation of this service is extended for a further period of two years in accordance with section 65 of the Act.

National Roaming

201. In order to make a recommendation on whether the specified service of national roaming should be extended, the Commission assessed the level of competition in the national wholesale markets for roaming on both the CDMA and GSM cellular mobile networks. Both these markets are subject to limited competition.
202. Accordingly, it is the Commission's view that there will be benefits to end-users of telecommunications services if the period of regulation of national roaming is extended for a further period of two years in accordance with section 65 of the Act.

Number Portability

203. The availability of number portability is expected to promote competition for the long-term benefit of end-users. Benefits from increased competition are likely to flow through to the retail markets for mobile and local access services.
204. The Commission has also put in place a number portability determination for both cellular and local number portability that is binding on all parties to the determination.³² Number portability is not yet available, but is expected to be implemented by April 2007. The Commission's determination will expire on the earlier of:
- a. 19 December 2010; or
 - b. the date on which the number portability service ceases to have designated multinet network service status because it has either –
 - (i) expired under section 65; or
 - (ii) been omitted from Schedule 1 under section 66.

³² Commerce Commission, determination on the multi-party application for determination of 'local number portability service' and 'cellular number portability service' designated multinet network services. 31 August 2005

205. Accordingly, the benefits to end-users of telecommunications services from the availability of regulated number portability will only accrue if the period of regulation of number portability is extended for a further two year period in accordance with section 65 of the Act.