

**NOTICE SEEKING CLEARANCE UNDER SECTION 66 OF THE
COMMERCE ACT 1986 OF A PROPOSED ACQUISITION OF 2.5GHz
RADIO SPECTRUM RIGHTS
BY TELECOM LEASING LIMITED**

28 JANUARY 2008

PUBLIC VERSION

**COMMERCE ACT 1986: BUSINESS ACQUISITION SECTION 66: NOTICE SEEKING
CLEARANCE**

28 January 2008

The Registrar
Business Acquisitions and Authorisations
Commerce Commission
PO Box 2351
WELLINGTON

Pursuant to s66(1) of the Commerce Act 1986 notice is hereby given seeking **clearance** of a proposed business acquisition.

PART I: TRANSACTION DETAILS

TO BE COMPLETED BY ALL APPLICANTS

SUMMARY OF APPLICATION

Telecom is applying for clearance to acquire from the Crown management rights for 20MHz of paired radio spectrum in the 2.5GHz frequency range. Telecom was the provisionally successful bidder for this spectrum in the Government's recent auction of spectrum in the 2.3GHz and 2.5 GHz ranges (referred to in this application as "**Auction 9**"). For the purposes of this application, Telecom takes the conservative view that there are three relevant markets:

- The national market for the provision of WiMax broadband internet access;
- The metropolitan and non-metropolitan market for the provision of fixed (wired and wireless) broadband internet access; and
- The national market for the provision of third generation (also referred to as 3G) mobile telephony services via cellular technologies (including the provision of enhanced 3G services).

Telecom does not believe the acquisition of the management rights will substantially lessen competition in any of the affected markets.

WiMax

Telecom does not believe the acquisition will substantially lessen competition in the WiMax market because:

- [paragraph 32 of the Ministry of Economic Development's "Radio Frequency Auctions: 2.3GHz and 2.5GHz Bands" Discussion Paper ("**Discussion Paper**") comments that:

Most submitters on the 2.3 GHz auction discussion paper considered that 30 MHz plus a guardband (of 5 MHz) was the minimum necessary for WiMAX services.

This is the reason why the four lots of unpaired spectrum in auction 9 each contain 35MHz;

- there were five other successful bidders in the auction, including large, well-resourced and pro-active competitors, which will ensure active competition in the WiMax market. Those bidders include a state-owned enterprise (Kordia Limited), Telecom's major telecommunications competitor (Vodafone), a company listed on the Toronto stock exchange (Craig Wireless Systems Limited), and two vigorous competitors (Woosh Wireless Limited and Blue Reach Limited, with the latter being the wholesale arm of established telecommunications company CallPlus Limited). With the exception of Craig Wireless Systems Limited, all of those companies received 30MHz (Blue Reach) or 35MHz (the others) of contiguous spectrum;
- the Government also allocated spectrum to Hautaki Limited, a partner of NZ Communications Limited, creating a seventh competitor in the WiMax market;
- the Government has made available a managed spectrum park ("**MSP**") in the 2.5GHz range, comprising a large amount of spectrum (45MHz) which will be available to the unsuccessful bidders to offer a competing WiMax service. This service can be regionally targeted, by using a frequency range only in areas in which the relevant company wishes to compete;
- spectrum can be licensed from holders of management rights to enable those who did not acquire it to have access to spectrum; and
- the absence of those bidders who were unable to acquire spectrum (being Compass Communications Limited and Snap Internet Limited) will not substantially lessen competition, compared to a counterfactual in which they acquired the paired spectrum which Telecom acquired. In this regard, Telecom notes that the section headed "Commercial Viability of Multiple WiMAX Providers" in part 3.1 of the Discussion Paper acknowledges that "it is questionable whether a small country like New Zealand can sustain" "up to six nationwide providers of WiMAX".

IMT 2000 mobile cellular services

The 2.5GHz band is identified for IMT 2000 cellular technologies (as are a number of other bands) and is most likely to be used for IMT 2000 enhancements, but this requires paired spectrum. IMT 2000 is a 3G standard published by the International Telecommunication Union ("**ITU**"). The IMT 2000 enhanced technology is also called LTE (which stands for Long Term Evolution). Telecom believes the acquisition would not substantially lessen competition in the 3G mobile telephony market because offering IMT 2000 enhanced mobile telephony services requires a company to have access to paired spectrum and an underlying IMT 2000 cellular network. The only companies with an underlying cellular network in New Zealand are Telecom, Vodafone and, potentially in the future, NZ Communications (which has announced that work has started on constructing New Zealand's third cellular network). There were only two sets of paired spectrum available in the recent auction. Neither Vodafone nor NZ Communications bid for either of the sets of paired spectrum. Accordingly, the appropriate counterfactual is one in which no-one acquires the spectrum for IMT 2000 enhanced telephony services. At present there are no competitors offering LTE technology in the 3G market, as the technology has not yet been developed. In addition:

- once the technology is developed, Telecom's major competitor, Vodafone, will be able to offer LTE capability in lower frequency ranges, using spectrum that it already holds. Vodafone will have a cost advantage in this respect, as it is [] cheaper to offer cellular services at lower frequencies;
- NZ Communications is a potential new entrant in the mobile space and may also be able to offer limited LTE capability in the 900 MHz spectrum that it will hold;

- therefore, Vodafone and NZ Communications will be able to deploy LTE telephony in lower frequency ranges using spectrum that they already have access to; and
- if Telecom is not cleared to acquire the spectrum, its ability to offer LTE based services will be restricted to the spectrum that it already has access to. [

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Fixed Broadband Access

Due to the large number of alternative providers of fixed broadband in New Zealand, Telecom does not consider that the acquisition would substantially lessen competition in the fixed broadband access market.

