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COMMERCE COMMISSION

Decision No. 479

Determination pursuant to the Commerce Act 1986 in the matter of an application for clearance of a business acquisition involving:

VODAFONE MOBILE LTD NZ

and

900 MHZ SPECTRUM

The Commission:	John Belgrave Donal Curtin Paula Rebstock
Summary of Application:	The acquisition by Vodafone Mobile Ltd. NZ, of Radio Frequency Spectrum management rights and licences in the 900 MHz band auctioned by the New Zealand Government.
Determination:	Pursuant to section 66(3)(a) of the Commerce Act 1986, the Commission determines to give clearance for the proposed acquisition.
Date of Determination:	1 November 2002

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THE PROPOSAL

1. On 27 September 2002 the Commission registered a notice pursuant to section 66(1) of the Commerce Act 1986 ("the Act") for Vodafone Mobile Ltd NZ or interconnected body corporate ("Vodafone"), to acquire the management rights for 20 years in the radio frequency range between 890 MHz and 899.8 MHz, together with the corresponding natural pair management rights in the 939.0 – 944.8 MHz range.
2. Vodafone seeks clearance from the Commission on the basis that the transaction will not have the effect of substantially lessening competition in any market in New Zealand.

THE PROCEDURES

3. Section 66(3) of the Act requires the Commission either to clear or to decline to clear a notice given under section 66(1) within 10 working days, unless the Commission and the person who gave notice agree to a longer period. An extension was applied for by the Commission and granted by the Applicant. Accordingly, a decision on the application was required by 1 November 2002.
4. The Applicant sought confidentiality for specific aspects of the application. A confidentiality order was made in respect of the information for a period of 20 working days from the Commission's determination notice. When that order expires, the provisions of the Official Information Act 1982 will apply.
5. The Commission's determination is based on an investigation conducted by staff.
6. The Commission's approach is based on principles set out in the Commission's *Practice Note 4*.[1]

THE PARTIES

Vodafone Mobile New Zealand Limited ("Vodafone")

7. Vodafone is 100% owned by Vodafone Group Plc (previously called Vodafone AirTouch Plc) who are the owners and operators of numerous cellular networks internationally.
8. Vodafone acquired its New Zealand operation by purchasing Bellsouth's 65% stake in BellSouth New Zealand in 1998 and subsequently purchasing the remaining 35% stake owned by Singapore Technologies Telemedia.
9. Vodafone is the owner of radio spectrum management rights in the 900, 1800 MHz ranges, the 1.9, and 2.1 GHz ranges. The 900 and 1800 MHz frequencies are used to operate the current Global System for Mobile Communications (GSM) service offered by Vodafone.

GSM / 900MHz SPECTRUM AUCTION

10. The management rights and licences, which are the subject of the application, are the rights and licences offered for auction by the Crown. The Radio Spectrum Management Group of the Ministry of Economic Development, which is also the issuer, administers the auction and is the administrator of radio spectrum licences in New Zealand.
11. The Radio Spectrum Management Group also maintains a public register of spectrum rights and radio licences.

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[1] Commerce Commission, *Practice note 4: The Commission's Approach to Adjudicating on Business Acquisitions Under the Changed Threshold in section 47 – A Test of Substantially Lessening Competition*, May 2001.

12. The management rights and licences, which are the subject of the auction, relate to frequencies, which currently may be encumbered. In some instances, the acquirer may need to reach an accommodation with an existing user of that part of the spectrum. All encumbrances relating to particular lots have been specified in the auction catalogue. In addition, the Crown does not guarantee that the lots in the auction are suitable for the purpose for which they are being acquired. Nevertheless, MED and others have advised the Commission that it is likely the 900 MHz lot on offer would support mobile telephony networks.

OTHER RELEVANT PARTIES

TelstraClear Limited

13. TelstraClear is New Zealand's second largest full service telecommunications company, providing products and services to the business, government, wholesale and residential sectors.

14. The company provides voice, high-speed data, mobile, wireless, Internet services and cable TV to businesses and consumers.

Econet Wireless New Zealand ("EWNZ")

15. Econet Wireless Limited ("EWL"), a company registered in the UK and based in Johannesburg, South Africa, started its operations in Zimbabwe. It now operates in seven countries. EWL is the majority shareholder of EWNZ, the other major shareholder being Hautaki Ltd. Hautaki Ltd is the trustee of the Hautaki Trust, a pan-Maori Trust established to administer Maori telecommunications spectrum assets.

Walker Wireless

16. Walker Corporation is a New Zealand technology company. The company has been involved since 1985 with creating wireless local area networks, and data acquisition and identification systems.

17. Walker Wireless, a subsidiary of Walker Corporation, was established in 1999 and is involved in fixed wireless solutions requiring high speed, secure data carriage and Internet access.

18. The company is currently collaborating with Vodafone to rollout a broadband wireless service in select areas of NZ.

Telecom NZ

19. Telecom Corporation of New Zealand Limited (Telecom) was formed in 1987 out of the telecommunications division of the New Zealand Post Office, a government department. In 1990 Telecom became one of the first telecommunication companies in the world to be fully privatised.

20. Telecom Corporation of New Zealand through the Telecom group provides a full range of Internet, data, voice, mobile and fixed line calling services to customers in New Zealand and Australia.

TUANZ

21. TUANZ is the Telecommunications Users Association of New Zealand Inc. TUANZ is a non-profit organisation that represents business telecommunications interests. The Association has approximately 500 corporate members, who represent the major business users of telecommunications.

Ministry of Economic Development

22. The Ministry of Economic Development ("MED") facilitates, leads and implements the Government's vision for economic development.

23. The MED leads the production and co-ordination of policy advice related to economic, regional and industry development. The MED is also the Government's primary advisor on the operation and regulation of specific markets and industries, including energy and telecommunications.

INDUSTRY BACKGROUND

Background to the NZ telecommunications environment

24. Mobile communications have been available in New Zealand since the 1940s. In the beginning, conventional (or private) mobile radio was the only option for mobile communications. This provided the simplest of services – open broadcast of voice services over a radio channel.

25. Since the early 1980s, global mobile communications have been revolutionised by advancing technology. In 1982 paging services were introduced to New Zealand, followed in 1987 by the introduction of analogue cellular services using the US 'AMPS' cellular standard. Competition arrived with the introduction of competing GSM cellular services in 1993.

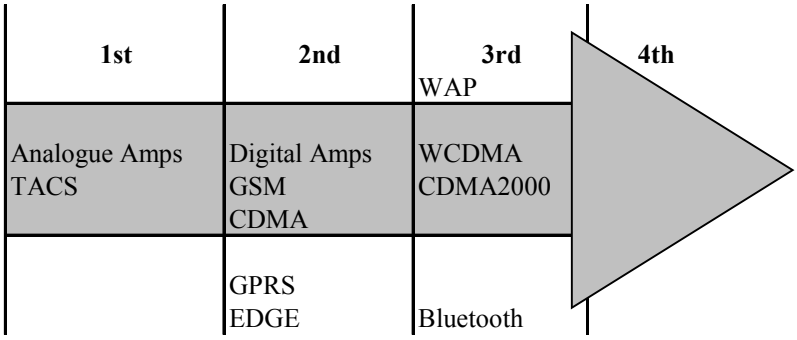
26. The most common application of wireless technology within New Zealand is for mobile phone use. Two cellular network operators currently provide services in New Zealand. In its early years, mobile communications were considered expensive and purely a business tool. However, the trend now is towards mass ownership of mobile phones. It is estimated that mobile phone penetration now exceeds 60% of the total population with Telecom, New Zealand's largest cellular operator, serving more than 1 million mobile customers. Vodafone, the second largest cellular operator has approximately a 47% share of the market, as measured by customer numbers.