1. THE BUSINESS ACQUISITION

- 1.1 The business acquisition for which this clearance is sought is the purchase by Telecom Leasing Limited of the radio spectrum management rights known as MED radio frequency auction number 9 lot numbers 4 (which applies to spectrum in the 2520 to 2540MHz range) and 7 (in the 2640 to 2660MHz range).
- 1.2 The management rights expire no later than 31 December 2028, although it is possible for the rights to expire earlier, if Telecom is not utilising them to the satisfaction of the Chief Executive of the Ministry of Economic Development ("**MED**").
- 1.3 The purchase will result in Telecom owning the management rights in a pair of 20MHz in the 2.5GHz range.
- 1.4 The radio spectrum management rights are currently owned by the Crown, which has recently concluded auction 9, for spectrum in the 2.3GHz and 2.5GHz ranges.

2. NOTICE GIVEN BY TELECOM

- 2.1 This notice is given by:

Telecom Leasing Limited
PO Box 570
WELLINGTON

Telephone: 04 498 9059
Fax: 04 498 9176
Attention: Group Company Secretary

- 2.2 All correspondence and notices in respect of the application should be directed in the first instance to:

Russell McVeagh
Vodafone on the Quay
157 Lambton Quay
PO Box 10-214
WELLINGTON

Telephone: 04 499 9555
Fax: 04 499 9556
Attention: David Clarke / Sam Richards

Email: david.clarke@russellmcveagh.com /
sam.richards@russellmcveagh.com

3. CONFIDENTIALITY

- 3.1 Confidentiality is sought in respect of all items deleted from the public copy of this application ("**confidential information**"). The items are indicated in the non-public version in square brackets ("[]").
- 3.2 In respect of the confidential information, a confidentiality order is sought under section 100 of the Commerce Act 1986 ("**Act**"), and confidentiality is claimed under section 9(2)(b)(ii) of the Official Information Act 1982, on the grounds that the information is commercially sensitive and valuable information which is confidential to the participants, and disclosure of it is likely to give unfair advantage to competitors of the participants and/or unreasonably to prejudice the commercial position of the persons involved.
- 3.3 Telecom requests that it be notified of any request made to the Commission under the Official Information Act for release of the confidential information, and that the Commission seeks Telecom's views as to whether the information remains confidential and commercially sensitive, at the time responses to such requests are being considered.

4. DETAILS OF THE PARTICIPANTS

- 4.1 Telecom Leasing Limited
PO Box 570
WELLINGTON
- Telephone: 04 498 9059
Fax: 04 498 9176
Attention: Group Company Secretary
- 4.2 The Crown acting through MED.
- 4.3 All correspondence and notices in respect of the application should be directed in the first instance to:

Russell McVeagh
Vodafone on the Quay
157 Lambton Quay
PO Box 10-214
WELLINGTON

Telephone: 04 499 9555
Fax: 04 499 9556
Attention: David Clarke / Sam Richards

Email: david.clarke@russellmcveagh.com /
sam.richards@russellmcveagh.com

5. WHO IS INTERCONNECTED TO OR ASSOCIATED WITH EACH PARTICIPANT?

- 5.1 Telecom Leasing Limited is a wholly owned subsidiary of Telecom New Zealand Limited, which is a member of the group of companies associated with Telecom Corporation of New Zealand Limited ("**Telecom**"). The group of companies associated

with Telecom Corporation of New Zealand Limited includes Telecom New Zealand Limited, Telecom Mobile Limited and Xtra Limited.

5.2 There are no people or entities who are interconnected or associated with the Crown or MED which are relevant to this application.

6. DOES ANY PARTICIPANT, OR ANY INTERCONNECTED BODY CORPORATE THEREOF, ALREADY HAVE A BENEFICIAL INTEREST IN, OR IS IT BENEFICIALLY ENTITLED TO, ANY SHARES OR OTHER PECUNIARY INTEREST IN ANOTHER PARTICIPANT?

6.1 This question is not relevant to the transaction at hand.

7. IDENTIFY ANY LINKS, FORMAL OR INFORMAL, BETWEEN ANY PARTICIPANT/S INCLUDING INTERCONNECTED BODIES CORPORATE AND OTHER PERSONS IDENTIFIED AT PARAGRAPH 5 AND ITS/THEIR EXISTING COMPETITORS IN EACH MARKET.

7.1 Telecom is a party to a re-seller agreement with TelstraClear Limited for services using Telecom's CDMA network.

7.2 Telecom has also entered into a conditional agreement to sell management rights to two lots of 5MHz spectrum in the 800MHz frequency range to NZ Communications. Telecom notes that, whether or not that agreement goes unconditional, it will create no ongoing link between Telecom and NZ Communications.

7.3 Telecom also has interconnection agreements with a number of companies and is required by regulation under the Telecommunications Act 2001 to have various relationships with its competitors, including arrangements with access seekers for designated and non-designated services.

7.4 []

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8. DO ANY DIRECTORS OF THE 'ACQUIRER' ALSO HOLD DIRECTORSHIPS IN ANY OTHER COMPANIES WHICH ARE INVOLVED IN THE MARKETS IN WHICH THE TARGET COMPANY/BUSINESS OPERATES?

8.1 There is no target company in this transaction. The directors of Telecom Leasing Limited do not hold directorships in any other telecommunications companies.

9. WHAT ARE THE BUSINESS ACTIVITIES OF EACH PARTICIPANT?

9.1 Telecom Leasing Limited and its interconnected bodies corporate are suppliers of telecommunication services in New Zealand and Australia. They provide a full range of telecommunication products and services including local, national and international telephone services, mobile services, data and internet services.

9.2 Telecom holds management rights in respect of 20MHz (and the corresponding natural pair) in the 800MHz band, which is used by Telecom for the delivery of its CDMA

(mobile services). However, these rights are due for renewal by 12 May 2008 and Telecom understands that, at that time, it will be required to reduce its holding from 20MHz to 15MHz paired in the 800MHz band (hence it has entered the conditional sale agreement described at paragraph 7.2 above).

9.3 Telecom also holds management rights to 64MHz in the 2.3GHz band but these rights expire in 2010 and, rather than permitting incumbents to renew these rights, Cabinet has decided to auction them in the current auction. It follows that, within two years of Telecom having access to the 2.5GHz spectrum which it seeks clearance to acquire (from 1 January 2009), Telecom will no longer hold management rights for spectrum in the 2.3GHz range. Telecom has 15MHz of paired 3G spectrum in the 2.1GHz band and 25MHz of paired 1800MHz spectrum. Telecom also has management rights to a 7MHz pair of spectrum in the 3.5GHz range.

10. WHAT ARE THE REASONS FOR THE PROPOSAL AND THE INTENTIONS IN RESPECT OF THE ACQUIRED OR MERGED BUSINESS?

10.1 [

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PART II: IDENTIFICATION OF MARKETS AFFECTED

Horizontal Aggregation

11. ARE THERE ANY MARKETS IN WHICH THERE WOULD BE AN AGGREGATION OF BUSINESS ACTIVITIES AS A RESULT OF THE PROPOSED ACQUISITION?

Introduction

11.1 This proposal involves the acquisition by Telecom of spectrum management rights. The 2.5GHz spectrum enables holders to provide services utilising technology developed for use at that frequency. The acquisition does not involve aggregation of existing businesses. [

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11.2 Spectrum in the 2.5GHz range is currently licensed by the Crown to individuals or organisations which use the spectrum for relaying video signals. The current use of the spectrum is irrelevant in terms of market aggregation, as the spectrum is being used for a completely different form of technology to that intended by Telecom (and, it believes, its competitors). In any event, consequent upon the present spectrum auction, the Crown will not renew the existing licences, such that existing users could not continue to use the spectrum and are therefore irrelevant to the competition analysis.

11.3 Telecom does not currently hold any management rights or licence rights in relation to 2.5GHz spectrum and will not, within two years of its new 2.5GHz management rights taking effect on 1 January 2009, hold any rights to 2.3GHz spectrum (as its existing 2.3GHz licence rights will expire in 2010 and will not be renewed). Both of these spectrum ranges enable rights holders to deploy WiMax broadband internet access [

]. Following the acquisition, Telecom will hold management rights for only 40MHz out of a total of 215MHz being allocated in auction 9 for private usage. In addition, 45MHz is being made available for use as an MSP which is discussed further below.

11.4 The following table, as published on the MED's website, shows the bidders who were provisionally successful in the spectrum auction.

Lot number	Lower boundary	Upper boundary	Lot size (MHz)	Provisionally Successful Bidder		Lot value
				Number	Name	
1	2300MHz	2335MHz	35	904	Kordia Ltd	\$593,333
2	2335MHz	2370MHz	35	910	Woosh Wireless Ltd	\$650,000
3	2500MHz	2520MHz	20	903	Craig Wireless Systems Ltd	\$555,000
4	2520MHz	2540MHz	20	907	Telecom Leasing Ltd	\$456,000
5	2540MHz	2575MHz	35	909	Vodafone Mobile NZ Ltd	\$670,000
6	2620MHz	2640MHz	20	903	Craig Wireless Systems Ltd	\$500,000
7	2640MHz	2660MHz	20	907	Telecom Leasing Ltd	\$450,000
8	2660MHz	2690MHz	30	901	Blue Reach Ltd	

11.5 In addition, the MED website states that:

a nationwide lot of 25MHz is reserved for Maori. The Minister of Maori Affairs has offered this lot to Hautaki Ltd. The terms and conditions of the management rights deed for this piece of spectrum are the same as those of the management rights deed that successful bidders are required to enter into, including acquisition limits, association rules and requirements for implementing services in any spectrum band the subject of the rights.

The spectrum available to Hautaki Ltd is in the range 2370MHz to 2395MHz (ie the 2.3GHz range).

11.6 As discussed further in section 16 below, Hautaki is in partnership with NZ Communications Limited.

11.7 Ten bidders were registered to bid in the auction. Six bidders acquired spectrum, as per the table above. With respect to the other bidders:

- (a) One bidder, Spectrumania Limited, was precluded from acquiring any spectrum as that bidder was associated with Blue Reach Limited such that the spectrum acquired by the two companies would have been aggregated. The effect is that it would not have been possible for Spectrumania to acquire any lots in addition to those acquired by Blue Reach Limited without breaching the acquisition limits in the auction rules.
- (b) TelstraClear Limited voluntarily withdrew from the auction.
- (c) Compass Communications Limited and Snap Internet Limited were unsuccessful. (Telecom notes that either of these companies will be able to access the 45MHz MSP to gain access to spectrum.)

Future use of 2.3GHz and 2.5GHz spectrum

11.8 The primary future uses of radio spectrum in these frequency ranges are:

- (a) WiMax technology, being wireless broadband internet access with portable or nomadic (but not yet mobile) functionality; and
- (b) IMT 2000 cellular technology.

WiMax

11.9 Advanced WiMax standards (offering greater functionality than fixed WiMax and utilising IEEE standard 802.16e) have now been approved in the 2.5GHz range by the ITU and the WiMax Forum (an organisation established in mid 2001 as a worldwide industry association which seeks to promote and certify the compatibility and interoperability of broadband wireless access equipment). WiMax is a standards-based technology which enables the delivery of wireless broadband access. (References in this application to WiMax are references to the advanced WiMax standards, rather than fixed WiMax which utilises IEEE standard 802.1d.) The technology required for WiMax will only be available cost effectively where there is sufficient scale, in terms of the manufacture of appliances (ie laptops and cell phones). Due to the size of the New Zealand market, New Zealand companies must operate technology in the same spectrum ranges as are used by foreign manufacturers. In terms of WiMax equipment, this requires us to operate either:

- (a) in the 2.5GHz range, as approved by the ITU and the WiMax Forum; or

(b) in the 2.3GHz range, in which USA telecommunications company Sprint Nextel offers WiMax services and for which Korean manufacturers also make equipment.