27. Much of the cellular growth has occurred in the last three to four years, with pre-paid mobile phones and text messaging proving extremely popular. As of July 2001, there were 2.25 million mobile users in New Zealand bringing mobile penetration to 60% of the population.[2] Industry forecasts predict cell phone penetration will reach 80% of the total population by 2005.

[2] www.med.govt.nz/pbt/telecom/tip8/tip8-02.html

Mobile telephony

Table 1: Generations of Cellular Mobile



First generation (1G) functionality

28. At the time mobile technology was introduced in the late 1980s, mobile phones operated on Telecom's analogue network in the AMPS radio-frequency band. Basic telephony was all that was offered, and the cost of operation was significant. These cellular phones were considered the first generation (1G) of wireless technology.

Second generation (2G / 2.5G) functionality

29. BellSouth (later acquired by Vodafone) entered the cellular market using digital GSM technology. GSM has become a common standard internationally and has been adopted by many cellular operators. Digital cellular was arguably better suited to wireless data applications, which became increasingly common during the mid-1990s. During this time, Telecom also acquired spectrum to introduce their digital cellular service known as D-AMPS and which provided an increase in capacity to support a growing number of users.

30. Digital networks, in addition to accommodating low-speed data applications, (typically up to 9.6 kilobits per second (kbps)) have also permitted functions such as caller identification, voice messaging and short text messaging. Internationally, this functionality is known as second generation (2G) wireless technology.

31. The switch by Telecom from its AMPS/D-AMPS cellular system to a CDMA (Code Division Multiple Access) cellular network provided expanded capacity and improved functionality.

32. Technology developers have focused on increasing data transmission speeds to achieve rates between 56kbps and 144kbps. Transmission speeds of this magnitude have resulted in what many in the industry refer to as "2½G" technology. The use of General Packet Radio Services (GPRS) and Enhanced Data Rate for GSM Evolution (EDGE) have provided these enhanced transmission speeds in 2G networks.

Dual Band Phones

33. Dual-band mobile phones are capable of switching between GSM 1800 and GSM 900 frequencies. These phones are useful for travellers as they allow roaming on a greater number of networks across the world. All phones supplied by Vodafone in the last 2 – 3 years are at least dual band phones. At the top-end of the market, phones are tri-band (900/1800/1900 MHz). When phoning with a dual band mobile, the user never knows what frequency is being used, but will experience fewer problems than with a saturated

operator network. These phones first arrived in NZ in 1997. Both Telecom and Vodafone currently operate networks using 900 MHz and 1800 MHz spectrum.

Third generation (3G) functionality

34. The introduction of third generation wireless technology, now known as 3G, promises to integrate wireless and broadband applications incorporating voice, data and video. Global expectations are for the technology to offer high speed Internet access in a mobile environment. For example, current 2G mobile offers a data transfer rate of 9.6 kbps. This compares to most common data transfer speeds using a modem over the fixed line network of 56.6 kbps (excluding variants of Digital Subscriber Lines). "3G devices, by contrast, will transmit data at speeds between 144kbps and 2Mbps, about as fast as a cable modem or digital subscriber line"[3].

35. Common international standards specified by the ITU for the operation of 3G technology may also permit cross-network roaming on currently incompatible networks. For example, GSM users (such as Vodafone customers) would be able to 'roam' to competing operator networks who deploy D-AMPS and CDMA technology (such as Telecom), and vice versa.

Future technology developments

36. The date for introducing 3G technology in NZ is uncertain. 2003 and 2004 will see broader European carrier trials of 3G and limited commercial service in 2004. Widespread growth outside of urban centres is expected to be slow.

37. The Commission is uncertain as to the timeline for the introduction of 3G services to New Zealand. The bursting of the telecommunications bubble internationally has pushed back the expected introduction of 3G services around the world. Industry participants advised the Commission that the introduction of 3G technology to New Zealand is some three to five years away in a best-case scenario. At this time, the Commission considers the timeline for the introduction of 3G services to be too uncertain to place reliance on.

Significance of convergence and impact on demand for spectrum

38. Delivering 3G technology requires access to more radio-frequency spectrum in order to meet the demand for increased bandwidth. This requirement initiated the spate of spectrum auctions that occurred both internationally and in NZ, as few operators around the world had enough spectrum in existing bands to provide 3G services.

Spectrum currently utilised

39. The two current mobile network operators, Telecom and Vodafone, utilise spectrum in the 825 – 960 MHz range. MED has verified Vodafone currently holds approximately 15MHz of spectrum, together with the corresponding natural pair (in the 900 – 960 range), used for the provision of their GSM mobile services.

40. Telecom holds approximately 20 MHz of spectrum, together with the corresponding natural pair (in the range 825 – 890 MHz), and utilise this spectrum for the delivery of their CDMA mobile services.

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[3] *The Economic Impact of Third-Generation Wireless Technologies*, October 2000, A Report by the Council of Economic Advisers. www.wireless.co.il/whitePapers/3geconomic.pdf

41. In addition to their existing holdings in the 900 MHz spectrum Telecom possesses 2 x 25 MHz of 1800 MHz spectrum and Vodafone possesses 2 x 15 MHz of 1800 MHz spectrum. Both companies utilise this spectrum for the delivery of their CDMA and GSM services.

Background to Spectrum Allocation

42. Access to radio spectrum is an essential requirement for the operation of any form of mobile or wireless communication service. This access may be achieved by acquiring management rights to a specified frequency range or by the receipt of license to operate within a designated frequency. Management rights and licences are obtained from the MED. [4]

Current Spectrum Auction

43. Radio spectrum auction Number 5 commenced on 23 July 2002 and involved the auction of various management rights and spectrum licences over spectrum in the bands 890.0 MHz to 899.8 MHz, 3410 MHz to 3587 MHz, 3.4 GHz to 24.5 GHz and 1785 MHz to 1805 MHz. The auction confers management rights to these blocs of spectrum for a 20-year period. There is no obligation on the acquirer to utilise the spectrum acquired.

44. Before the auction, each registered bidder received a Bidder Registration Pack from the MED, which contained a bidders manual, a list of timing schedules for the first four auction rounds, and a standard form for declaring any associations with another registered bidder.

45. The auction process used by the MED is a multiple ascending round auction. This process involves making all lots available for bidding at the same time. The auction takes place over a number of rounds of a specified duration until no further bidding takes place on the lots being offered. This type of auction allows bidders who wish to purchase specific combinations of lots to take part in the auction.

46. In a change from previous auctions, the schedules in this auction ran independent of each other, so that as soon as there had been one clear round in any schedule, the auction for lots in that particular schedule ended and bidding remained open for the remaining schedules. The sixteen lots of spectrum in the auction were divided into four schedules. By separating the lots into different schedules, the MED ensured the sale of one group of lots did not affect the sale of another group of lots.