11.10 In addition, utilising these spectrum ranges for WiMax will be globally compatible allowing international visitors to New Zealand, and New Zealanders travelling overseas, to use their personal equipment to access broadband services. WiMax allows connectivity without the need for direct line of sight with a base station and allows high bandwidth applications to run across long distances.

11.11 WiMax will also provide for portability and a degree of mobility within urban centres. In addition the 802.20 WiMax standard (an alternative to the 802.16 standards) is also under development and is intended to provide full mobile broadband access. In urban areas, WiMax can currently provide broadband access to portable users, being those users who wish to utilise their laptop when stationary but in a variety of locations. In this respect, use of the 2.3GHz and 2.5GHz spectrum will compete with current WiFi offerings and broadband access via third generation mobile offerings. WiMax also currently enables nomadic usage, allowing people to use their laptop with hand-off between base stations, while travelling at pedestrian speeds (up to 5km per hour). In contrast, 3G telephony is a fully mobile service, allowing hand-off between base stations at vehicular speeds (up to 250km per hour). WiFi is significantly more restricted geographically than WiMax (100m compared to kilometres for WiMax) and WiFi uses public spectrum and therefore cannot be managed to the same quality as WiMax. These characteristics of WiMax mean that WiFi and third generation mobile technology are not direct competitors to WiMax.

IMT 2000 Cellular Mobile Services

11.12 With respect to cellular technology, only two combinations of the auction lots are suitable for cell phone services (being lots 3 and 6 or 4 and 7). This is because cellphone services require paired spectrum with a minimum gap of 120MHz. Such services may be of differing levels of technological advancement. For example, most current services utilise 2G cellphone technology. Advanced 3G technology is also becoming available. The difference between each level of advancement relates primarily to the size and speed of data which can be transferred. [

Telecom notes that no other mobile operators were focused on obtaining paired spectrum in auction 9 (the other allocation of paired spectrum was acquired by Craig Wireless, which was bidding on unpaired spectrum in earlier rounds of auction 9, indicating that it would have been happy to acquire unpaired spectrum).

Product market

11.13 Both demand-side and supply-side factors determine market boundaries: 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.

11.14 As outlined above, the most likely use of the spectrum for most parties is either to offer WiMax broadband internet access (which may in the future permit mobile broadband access at high speeds) or IMT 2000 based mobile cellular services.

11.15 Telecom evaluates both of these product markets below.

11.16 When considering the wholesale level of the product market, it is important to consider whether the products supplied at the retail level of the market are competing against

each other. As the Commission pointed out in the UBS determination, if retail products supplied downstream are competitive substitutes, indirect substitution will constrain any attempted "SSNIP" at the wholesale level of the market.

- 11.17 Although fixed broadband access is not a direct competitor to WiMax across the entire WiMax functionality, the reverse is not true. That is, WiMax can offer the same functionality as fixed access. Accordingly, WiMax is also likely to be used by some companies to compete with fixed broadband access service offerings. That is, the two products will compete, to an extent, in the market for the provision of fixed broadband access. This market is also analysed below.

WiMax

- 11.18 WiMax is a wireless broadband internet access technology.
- 11.19 As outlined above, in addition to fixed internet access, WiMax technology also offers nomadic and portable wireless internet access. In the future, it is possible WiMax will offer mobile broadband internet access for users travelling at higher speeds.
- 11.20 WiMax will be useful for any service providers wishing to de-load their mobile network in heavily populated urban centres, for use by customers when they do not wish to utilise mobile functionality.
- 11.21 Telecom believes that all of the successful bidders in the recent spectrum auction, as listed above, are intending to use their spectrum to provide WiMax broadband internet access. Telecom's assessment is that all of these spectrum holders are looking to deploy a combination of fixed and nomadic services, and that none of them are presently looking to deploy mobile WiMax access. For example:
- (a) the technology for mobile WiMax has not yet been developed and it Telecom suspects it will be around five years before the technology is developed;
 - (b) the business model of Woosh Wireless does not include mobile internet access; and
 - (c) Blue Reach has stated that it is trialing fixed and nomadic WiMax, rather than mobile WiMax.
- 11.22 Due to the advantages of WiMax for portable and nomadic broadband access, for the purposes of this application, Telecom adopts a conservative market definition, and assesses WiMax in a separate product market from fixed broadband internet access.

Fixed broadband access

- 11.23 Fixed broadband internet access can be both wired and wireless, as shown by the following list of alternative broadband access technologies which Telecom considers to be close demand-side substitutes for fixed wireless broadband networks. These include DSL technology operated over copper networks, fibre-optic cables, co-axial cable, fixed wireless technology operated over other radio spectra, and satellite technology. Carriers deploying these technologies are:
- (a) Telecom's wired DSL network;
 - (b) Telecom's commercial and regulated wholesale broadband access products (for example, UBS);
 - (c) TelstraClear's wired fibre-optic and co-axial cable broadband networks;

- (d) Fibrebased networks such as those of CityLink, United Networks, and Vector Communications Limited;
- (e) Kordia's wireless network utilising 3.5GHz spectrum;
- (f) Vodafone's Vodem cellular technology;
- (g) Woosh Wireless's wireless network utilising 2.2GHz spectrum and IP-CDMA technology;
- (h) Compass Communications and Inspire Net's wireless networks; and
- (i) Thai-based Shin Satellite's nationwide network, provided in conjunction with ISP's Bay City (a rural specialist) and ICONZ (Auckland based).

11.24 Not all of the above technologies are available in every part of New Zealand. This is discussed further in respect of the geographic market dimension at paragraph 11.30 below.

IMT 2000 mobile cellular services

11.25 []

11.26 However, at its core, LTE is a cellular service which is an enhancement to 3G, so is simply an enhanced 3G service. The Commission has previously considered 3G services in a narrow product market, distinct from 2G services (in Telecom New Zealand Limited/2GHz Spectrum Decision 423, 15 March 2001). Accordingly, for the purposes of this application Telecom has analysed the competitive effects of the acquisition using a separate market for the provision of 3G mobile telephony services via cellular technologies. In Telecom's view, enhanced 3G services such as LTE will be part of the 3G market, as they are simply an enhancement to the existing technology.

11.27 In the future, if mobile WiMax is successfully developed and all of the incremental functionality increases associated with LTE accrue to 3G mobile services, this will result in further convergence between the 3G and WiMax technologies. Accordingly, while Telecom has prepared this application on the basis that 3G and WiMax are in different markets, it believes this is a conservative approach and reserves its position on future market definition.

Functional Dimension

11.28 It is always appropriate to analyse upstream levels of affected markets with reference to the competitive dynamics at the retail level of those markets. However, in this case, the functional level directly affected by this acquisition is the wholesale level. The state of competition can be assessed fully by considering the wholesale level of the affected markets.

Geographic Dimension

11.29 Telecom considers that a national geographic dimension is appropriate for the WiMax broadband access market. Management rights to the 2.3GHz and 2.5GHz spectrum are national in coverage and other successful bidders are intending to use the spectrum for a national wireless network based on WiMax technology (see "Woosh gains spectrum for third network" in The National Business Review by NBR staff, 19 December 2007).

11.30 In the context of the wholesale fixed wired and wireless broadband access market, Telecom considers that the relevant geographic market dimension is metropolitan and non-metropolitan. There is a proliferation of wireless and wired broadband access networks in metropolitan areas of NZ, and competition downstream is mainly focused in these areas. The main participants in the non-metropolitan markets are Vodafone, Telecom and any other parties which seek access to Telecom's unbundled copper local loop ("**UCLL**").

11.31 In line with the Commerce Commission's previous decision that the 3G telephony services market is national in scope (see Telecom New Zealand Limited/2GHz Spectrum Decision 423, 15 March 2001, paragraph 55), Telecom considers that a national geographic market is appropriate for the 3G and enhanced services market. Cellular coverage needs to be national in scope to form a competitive service offering.

Market Definition Conclusion

11.32 In conclusion, Telecom considers that the relevant markets within which to assess the acquisition are:

- (a) the national market for the provision of WiMax broadband internet access;
- (b) the metropolitan and non-metropolitan market for the provision of fixed (wired and wireless) broadband internet access; and
- (c) the national market for the provision of 3G cellular mobile telephony services and enhanced 3G services

11.33 Telecom defines these markets for the purposes of this application. However, as the Commission has previously acknowledged in relation to 3G services, future technology developments may impact upon relevant market definitions. Telecom's assessment of the markets in relation to this application is therefore without prejudice to any views it may take in the future as circumstances change.

12. PRODUCT DIFFERENTIATION

12.1 The WiMax market and the fixed broadband access market are both characterised by competition based on product differentiation, as well as price. At the retail level of the market customers can choose between broadband offerings that are based on differences in:

- (a) speed (both upstream and downstream);
- (b) data allowances; and
- (c) degree of mobility (being fixed versus portable or nomadic).

12.2 Similar considerations apply to 3G cellular markets, although there is less differentiation in terms of mobility.

13. DIFFERENTIATED PRODUCT MARKETS

13.1 It is not yet known what mix of retail WiMax packages will be offered by each of the bidders who have acquired spectrum at a wholesale level. In any event, it is not difficult for a retailer to alter the retail package being offered. The extent that the products are differentiated will primarily depend on each supplier's assessment of the packages

which would be attractive to consumers. Therefore, each supplier has the power to constrain the others by altering the retail package they offer.

- 13.2 There is no immediate aggregation of market share in relation to the WiMax broadband access market. However, Telecom not gaining the management rights would prevent it from being able to access this market via an exclusive band of spectrum in the future (although Telecom understands that it would be permitted to access spectrum in an MSP or could potentially enter a spectrum licence with another management rights holder, if the opportunity were available). Such an outcome could restrict competition by reducing the competitive threat of Telecom (being a well-resourced, experienced competitor) entering the WiMax market.
- 13.3 There is no aggregation of market share in the fixed broadband access markets due to Telecom's proposed acquisition. Telecom is proposing solely to buy the management rights of newly-available spectrum. The acquisition of spectrum is merely a raw asset that, by itself, will not change the competition dynamics of the affected markets.
- 13.4 Any use of the spectrum to offer WiMax which competes with fixed broadband may result in Telecom increasing its market share in the fixed broadband market - but not from acquiring this spectrum. Increases in market share would only result in the same way as for any other holder of spectrum; that is from Telecom investing in the cost of a new network build and other associated market entry costs, plus managing to compete successfully to gain customers from incumbent broadband access firms (including Telecom's own fixed broadband access network).
- 13.5 There is also no aggregation of market share in the 3G and enhanced services mobile telephony market. In particular, enhanced LTE services have not yet been developed such that no-one is presently offering those services in the 3G market. Again, if Telecom were not able to acquire management rights to this spectrum, its ability to offer LTE will be restricted to the spectrum that it has. [

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14. VERTICAL INTEGRATION

- 14.1 As discussed above, due to its small size, New Zealand companies will only be able to deploy WiMax in spectra for which appliances are manufactured by large, foreign manufacturers. At present, this includes only the 2.3GHz and 2.5GHz spectrum ranges.
- 14.2 Apart from the successful bidders in spectrum auction 9 (including any parties who trade spectrum with them), no other parties will hold management rights for spectrum in the 2.3GHz or 2.5GHz spectra until at least 2014 (being the earliest date that a successful bidder could lose its management right under the use-it or lose-it provisions associated with this spectrum). Other parties will need to access any such spectra via licences granted by the holders of the relevant management rights.