47. On the opening day of the auction (23 July 2002) there were no bids for the 1800 MHz spectrum in Schedule Four. Consequently, this spectrum was removed from the auction and remains with the Crown.

48. On the same day, Vodafone placed a bid for the one lot of 900 MHz spectrum in Schedule Two. No other bids were placed in round one of the auction. No bids were placed by any registered bidder in round two of this part of the auction and, consequently, the Auction Manager issued a notice to declare Vodafone the provisionally successful bidder of that lot under the auction rules[5].

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[4] *See Robert Crandall's "NZ Spectrum Policy: A Model for the U.S.", The Journal of Law and Economics, Oct 1998.*

[5] *Vodafone Mobile's first and only bid of $2,050,026 was marginally above the reserve price of $2 million set by the Auction Manager for this lot. Under the Auction Rules, Rule 30, the Auction Manager can specify the minimum bids that may be submitted. For the opening period of the Auction, bidders were required to place bids (other than the opening bid) of not less than 10% of the current lead bid. If any bidder had made an opening bid at the reserve price, the next bid required would have had to be at least $2,200,000 in order to satisfy the bidding requirements. If there had been a subsequent bid over Vodafone Mobile's initial bid, that subsequent bid would have had to be at least $2,255,029 in order to be valid.*

Spectrum Management rights

49. The Secretary of MED on behalf of the Crown may only create a management right. The right will either be disposed of to private interests (via the auction), or retained. The Radiocommunications Act of 1989 also makes provision for a public register of spectrum rights and radio licences and an arbitration process for interference resolution[6].

50. Management rights are not inherently use-specific and in essence establish a right to create spectrum licences within a specific frequency band for any purpose. However, spectrum licences and radio licences tend to be use-specific. They must also be described in technical parameters that enable adequate interference co-ordination.[7]

51. The Radiocommunication Act provides for the application of provisions in the Commerce Act to the acquisition of spectrum where this would result in a substantial lessening of competition in the market. Provisions of the Commerce Act also apply in circumstances where a firm misuses its market power.

Limits on Acquisition of Spectrum

52. The rules of the auction as established by the MED did not place any limitations on the acquisition of spectrum in the 900 MHz band. The MED conducted a consultative process before the auction. That process resulted in the preparation by MED of a Discussion Document: "*Proposed auction of spectrum rights for WLL, LMDS and cellular services"* ("Discussion Document") that was released on 24 September 2001. The Discussion Document was widely circulated to industry and provided interested parties with the opportunity to comment on the various issues surrounding the auction, including process, timing and acquisition limits. It also specifically called for comment on whether or not Telecom and Vodafone should be prohibited from acquiring further cellular spectrum in the 900 MHz band in the Auction.

53. A Memo from the Office of the Minister of Communications attached to Cabinet Paper FIN (01) 264, 10 December 2001, reviewed the issues surrounding acquisition of the 900 MHz spectrum by either Telecom or Vodafone, given their existing market presence. On these issues, the Memo notes that:

> "39 Because infrastructure costs are likely to be lower at 900 MHz than at 2 GHz, particularly in non-urban areas, the spectrum concerned is likely to be attractive to a new entrant or an existing player wanting to expand services. However, access to the spectrum is not critical because under the Telecommunications Amendment Bill, market entry could be achieved initially through a roaming agreement…Moreover, the spectrum would need to be utilised in conjunction with other spectrum if a full competitive network was envisaged...
>
> 40 Accordingly, the Ministry is not convinced that Telecom and Vodafone should be prevented from acquiring the spectrum at auction."

54. Consequently, Cabinet made a decision not to restrict Vodafone or Telecom from participating in the Auction. The Cabinet Papers[8] both recommended spectrum caps be placed on the spectrum in the WLL and LMDS blocks. In contrast, spectrum caps were not placed on the 900 MHz spectrum. In effect, Cabinet chose to rely on the Commerce Act rather than make a predetermined judgement as to the likely effect on competition of

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[6] *A Spectrum Allocation Strategy, - Discussion paper. Radio Spectrum Management Group, Ministry of Commerce, May 1998.*

[7] *www.med.govt.nz/rsm/publications/dps/dp11.pdf*

[8] *FIN Min (01) 31/9 dated 12 December 2001 and CBC (01) 27 dated 18 December 2001*

Vodafone or Telecom purchasing the 900 MHz spectrum. As a result, Vodafone submitted a s66 clearance application to the Commerce Commission.

Vodafone's Rationale for Purchase of 900 MHz Spectrum

55. Vodafone supplied three reasons for the purchase of the 900 MHz spectrum. [

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56. The second rationale provided by Vodafone [

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57. [

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58. [

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MARKET DEFINITION

59. The Act defines a **market** as:

> *. . . a market in New Zealand for goods or services as well as other goods or services that, as a matter of fact and commercial common sense, are substitutable for them.*

60. For the purpose of competition analysis, a relevant market is the smallest space within which a hypothetical, profit-maximising, sole supplier of a good or service, not constrained by the threat of entry, could impose at least a small yet significant and non-transitory increase in price, assuming all other terms of sale remain constant (the '*ssnip* test'). For the purpose of determining relevant markets, the Commission will generally consider a *ssnip* to involve a five percent increase in price for a period of one year.

61. It is substitutability at competitive market prices that is relevant in defining markets. Where the Commission considers that prices in a given market are significantly different from competitive levels, it may be necessary for it to assess the effect of a *ssnip* imposed upon competitive price levels, rather than upon actual prices, in order to detect relevant substitutes.

62. The Commission may seek to define relevant markets in terms of four characteristics or dimensions:

- The goods or services supplied and purchased (the product dimension);
- The level in the production or distribution chain (the functional level);
- The geographic area from which the goods or services are obtained, or within which the goods or services are supplied (the geographic extent); and possibly

- The temporal dimension of the market, if relevant (the timeframe).

63. The Commission will seek to define relevant markets in a way that best assists the analysis of the competitive impact of the acquisition under consideration. A relevant market will ultimately be determined, in the words of the Act, as a matter of fact and commercial common sense.

64. Where markets are difficult to define precisely, the Commission will initially take a conservative approach. If the proposed acquisition can be cleared based on a narrow market definition, it would also be cleared using a broader one. If the Commission is unable to clear the proposed acquisition based on the narrower market, it will be necessary to review the arguments and evidence in relation to broader markets.

Product Dimension

65. The delineation of relevant markets as a basis for assessing the competitive effects of a business acquisition begins with an examination of the goods or services offered by each of the parties to the acquisition. Both demand-side and supply-side factors are generally considered in defining market boundaries. Broadly speaking, a market includes products that are close substitutes in buyers' eyes on the demand-side, and suppliers who produce, or are able easily to substitute to produce, those products on the supply-side.

66. The Commission takes the view that the appropriate time period for assessing substitution possibilities is the longer term, but within the foreseeable future.[9] The Commission considers this a period of one year, which is the period customarily used internationally in applying the *'ssnip'* test (see below) to determine market boundaries. The Commission will take into account recent, and likely future, changes in products, relative prices and production technology in the process of market definition.