- 14.3 Telecom expects that most of the successful bidders will utilise the spectrum to offer WiMax services and notes that each bidder also operates, directly or indirectly, at the retail level, with the exception of Kordia and Craig Wireless (which does not yet offer any services in New Zealand). Although Blue Reach Limited is a wholesaler, it is wholly owned by CallPlus Holdings Limited; Telecom anticipates that Blue Reach intends to start by making its spectrum available only to CallPlus, which will offer retail packages, although with a view to wholesaling its WiMax service to other companies once CallPlus has established its network (see "CallPlus Announce Blue Reach An \$3 Million Launch" published on 5 September 2006 on Scoop.co.nz, <http://www.scoop.co.nz/stories/BU0609/S00063.htm>). It follows that Blue Reach's spectrum will, effectively, be used to offer direct retail packages. For further information regarding Telecom's competitors, see section 16 below.
- 14.4 Telecom also intends to use the spectrum to offer retail services.
- 14.5 Where wholesale spectrum owners offer retail services directly, this will blur the distinction between the wholesale and retail functional levels, such that this question becomes less relevant to the transaction at hand. (This blurring is not a result of Telecom acquiring the management rights, so is different from the situation where a supplier acquires a customer.)

15. PREVIOUS ACQUISITIONS

- 15.1 Although Telecom has acquired spectrum in the past, that spectrum has not been utilised for either WiMax or LTE enhanced 3G cellular services.
- 15.2 Telecom's most recent spectrum acquisition was its 2005 purchase from Counties Power Limited of the management rights for 7MHz of paired spectrum in the 3.5GHz range. [

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PART III: CONSTRAINTS ON MARKET POWER BY EXISTING COMPETITION

16. EXISTING COMPETITORS

16.1 As WiMax will be deployed in the 2.3GHz and 2.5GHz spectra, the competitors in the relevant markets will be the other successful bidders at the auction and any other companies who obtain licences from those bidders or operate in an MSP. Successful bidders and potential licensees include:

- (a) Blue Reach Limited;
- (b) Compass Communications Limited;
- (c) Counties Power Limited;
- (d) Craig Wireless Systems Limited;
- (e) Kordia Limited (trailing WiMax since at least 2005);
- (f) NZ Communications Ltd (in conjunction with Hautaki Limited);
- (g) NZWireless;
- (h) Reach;
- (i) Telecom;
- (j) Vodafone;
- (k) Wired Country;
- (l) Woosh; and
- (m) other geographically specific competitors, who can access rights for specific areas through MSP's or spectrum licences.

16.2 As enhancements to 3G telephony services must be built on top of an underlying 3G/2G cellular network, the competitors will be Vodafone and NZ Communications, providing it succeeds in completing the third cell phone network which it has recently stated it has started building. In addition, paired spectrum is required to operate cellular phone technology. In the current auction, only two lots of paired spectrum were offered. These were acquired by Telecom and Craig Wireless. As Craig Wireless does not have an underlying cellular network, it follows that Craig Wireless does not intend to use this spectrum for cellular phone technology. However, Vodafone and NZ Communications have access to paired spectrum in other frequency ranges.

16.3 It is not yet known who will licence spectrum from the successful bidders. The following sections describe each of the successful bidders.

Kordia Limited (formerly known as Broadcast Communications Limited)

16.4 Kordia is a New Zealand registered company, wholly owned by Kordia Group Limited which is, in turn, owned 50:50 by the Minister of Finance and the Minister for State Owned Enterprises. Kordia is a wholesale wireless communications network operator which provides customised engineering and network solutions to broadcasters, telecommunications providers, network operators, and utilities. Kordia offers a range of

broadband products, through its EXTEND network, that can take voice, data and fast internet to parts of New Zealand that have not been able to access comparable products before.

- 16.5 Kordia's telecommunications network services are available to all retail service providers on a non-exclusive basis.
- 16.6 Kordia owns spectrum in a number of bands including 2.1-2.3GHz, 3.5GHz and 25GHz. Airspan provides the base station and customer equipment technology that powers Kordia's EXTEND network. Airspan has an 802.16e base station and customer equipment ready for WiMax. Airspan is one of the founding members of the WiMax forum, which defined the 802.16e standard.

Vodafone

- 16.7 Vodafone New Zealand Limited ("**Vodafone**") is incorporated in New Zealand and is wholly owned by Vodafone International Holdings B.V. Vodafone International Holdings B.V is based in the Netherlands. Vodafone has more than 1000 mobile phone sites around New Zealand. Its services include text and pxt messaging, voice and data roaming, caller ID, wireless internet and, more recently, home phone services.
- 16.8 In addition to the spectrum it acquired in auction 9, Vodafone has spectrum in the 900MHz, 1800 MHz, 2.1GHz, 3.5GHz and 25GHz ranges. Accordingly, Vodafone is well-placed to offer LTE in its lower frequency ranges (900MHz or 1800 MHz), once LTE technology is mature. This would give Vodafone a competitive advantage over cellular providers operating at higher frequencies, including Telecom, as it is cheaper to supply cellular services at lower frequencies. Even if higher frequency ranges become the dominant bands for LTE technology, the Vodafone group is a large enough international organisation that it could induce a manufacturer to develop LTE devices in the lower frequency ranges.
- 16.9 Vodafone currently offers mobile internet access via its Vodem product, which operates using high speed downlink packet access ("**HSDPA**"). Vodafone has announced that it has built a new 3G network which is capable of providing high-speed mobile broadband to 60 per cent of New Zealand's population but has currently ceased building in response to the extent of the proposed regulation permitting its competitors to roam onto its network. Vodafone does not intend to resume building until the extent of regulation is clearer (see "Vodafone Baulks at mobile market regulation" published on 4 September 2007 on [nzherald.co.nz, http://www.nzherald.co.nz/category/story.cfm?c_id=93&objectid=10461508](http://www.nzherald.co.nz/category/story.cfm?c_id=93&objectid=10461508)).
- 16.10 As Vodafone did not bid for any paired spectrum, it is likely it will use the 2.5GHz spectrum it acquired in auction 9 to provide WiMax services. As in other telecommunications markets in New Zealand, Vodafone will be a substantial competitor in the WiMax market.