The Commission's previous view of the market

67. In the most recent decisions involving the acquisition of spectrum rights, the Commission assessed the competitive impact of Vodafone (Decision 413) and Telecom (Decision 423) acquiring rights in the 2 GHz band. In those and other decisions relating to telephony services, the Commission and the Courts have found that there were separate markets for fixed telephony services and mobile telephony services. While it was recognised that there was some substitutability between fixed and mobile services, the price and functionality of the two services were quite different. The Commission noted in Decision 413 that while the differences might narrow with new technology, at that time it remained appropriate to continue to place them in separate markets.

68. The particular difficulty the Commission had with assessing the 2 GHz acquisitions was in determining the use to which that spectrum might be put. The spectrum was seen as being suitable for third generation (3G) technology. The Decision quoted the International Telecommunications Union as forecasting that 3G devices will:

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[9] *In Tru Tone Ltd v Festival Records Retail Marketing Ltd (1988) 2 NZLR 351 Smellie J and the Court of Appeal on appeal approvingly quoted an earlier decision of the Commerce Commission in Edmonds Food Ind Ltd v W F Tucker & Co Ltd (Decision 21, June 1984) where the Commission had ruled: "A market has been defined as a field of actual or potential transactions between buyers and sellers amongst whom there can be strong substitution, at least in the long run, if given a sufficient price incentive". See also News Limited v Australian Rugby Football League Limited &Ors (1996) ATPR at 41,687, where Burchett J stated: "Long term prospects that can be more or less clearly foreseen are, to that extent, a present reality, from the point of view of identifying the constraints upon commercial action. This fact emphasises the importance of the principle . . . that substitution possibilities in the longer run may be very significant for market delineation." Also Re Tooth & Co Ltd v Tooheys Ltd (1979) 39 FLR 1 emphasises longer run substitution possibilities.*

> "function as a phone, a computer, a television pager, a videoconferencing centre, a newspaper, diary and even a credit card. It will support not only voice communications but also real-time video and full-scale multimedia."

69. The Commission recognised the possibility that 3G services, when they were finally introduced, would be sufficiently different to justify placing those services in a discrete market, distinct from the market for other mobile telephony services. It concluded that it could not be certain about this from the information available to it at that time. Accordingly, it took what it considered the conservative approach, and assessed the acquisition in both the market for the provision of mobile telephony services and that for the provision of third generation mobile telephony services. Both markets were considered national in scope.

70. A similar approach was adopted, for similar reasons, in Decision 423.

The industry's views on the market

71. Vodafone stated in its current application that it considers the relevant product and geographic market is that for the provision of mobile telephony services on a national basis. It considers that the relevant functional markets are those for the wholesale supply of those services and the retail sale of these services.

72. The market definition submitted by EWNZ agrees with the definition submitted by Vodafone.

73. Other industry participants provided comments, which were consistent with the past approach of the Commission.

The Market Relevant to the Current Application

74. The asset being acquired, the management right to spectrum in the 900 MHz band, could in theory, be used in a number of applications. However, the principal parties consulted on the application appeared to accept that the highest value use for this part of the spectrum was for carrying mobile telephony services. The MED's auction, which resulted in the only bid for this band coming from Vodafone, confirmed this view.

75. The Commission recognises that there are a range of services that can, in some circumstances, offer alternatives to users of mobile telephony services. These include:

- the fixed network or public switched telephone services;
- public access cordless telecommunications services;
- radio paging;
- private mobile radio services;
- trunked private mobile radio; and
- mobile radio and satellite services.

Each is considered below.

Fixed networks

76. Fixed networks, such as the PSTN (Public switched telephone network), provide all the functionality of mobile services except for mobility. The Commission considers that the main factor behind a customer's purchase of a mobile service is to obtain mobility of service on which a price premium is charged, particularly for calls to customers in the

local area. As fixed networks do not provide mobility, most consumers do not consider fixed services close substitutes for mobile services.

Public access cordless telecommunications services (PACTS)

77. PACTS has some functional similarities with mobile services in terms of two-way communication and interconnection with the PSTN (it has been described as a digital cordless technology). However, there are also significant differences in functionality between PACTS and mobile services. PACTS generally have no call handover ability between cells and users are constrained to stay within a very short distance from the base station (typically a maximum of 100 meters). Because of its limited mobility, the majority of mobile services users would not consider PACTS a close substitute. PACTS type technology is popular in highly urbanised communities such as in Japan (PHS) and South East Asia. In Europe, the technological standard is known as DECTS (Digital European Cordless Telephony).

Paging Services

78. Paging services have comparable mobility to mobile services but are not considered part of the current mobile telephony market because of the lack of interactive two-way voice communication. Radio paging and mobile services tend to be complementary services rather than substitutes. Customers who use both demonstrate their complementary nature. If the services were substitutes, customers would choose one or the other but not both. If the price of mobile services increased there may be some customers at the margin who would move to a paging service, but this possibility is insufficient to include radio paging in the mobile telephony market. It should also be noted that mobile phones increasingly feature many of the services provided by pagers, although at a noticeable premium.

Private Mobile Radio Services (PMR)

79. PMR is a mobile communications system, which is set up and maintained by the user. PMR utilises user-owned infrastructure and transmission facilities, and does not have any common or shared facilities between users. The service can provide coverage to large areas depending upon geographical citing of base stations. Two services are considered substitutable if a significant migration of customers from one service to another occurs in response to an increase in price of the first. If the price of mobile services increased, the Commission considers it unlikely that there would be a significant migration of customers from mobile telephony to PMR. The main limiting factor would be the initial investment in the sunk costs necessary to set up the PMR infrastructure and the fact that it is suited to customers with a large number of users who only require communication between themselves and a base station.

Trunked Private Mobile Radio (TPMR)

80. TPMR is a private mobile radio service with the ability to link to the PSTN (Public switched telephone network) often at a premium rate. TPMR services are differentiated from mobile services in terms of improved capacity, signalling capability, group calling and data transmission features. TMPR also allows all parties to a communication to speak simultaneously. TMPR is also capable of managing several interactive calls at once. There are no indications of the number of customers who could move from mobile services to TMPR, nor any indication of the number of TPMR services available should

prices for mobile services increase and customers decide to move back to TPMR. The lack of functionality of TPMR in terms of the difficulty and costs of interconnection to the PSTN, together with limited geographic coverage, indicate that TPMR is not a good substitute for mobile services. The differential in mobile services prices and significantly higher functionality also suggest that TPMR is not likely to be a good substitute in the near future.

Mobile satellite services

81. Mobile satellite services are a mobile service based upon a satellite rather than (terrestrial) cellular radio. Mobile satellite services are likely to become an important niche in the future. However, it is likely that the cost of satellite mobile services would, at least initially, be significantly higher than terrestrial mobile services — meaning satellite services may not be substitutable for mobile services for some time.

Microwave services.

82. Broadband radio services such as multi channel multipoint distribution services (MMDS) and local multipoint distribution services (LMDS), which are known as 'wireless cable' reflecting their ability to support high bandwidth services, are not considered substitutes for mobile services as they currently support only one way communication and do not offer mobility of communications.

Wireless local loop

83. Wireless local loop technologies offer the possibility of providing local access services at a lower cost than traditional fixed line technologies and can use a number of different radio technologies such as microwave, digital and analogue cellular, and cordless technologies (such as DECTS). The Commission does not consider wireless local loop to be a close substitute for mobile telephony because of the limited mobility this type of communications offers.

84. Having considered each of these possible substitutes on the demand side, the Commission concludes that none is sufficiently similar to mobile telephony services to justify placing them within the same product market. These differences include the type of service and the cost of the service.

85. The Commission's position in this respect is consistent with that reached in earlier decisions, including Decisions 413, 423 and 447.

Supply Side

86. On the supply side, potential sources of substitution can be identified when an existing supplier in the mobile services or other markets using existing infrastructure can change its output mix in order to supply mobile services. The relevant output of the market is a public mobile telecommunications service, which can be supplied using either CDMA or GSM technology.

87. Other services will be considered substitutable for mobile services if suppliers change their output mix to supply more mobile services because of a change in demand, or change their supply conditions leading to a price increase for mobile services.

88. The Commission has not identified any existing combination of telecommunications services, which could be closely substitutable with mobile services, thus no existing supplier substitutes are included in the mobile telephony market. No substitutable services have been identified because the conditions of supply of mobile services are unique in terms of factors such as the radio spectrum required or the use of cellular radio base stations. A number of other telecommunications services are complementary services, not substitutes, to mobile services on the supply side.

Functional Level

89. The production, distribution and sale of a product typically occur through a series of functional levels – for example, the manufacturing/import level, the wholesale/distribution level and the retail level. It is often useful to identify the relevant functional level in describing a market, as a proposed business acquisition may affect one horizontal level, but not others.[10] Alternatively, some acquisitions, such as those involving businesses at different vertical levels, may raise issues related to vertical integration. Generally, the Commission will seek to identify separate relevant markets at each functional level affected by an acquisition and assess the impact of the acquisition on each.

90. In this instance the Commission considers that any market power issues raised by the proposed acquisition can be assessed fully at the functional level which could be directly affected – that is, the wholesale functional market.

Geographic Extent

91. The Commission will seek to define the geographical extent of a market to include all of the relevant, spatially dispersed, sources of supply to which buyers can turn should the prices of local sources of supply be raised. For each good or service combination, the overlapping geographic areas in which the parties operate are identified. These form initial markets to which a *ssnip* is applied. Additional geographic regions are added until the smallest area is determined within which the hypothetical monopolist could profitably impose a *ssnip*.

92. Generally, the higher the value of the product to be purchased, in absolute terms or relative to total buyer expenditure as appropriate, the more likely are buyers to travel and shop around for the best buy, and the wider the geographic extent of the market is likely to be.

93. Although buyers and sellers of a particular good or service may interact in markets that are apparently local or regional in extent, those markets may themselves overlap and interrelate to form a market covering a larger geographical area. In these situations, the larger market is likely to be the appropriate one for analysing the competitive effects of a business acquisition.

94. Mobile services are currently provided on a national basis via the Vodafone and Telecom networks. These networks provide both urban and rural customers with mobile communication products and services.

95. The Commission concludes that it is appropriate to consider the current application within the framework of a national geographic market. The Commission notes, however, that if factors arise which have different impacts in different areas, the Commission may in future

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[10] *Telecom Corporation of New Zealand Ltd v Commerce Commission (1991) 4 TCLR 473, 502 The High Court (Greig J, Shaw WJ, Prof M Brunt) noted: "If we ask what functional divisions are appropriate in any market definition exercise, the answer, …, must be whatever will best expose the play of market forces, actual and potential, upon buyers and sellers. Wherever successive stages of production and distribution can be co-ordinated by market transactions, there is no difficulty: there will be a series of markets linking actual and potential buyers and sellers at each stage. And again, where pronounced efficiencies of vertical integration dictate that successive stages of production and distribution must be co-ordinated by internal managerial processes, there can be no market."*

adopt regional markets for the purpose if its competition analysis. For the purposes of this application, the Commission has no evidence to suggest that any such factors, if they exist, are significant.

Time Frame

96. Vodafone's current 900 MHz spectrum rights come up for renewal in 2011. The period of time the Commission has concentrated on in its analysis below is 2003 to 2011. After 2011, Vodafone's existing rights to the spectrum may become available for auction. In any event, the rapid development in technology makes any assessment of market conditions beyond 2011 very problematic. The rate of development would suggest, however, that a range of new technology and entry options might be available at that time.

Third Generation Mobile Telephony Services

97. In Decision 413 and 423, the Commission identified a separate market for 3G mobile telephony services in New Zealand. At present, there are no providers of third generation services in New Zealand, although it is recognised that it is likely these services will encompass services currently being supplied within the 2G and 2½G categories.

98. The spectrum band, which is the subject of the application, is not suitable for 3G services. Accordingly, the proposed acquisition would not affect currently, for instance, entry by 3G service providers. Accordingly, the Commission does not consider that it is necessary to consider a discrete 3G services market in its analysis of this application. However the Commission recognises 3G services may be a potential constraint on providers of mobile telephony services, and this is taken into account in the analysis below.

Conclusion on Market Definition

99. The Commission concludes that the relevant market is the national market for the supply of mobile telephony services.

COMPETITION ANALYSIS

Substantially Lessening of Competition

100. Section 47 of the Act prohibits particular business acquisitions. It provides that:

> A person must not acquire assets of a business or shares if the acquisition would have, or would be likely to have, the effect of substantially lessening competition in a market.

101. Section 2(1A) provides that substantial means "real or of substance". Substantial is taken as meaning something more than insubstantial or nominal. It is a question of degree.[11] What is required is a real lessening of competition that is not minimal. The lessening needs to be of such size, character and importance to make it worthy of consideration.[12]

102. Section 3(2) provides that references to the lessening of competition include references to the hindering or preventing of competition.[13]

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[11] *Commerce Commission v Port Nelson Ltd (1995) 6 TCLR 406, 434; Mobil Oil Corporation v The Queen in Right of NZ 4/5/89, International Centre for Settlement of Investment Disputes, Washington DC, International Arbitral Tribunal ARB/87/2 (paras 8.2, 19, 20).*

[12] *Dandy Power Equipment Ltd v Mercury Marina Pty Ltd (1982) ATPR 40-315, 43-888; South Yorkshire Transport Ltd v Monopolies & Mergers Commission (1993) 1 All ER 289.*

[13] *For a discussion of the definition, see Commerce Commission v Port Nelson Ltd, supra n 6, 434.*

103. While the Act defines the words "substantial" and "lessening" individually, it is desirable to consider the phrase as a whole. For each relevant market, the Commission will assess:

- the probable nature and extent of competition that would exist in a significant section of the market, but for the acquisition (the counterfactual);
- the nature and extent of the contemplated lessening; and
- whether the contemplated lessening is substantial.[14]

104. In interpreting the phrase "substantially lessening competition", the Commission will take into account the explanatory memorandum to the Commerce Amendment Bill (No 2). The memorandum notes that:

> Two of the 3 key prohibitions are strengthened to bring New Zealand into line with Australian competition law, which will facilitate a more economic approach to defining anti-competitive behaviour.

and, in relation to s47:

> This proposed new threshold is the same as the threshold for these types of acquisitions in section 50 of the Trade Practices Act 1974 (Australia).