Woosh

- 16.11 Woosh Wireless Limited ("**Woosh** ") was incorporated in 1999. Woosh Wireless has multiple shareholders, the largest being New Zealand Australia Private Equity Fund Company B.S.C (C), Clarity Partners LP, which is based in the US, Todd Wireless Limited, Norwood Investments Limited, Kuwait Finance House (Bahrain) B.S.C (C), Walker Wireless Holdings Limited, and Woosh Trustee Company Limited. There are a number of smaller shareholders, including Vodafone New Zealand Limited.
- 16.12 Woosh owns management rights for spectrum in the 2053MHz to 2082MHz range. This is not a general licence band. Woosh Wireless offers a portable, high-speed, and wireless internet service. It achieves this through the portable Woosh modem or, for

laptop users, the Woosh PC Card. The Woosh modem and PC Card use a TDD technology (IP-CDMA) that offers a similar service to end-users as the service available using TDD UMTS, although the two technologies process signals differently. IP-CDMA complies with the worldwide 3G Partnership Project universal telecommunications systems time division duplexing standard.

- 16.13 IP-CDMA can operate in multiple frequency bands such as 2.5GHz and 3.4GHz. However, Telecom understands that Woosh intends to alter its service offering to utilise WiMax technology.
- 16.14 Woosh also holds rights for 2.2 GHz spectrum. It already has an extant network and customer base.
- 16.15 The points outlined above demonstrate that Woosh will likely be a pro-active and rigorous competitor in the WiMax market, by offering fixed and nomadic (but not mobile) WiMax.

Blue Reach Limited

- 16.16 Blue Reach Limited is a wholly-owned subsidiary of CallPlus Holdings Limited. The two largest shareholders (holding over 80% of the shares) in CallPlus are Malcolm Dick and Annette Presley. CallPlus describes itself on its website (www.callplus.co.nz) as "New Zealand's third largest full service telecommunications company".
- 16.17 Blue Reach was formed to build a wireless network and operate as an internet telecommunications wholesaler (including offering fixed WiMax access). Initially, Telecom expects that Blue Reach will offer network capacity solely to CallPlus, but Telecom anticipates that it may wholesale more broadly in the future (see paragraph 14.3 above).
- 16.18 In addition to its association with CallPlus, Blue Reach was, for the purposes of auction 9, associated with Spectrumania Limited, as Malcolm Dick is principally involved in both companies.

Craig Wireless Systems Limited

- 16.19 Craig Wireless is a company listed on the Toronto stock exchange. It follows that the company is well-resourced and has significant financial capability.
- 16.20 Craig Wireless's website (www.craigwireless.com) describes Craig Wireless as follows: Craig Wireless Systems and its affiliates (collectively, the "**CWS Group**") offer a broad range of telecommunications services, including, broadband Internet access, television programming delivery, business connectivity solutions, hosting, security and telecommunications solutions. Through certain members of the CWS Group, Craig Wireless holds or leases licenses for spectrum in the 2.5 GHz, 2.6 GHz or 3.5 GHz bands in Manitoba, British Columbia, the Coachella Valley region, California, United States, Greece, Norway and now New Zealand. Spectrum in these ranges is effective for delivery of point-to-multipoint signals, possesses robust bandwidth capability and supports emerging WiMAX-based applications, including portable and mobile applications.
- 16.21 The CEO of Craig Wireless is Boyd Craig, who has experience in the New Zealand telecommunications industry.
- 16.22 During the bidding process, Craig Wireless bid on spectrum in combinations which would not have resulted in it acquiring paired spectrum. Because paired spectrum is required for cellular uses, and Craig Wireless does not own an underlying cellular network in New Zealand, Telecom suspects that Craig Wireless intends to use the

spectrum to compete in the market for the provision of WiMax services. This is supported by the recent comments in the media from Craig Wireless that its "intention was to build a wireless broadband network using WiMAX technology throughout New Zealand" although "it can't do anything immediately" (see "Canadians promise broadband option" published on 17 January 2008, on [nzherald.co.nz](http://www.nzherald.co.nz) http://www.nzherald.co.nz/category/story.cfm?c_id=93&objectid=10487230&ref=rss).

- 16.23 However, the media has also suggested that Craig Wireless is a 'spectrum speculator' ie that it intends to sell the spectrum it has acquired in auction 9 at a capital gain (see "TelstraClear pulls out of WiMax auction" published on 17 December 2007, on [stuff.co.nz](http://www.stuff.co.nz) <http://www.stuff.co.nz/4327284a28.html>).
- 16.24 Accordingly, it is difficult from an outsider's perspective to accurately predict how the involvement of Craig Wireless will affect the competitive dynamic in the relevant markets. That said, if Craig Wireless were to sell its spectrum, the possibility of another competitor acquiring it means that that spectrum will continue to exert a competitive constraint on Telecom in its future use of 2.5GHz spectrum.
- 16.25 Craig Wireless is well-placed to be an effective competitor in WiMax markets, should it choose to compete in New Zealand.

Hautaki Limited

- 16.26 Hautaki Limited is a major shareholder in NZ Communications Limited (holding 8 million of the 69 million shares. NZ Communications also has substantial shareholdings allocated to two private equity firms, as discussed below).
- 16.27 According to a press release by Fomana Capital Limited (a wholly-owned subsidiary of Federation of Maori Authorities Incorporated) in Scoop business (an internet news source) on 9 May 2007:

Hautaki Limited holds an equity interest in NZ Communications Limited (formerly known as Econet Wireless New Zealand Limited (EWNZ) on behalf of all Maori. []

The following information is publicly available and provides a summary of Hautaki Limited and NZ Communications.