105. For the purposes of the analysis, the Commission takes the view that a lessening of competition and a strengthening of market power may be taken as being equivalent, since they are the two sides of the same coin. Hence, it uses the two terms interchangeably. Thus, in considering whether the acquisition would have, or would be likely to have, the effect of substantially lessening competition in a market, the Commission will take account of the scope for the exercise of market power, either unilaterally or through co-ordination between firms.

106. When the impact of enhanced market power is expected predominantly to be upon price, the anticipated price increase relative to what would otherwise have occurred in the market has to be both material, and able to be sustained for a period of at least two years, for the lessening, or likely lessening, of competition to be regarded as substantial. Similarly, when the impact of increased market power is felt in terms of the non-price dimensions of competition, these also have to be both material and able to be sustainable for at least two years for there to be a substantial lessening, or likely substantial lessening, of competition.

Framework for analysis

107. The Act prohibits business acquisitions that would be likely to have the effect of substantially lessening competition in a market. The Commission makes this assessment against a counterfactual of what it considers would be likely to happen in the absence of the acquisition. In the present case, the counterfactual is considered the status quo where Vodafone and Telecom as the only current providers of mobile telephony in the market compete against each other.

108. Most business acquisition cases before the Commission require an assessment of the effects on market power from the removal or diminution of a competitor in the market. In this case, however, the number and size of existing competitors would be unaffected. Rather the matter, which the Commission will focus on, is the removal of one vehicle (i.e. a spectrum band) by which a new entrant can enter the market.

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[14] *See Dandy, supra n 5, pp 43–887 to 43-888 and adopted in New Zealand: ARA v Mutual Rental Cars (1987) 2 NZLR 647; Tru Tone Ltd v Festival Records Retail Marketing Ltd (1988) 2 NZLR 352; Fisher & Paykel Ltd v Commerce Commission (1990) 2 NZLR 731; Commerce Commission v Carter Holt Harvey, unreported, High Court, Auckland, CL 27/95, 18/4/00.*

109. Therefore, the Commission's analysis below will focus principally on whether the transaction affects the potential for a third player to enter the market and, if so, whether it would be likely to impact on the competitiveness of the market, and hence market power, in the future.

The Counterfactual

110. The Commission will continue to use a forward-looking, counterfactual, type of analysis in its assessment of business acquisitions, in which two future scenarios are postulated: that with the acquisition in question, and that in the absence of the acquisition (the counterfactual). The impact of the acquisition on competition can then be viewed as the difference between those two scenarios.

111. The Commission considers the most likely scenario if the acquisition does not proceed is that the spectrum bloc will remain with the Crown in the immediate future, but may be offered for auction in the future should there appear to be demand for it. The Commission does not intend to speculate on the likelihood of specific firms purchasing the 900 MHz bloc of spectrum.

112. In the counterfactual adopted by the Commission, Telecom and Vodafone will continue to compete in the mobile market using their existing networks.

113. The counterfactual scenario is virtually identical to the current status quo. It is the scenario where Telecom and Vodafone continue to compete and the Crown holds the 900 MHz spectrum. For this reason, the Commission considers the status quo the appropriate counterfactual to use in assessing the Vodafone acquisition of spectrum.

Conclusion on the Counterfactual

114. The Commission proposes to use as a counterfactual the current status quo where Telecom and Vodafone compete for mobile customers and the Crown holds the last bloc of 900 MHz spectrum.

Current Competition

115. There are currently two principal participants in the New Zealand mobile telephony market Telecom and Vodafone. TelstraClear resells Vodafone services under its brand. As TelstraClear mobile services are provided by and through Vodafone, the Commission does not consider that TelstraClear provides effective competition to Vodafone in the market.

116. The current market shares are shown below in Table 2.

Table 2: Estimated Market Shares for the NZ Mobile Telephony Market

Firm	Market Share (%)	Customer Numbers
Telecom	53%	**1,248,000**
Vodafone	47%	**1,115,600**
Total	**100%**	**2,363,600**

117. Telecom's market share has steadily eroded since Vodafone's entry into the market via its takeover of Bellsouth in 1998. Reasons suggested for Vodafone's growth of market share include greater ability of its GSM network to offer global roaming and its first mover advantage in introducing text messaging. In addition, it has been suggested that the lower costs of GSM handsets have also contributed to Vodafone's acquisition of market share.

118. Vodafone's capture of former Telecom customers indicates the two firms compete for the same customers. Vodafone has stated its [

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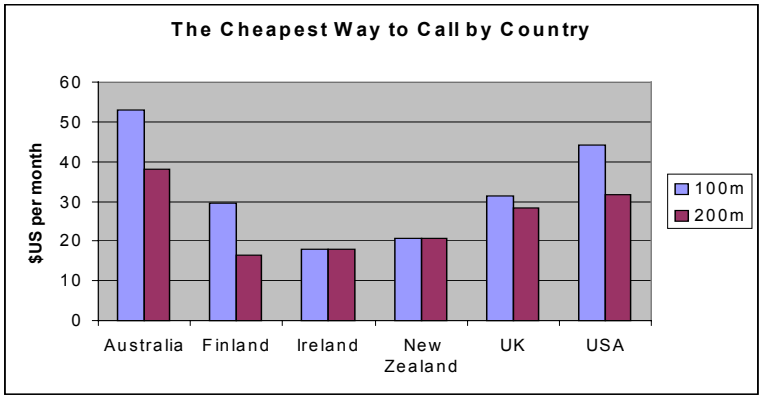
119. While there is a clear rivalry between the two firms, the level of competition in the NZ mobile market has been categorised as duopolistic by some industry observers. In an OECD/Taligen Mobile Basket Tariff Comparison[16] New Zealand mobile prices were higher than all OECD countries except Australia, Slovak Republic, Poland, Mexico and the Czech Republic.

120. Vodafone has provided alternative data pointing to a more competitive market than suggested by the OECD data. The submission states, "A benchmarking study undertaken by the Centre for Research in Network Economics and Competition [CRNEC] at the University of Auckland investigated what it would cost in a range of countries (including Australia, the UK, the USA, Ireland and Finland) to receive the same services offered by Vodafone to its customers for typical cellular packages. The study concluded that the prices paid by Vodafone customers in New Zealand were cheaper than in all countries other than for Ireland and one call case in Finland. Even those differences were slight..."[17]

Table 3: Graph from CRNEC study



121. Vodafone has stated, "the CRNEC study determined that prices paid by Vodafone customers in New Zealand are some of the cheapest prices when compared to other countries".[18] It has also pointed to a range of new services, which have been introduced which it considers suggests a competitive market.

122. Therefore, the Commission concludes the current competition provides a degree of constraint on the applicant. As the current level of competition would not be affected by the proposed acquisition, the Commission has not attempted to assess whether this level could be characterised as duopolistic or fully competitive.

123. For the purpose of considering the current application, what is important is whether the future level of competition as compared with the counterfactual would be affected by the proposed acquisition. In particular, the Commission is required to assess whether Vodafone's purchase of spectrum will affect the potential for entry of new players. The

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[15] *Vodafone letter to Commerce Commission, 24 Oct 2002.*

[16] *May 2001, PPP, excluding taxes (~250 call-minutes per month)*

[17] *Vodafone in a letter to the Chair of the Commerce Select Committee dated 7 November 2001*

[18] *Vodafone letter to Commerce Commission, 24 Oct 2002.*

Commission accepts as a general proposition that a two firm market with high entry barriers is likely to be less competitive than a two firm market with low entry barriers.

POTENTIAL FOR NEW ENTRY

124. A new entrant would have the following options:

- To offer a regional service (most likely in the major urban areas) utilising its own regional network, without providing national coverage.
- To offer a service which principally focuses on major urban areas covered by its own regional network, but providing national coverage through a roaming agreement with an existing national network operator.
- To offer a national service with national coverage utilising its own national network.
- To offer either a national or regional service without its own network but utilising another firm's national network. The new entrant would be, in what the Commission understands is the terminology of the sector, a "virtual mobile network operator".

125. The Commission considers below the conditions for entry into the market to assess whether the proposed acquisition, by removing the possibility of a new entrant acquiring spectrum in the 900 MHz band, would significantly lessen the potential for entry to occur. In particular, the Commission has considered whether the acquisition would significantly lessen the potential for a new network to be rolled out, or would significantly lessen the potential for existing network owners to enter into roaming agreements.

Plans for New Entry

126. The Commission considers there are at least two identifiable firms who are likely potential entrants, EWNZ and TelstraClear. Both have rights to unused frequency in the 1800 MHz and 2000 MHz band, which are capable of providing mobile telephony services, although neither has commenced rolling out a network.

127. TelstraClear has indicated that it is still considering its near term options for the mobile telephony market, beyond its present role of retailing Vodafone's service. One option is to become a "virtual network operator" utilising Vodafone's network. Rolling out its own network at some stage is another. TelstraClear did not bid for the 900 MHz spectrum Vodafone is seeking to acquire. [

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128. EWNZ announced last year its intention to establish a second GSM network in New Zealand. Like TelstraClear, it did not bid for the spectrum right in question. [

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129. The Commission has given careful consideration to the full range of issues raised by these firms.

Entry conditions

Introduction

130. The important conditions which affect successful new entry to the market include:

- Access to capital;
- Ability to achieve scale economies;

- Availability of necessary handsets, etc;
- Brand recognition, reputation for reliability/comprehensive coverage/innovation etc;
- Access to a network to carry the service. This can be achieved either by the new entrant rolling out its own network, or entering into an agreement with an existing network owner for it to carry the service (i.e. a roaming agreement), or a mix of both these.

Capital Costs

131. The capital cost of new entry on a reasonable scale is likely to be very substantial, but will vary substantially with the scale of the network rollout option chosen by the new entrant. However, in most instances, capital will be available to viable business propositions and access to capital as such is not usually regarded as a barrier to entry.

132. There are strong indications that national coverage is important to a significant portion of the mobile market. A U.S. study found that 58% of cellular users considered national coverage important.[19] Ovum[20] reported that entrants must be able to offer more than 90% national coverage before they are attractive to many segments of the market.

133. Therefore, given the importance of national coverage, the Commission has investigated whether additional capital costs would need to be incurred if 900 MHz spectrum was not available to a new entrant. EWNZ and Vodafone were asked for estimates for rolling out networks using different spectrum configuration. These figures are shown in Table 4.

[19] *http://www.yankeegroup.com/surveys.*

[20] *Interconnect — a global guide to effective telecommunications 1997. Ovum, London, 1997, p. 158.*

Table 4: Estimated Costs of Network Rollout

Firm	Capex	900 MHz national network	1800 MHz national network	1800 MHz Urban/ 900 MHz rural
EWNZ	Capex	[ ] million	[ ] million	[ ] million
Vodafone	Capex	[ ] million	[ ] million	[ ] million[21]
EWNZ Cost Difference versus Vodafone		[ ] million	[ ] million	[ ] million

All figures in NZ dollars.

134. The figures suggest there is a real cost differential between a 900 MHz network and an 1800 MHz network, but this difference arises only in respect of the rural component of the network. The costs of providing the urban component using the 1800 MHz band compared with the 900 MHz band are [ ] Therefore, whether lack of access to 900 MHz spectrum hinders entry depends on options available for rural coverage.

135. [

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136. The Commission notes that the current cost of rolling out a national network using 1800 MHz alone is significantly less than the cost of rolling out national networks on 900 MHz when Telecom and BellSouth entered the market. Vodafone has stated [

]22 EWNZ stated in its business plan, [ ]23

Comprehensive Coverage

137. While a new entrant may choose to concentrate on regional markets with regional coverage alone, the Commission considers that comprehensive coverage would be important for a new entrant as a significant proportion of its potential mobile customers would value it.

Economies of Scale

138. IHUG noted in its submission on roaming to the Telecommunications Inquiry that, "NZ can support multiple mobile operators …in the major cities for competition reasons, but it does not make sense for these mobile operators providing [sic] independent coverage of rural areas and highways."[24]

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[21] [

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[22] *Vodafone letter dated 24 Oct 2002*

[23] *EWNZ Information Memorandum*

[24] *http://www.teleinquiry.govt.nz/submissions/cross/c002.pdf*

139. The Commission has also received similar comments from independent parties. It remains doubtful whether New Zealand's population could support three national mobile networks, irrespective of the existence of unused 900 MHz spectrum, and notes that [
].

Time for New Entry

140. The parties who the Commission has identified as having the frequency rights, the expertise and experience, and potentially the access to the necessary resources to enter the market on a significant scale are EWNZ and TelstraClear. [

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Table 5: Network Rollout Timeline[25]

[Phase	[ ]	[ ]
[ ]	[ ]	[ ]
[ ]	[ ]	[ ]
[ ]	[ ]	[ ]
[ ]	[ ]	[ ]
[ ]	[ ]	[ ]

141. Vodafone has told the Commission that it considers a national network rollout could occur within three years from the time a decision to proceed was made. It stated,

> "We believe that, given these facts, it should be possible for an adequately resourced entrant to deploy a competitive urban network within less than 12 months (initially using mainly national roaming to provide coverage) and within 24 to 36 months for a reasonably extensive mobile network of its own."[26]

Roaming

142. As noted above, the Commission considers that the most likely means of entry is a gradual rollout of an urban network supplemented by roaming on an incumbent's existing mobile network. This type of entry allows a new entrant to offer national coverage while minimising the initial capital expenditure required for cell sites in remote locations where user revenue is unlikely to cover the installation cost. While it is theoretically possible for a firm to enter the market using another firm's network (and there is an example of this occurring in the UK where Virgin, which is described as a "mobile virtual network operator", uses OneWorld's network), this does not appear to be an attractive option in New Zealand.

143. Vodafone provided the following perspective on roaming to the Commission:

[

[25] [ ]
[26] *Vodafone letter 23 Oct 2002*

] [27]

144. The Commission recognises that a new entrant may not find it straightforward to enter into a satisfactory roaming arrangement, as the new entrant is likely to take retail business from the incumbent network owner. Nevertheless, there will be some incentives on the network owner to reach an agreement with the new entrant. These include the fact that a refusal to agree to access by, for example, Vodafone may:

- result in the new entrant entering into an agreement to use the Telecom network, and thereby result in Vodafone losing network revenue. (The Commission recognises that once the new entrant chooses its technology, and makes its choice known, this "bargaining chip" is lost. A new entrant opting for GSM technology would only be able to use Vodafone's network, while one using CDMA technology would only be able to use Telecom's network);
- result in Vodafone losing the network revenue which would potentially be available from market growth attributable to the new entrant;
- put Vodafone at risk of breaching the Commerce Act;
- result in a greater incentive on the new entrant to roll out a national network itself, with a resulting loss of revenue to Vodafone.
- result in the matter being referred to the Commission under Part 3 of the Telecommunications Act 2001. The Act specifies;

> "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 internationally 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
>
> Conditions: All of the following: (a) the access seeker must not already have the agreement that provides for national mobile roaming with any cellular mobile telephone network operator in New Zealand: (b) there must be no separate determination (whether pending or existing) regarding roaming onto a network other than the network in respect of which the access seeker seeks access: (c) the access seeker must have rolled-out a new cellular mobile network that covers no less than 10% of the area in which the New Zealand population normally lives or works. However, the access seeker may apply for a determination from the Commission before achieving the roll-out threshold as long as all the other applicable conditions set out in paragraphs (a), (b), (d), and (e) are met: (d) the Commission must have approved a plan for the access seeker. That plan must include (i) the establishment of roll-out milestones to be met by the access seeker to continue to access the national roaming service; and (ii) the provision for roll-out of a new national cellular mobile telephone network within the period of time in which the national roaming service is specified: (e) the Commission must be satisfied that the access seeker has the capability to comply with the agreed network roll-out plan."

145. The Commission considers that past experience of firms seeking access to a facility where the facility owner has market power and is vertically integrated suggests that roaming

[27] [ ] October 2002.

agreements may not be easy to conclude satisfactorily. However, what is significant to the consideration of the current application is that the only incentive, which may change because of the proposed acquisition, is that described in the fourth bullet point in the previous paragraph. If the roll out of a new national network is made more difficult because of Vodafone's acquisition of addition 900 MHz spectrum, the value of that incentive (but not the others) will be reduced. [

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146. The Commission understands that the cost of rolling out and maintaining networks in remote parts of the country are such that any roaming agreement is likely to be a significantly cheaper means for a new entrant to achieve comprehensive coverage than the alternative of the entrant constructing a comprehensive network itself. This is likely to be the case even when the agreement might be regarded as unsatisfactory by the new entrant and might leave the network owner at risk under the Commerce Act and Telecommunications Act. Thus the ability to reach a roaming agreement, rather than the ability to roll out a comprehensive network, is likely to be a key to entry into the market, and the Commission does not consider that roaming would be materially affected by the proposed acquisition.

Dual Band Handsets

147. It has been submitted to the Commission that Vodafone's acquisition of remaining 900 MHz spectrum will force new entrants to rollout a 1800 MHz network. Thus in order to compete with Vodafone a new entrant will be forced to offer dual band phones; phones that can operate on both the 900 MHz and 1800 MHz bands of spectrum.

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[28]

148. Vodafone responded to this concern by stating;

> "All phones supplied by Vodafone in the last 2 – 3 years are at least dual band phones. At the top-end of the market phones are tri-band (900/1800/1900 MHz). All phones currently for sale in the New Zealand market are dual band phones…On the issue of handset compatibility Vodafone makes the following additional observations:
>
> - Handset compatibility would not create a barrier for Vodafone customers changing to a competitor's network if the competing GSM network operated in only the 1800 MHz band.
> - A handset barrier already exists between users switching between Vodafone and Telecom's networks. In order to switch networks customers need to purchase a new phone as Vodafone and Telecom offer competing technologies (GSM vs. AMPS and CDMA). Even with different technologies between the 2 networks, there is a significant level of churn within the current market. [ ]
> - Handset prices have typically fallen over time, while handsets have greater functionality, including dual band capabilities, as standard."[29]

149. The Commission understands that the 900 MHz spectrum which Vodafone is seeking to acquire is not sufficient by itself to provide a viable service in urban areas.[30] Accordingly

[28] EWNZ Submission, Oct 17 2002

[29] Vodafone letter to Commission dated 23 Oct 2002

[30] EWNZ letter to Commission dated 23 October 2002.

a new entrant with its own urban network and with roaming rights utilising the rural part of the networks of either Vodafone or Telecom would require handsets with dual band capability. The proposed acquisition would not change this.

Impact of the Acquisition on New Entry

150. In most cases, the viability of new entry would be enhanced if the entrant were able to offer comprehensive coverage. The Commission has considered whether the proposed acquisition would lessen the possibility of the new entrant being able to offer comprehensive coverage. Of particular relevance in this respect is the impact of the acquisition on the ability of the new entrant to roll out a new national network and the ability of the entrant to enter into a roaming agreement with an existing network owner.

151. The Commission considers that the viability of a third, full national network is uncertain, even if the proposed acquisition does not proceed. [

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152. Both TelstraClear and EWNZ have sufficient spectrum rights in the 1800 MHz band to roll out a national network. However the cost of a national network on the 1800 MHz band would be significantly greater than one using 1800 MHz in urban areas and 900 MHz in rural areas. The Commission considers that even in the latter scenario, the total cost to the new entrant is likely to be substantially greater than it would be if it was able to enter using its own network in urban areas and utilising a roaming agreement to obtain coverage in rural areas.

153. Accordingly, the Commission considers that the key to new entry on a significant scale is the ability of a new entrant to enter into roaming agreements with Vodafone or TelstraClear. The Commission accepts that negotiating such an agreement may not be easy, although, as discussed above, it considers there are several incentives on the network owner to reach an agreement on reasonable terms. These incentives would be largely unaffected by the proposed acquisition.

154. The incentive which could change as a result of the acquisition comes from the threat of a new entrant rolling out a third national network if it is unable to obtain a reasonable roaming agreement. However, the Commission considers that this threat is only meaningful if a third national network is perceived by the existing network owners to be viable. Without perceived viability, the threat as a bargaining tool loses its force. The Commission considers that existing network owners are unlikely to consider a competing third national network as being viable in the near future.

Conclusion on the Impact of the Acquisition on New Entry

155. The Commission concludes that the proposed acquisition would not have a meaningful impact on the likelihood of a new national network being rolled out. Further, it concludes that roaming agreements on reasonable terms would not be made significantly less likely by the proposed acquisition.

156. Accordingly, the Commission does not consider that the proposed acquisition would have a significant impact on the potential for new entry into the market.

CONCLUSION ON COMPETITION IN THE MARKET

157. As noted above the proposed acquisition does not result in any market aggregation. There are currently two players in the market of reasonably equivalent size. The Commission

has given careful consideration as to the potential for new entry into the market and it concludes that this would not be affected to a significant extent by the proposed acquisition.

158. Consequently, the Commission is satisfied that the proposed acquisition would not have, nor would be likely to have, the effect of substantially lessening competition in New Zealand in the defined markets.

DETERMINATION ON NOTICE OF CLEARANCE

159. Accordingly, pursuant to section 66(3)(a) of the Commerce Act 1986, the Commission determines to give clearance for Vodafone Mobile NZ Ltd. (together with its subsidiaries and related companies), to purchase the bloc of 900 MHz spectrum bid for in the #5 Radio Spectrum Auction.

Dated this 1st day of November 2002

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MJ Belgrave
Chair