- In May 2000 the Crown announced it would allocate Maori a block of third generation (3G) radio frequency spectrum. The Crown also announced funding of \$5 million. []
- A charitable trust, Te Huarahi Tika Trust (also known as Maori Spectrum Trust) was established to receive the spectrum and the funding.
- Hautaki Trust was established in July 2000. The principal beneficiary of the Hautaki Trust is Te Huarahi Tika Trust.
- Hautaki Limited is the trustee of the Hautaki Trust.
- Hautaki Limited identified the Econet Group of South Africa as a commercial partner, and in 2001 they established EWNZ.
- In March 2007, two significant new investors purchased shares in EWNZ and renamed it NZ Communications Limited.

- 16.28 As outlined above, Hautaki Limited has acquired 25MHz of spectrum in the 2.3Gz range. Hautaki made a submission to the MED regarding the allocation of spectrum to Hautaki

(published on the part of the MED's website relating to auction 9). This submission heavily emphasised Hautaki's intention to utilise spectrum to develop WiMax services.

- 16.29 Since Hautaki Limited is a major shareholder in NZ Communications Limited, this WiMax offering may be deployed either by NZ Communications or directly by Hautaki Limited. Either possibility will constitute a further competitor in the market for the provision of WiMax services.
- 16.30 In the future, if NZ Communications' mobile network were under load pressure, in urban areas, Hautaki could use its acquired spectrum to take pressure off that network, by enabling urban users who would otherwise be mobile to access the internet using WiMax for any internet sessions during which that user intended to be stationary or nomadic.

NZ Communications Limited

- 16.31 NZ Communications is currently building New Zealand's third mobile network.
- 16.32 NZ Communications plans to create a 3G mobile network with 1340 cell sites to cover 80% of New Zealand's population, which will take several years and require hundreds of millions of dollars to be invested. That said, at least 10 of NZ Communications cell sites are scheduled to be ready by June 2008. (See "Work starts on third mobile network", published on 17 December 2007 on stuff.co.nz <http://www.stuff.co.nz/4326412a28.html>).
- 16.33 NZ Communications formed a joint venture with Hautaki Limited in 2001 to develop the 2.1GHz spectrum for 3G (see Hautaki's recent submission to the MED regarding spectrum allocation). NZ Communications has recently signed an agreement with Vodafone to permit roaming on Vodafone's network.
- 16.34 As NZ Communications has not yet begun offering mobile services, Telecom expects it to offer mobile services that are increasingly competitive (both in quality and geographical coverage) over time.
- 16.35 NZ Communications is well-funded, and has the backing of private equity firms including GEMS NZ BV (a Dutch company) and CVP, which is based in Hong Kong and Britain. Those two firms, plus Hautaki Limited, between them invested more than \$50 million in NZ Communications Limited during 2007 (see article cited at paragraph 16.32 above).
- 16.36 Accordingly, through its association with Hautaki Limited and significant financial resources, NZ Communications will be well-placed to offer a competing WiMax service.

Fixed broadband access competitors

- 16.37 To the extent that acquired spectrum is used to offer services which compete with fixed broadband, then the list of existing competitors will include all other participants in the fixed broadband access market. In addition to the competitors identified above, the list of competitors includes:
- (a) Airnet;
 - (b) Citylink;
 - (c) ICONZ;
 - (d) Inspire Net;
 - (e) Telecom;

- (f) TelstraClear;
- (g) Vector Communications Limited;
- (h) UCLL access seekers, being Orcon (a subsidiary of Kordia), ihug (which, given the recent announcement that Vodafone will discontinue the ihug brand, Telecom would expect to withdraw its request or, more likely, be replaced as an access seeker by Vodafone) and CallPlus; and
- (i) other geographically specific competitors

16.38 Some of these competitors are offering broadband access in the 3.5GHz spectrum, including competitors whom Telecom understands are offering fixed WiMax based on the 802.16d standard (which has now been superseded by the 802.16e standard). Although Telecom also holds management rights to 7MHz of paired spectrum in the 3.5GHz frequency range, [

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Other Considerations

Near Entrants

WiMax

16.39 The telecommunications companies listed above are each near entrants which could compete to provide WiMax services, provided that (where they were not successful bidders in auction 9) they obtain a licence to use the relevant spectrum. A holder of spectrum will only obtain market share in the same manner as any other holder, by investing in the costs of a network and other market entry costs, plus managing to compete successfully to gain customers.

16.40 In addition, MED is allocating management rights for the spectrum on a 'use it or lose it' basis. Accordingly, if any of the successful bidders are not taking active steps to implement a WiMax service offering, a more competitive party (near entrant) will be able to access that bidder's spectrum.

16.41 Two bidders who wished to obtain spectrum in auction 9 were unable to do so. However, this was not the result of Telecom obtaining spectrum. Rather, it was caused by the auction design, which allocated fewer lots than bidders. These bidders could be said to be in the position of near entrants. However, if Telecom were denied the opportunity to acquire the management rights that may also result in reducing the competitive threat from Telecom in the relevant markets.

Fixed broadband internet access

16.42 No significant near-entrant will have been removed from this market if Telecom acquires the management rights to the 2.5GHz spectrum. New Zealand's recent experience evidences that there are multiple near entrants in the fixed broadband internet access market, as shown by the entry of Woosh Wireless, Slingshot and others.

3G and enhanced services

16.43 In any event, NZ Communications did not bid for spectrum in auction 9 and Vodafone did not bid for paired spectrum.

16.44 Telecom suspects that Vodafone will use the spectrum it acquired in auction 9 to offer WiMax services. Telecom understands that Vodafone is not interested in offering LTE

telephony services at higher frequency ranges, such as in the 2.5GHz range, as this costs [] as much as offering cellular services in lower frequency ranges (which Vodafone already holds).

17. CONDITIONS OF EXPANSION

- 17.1 The conditions of expansion are access to spectrum (either management rights, licence rights or via an MSP) and availability of necessary technology, which will be available from a number of international providers.
- 17.2 As set out above, any of the holders of 2.3GHz or 2.5GHz spectrum could supply WiMax and there are many near entrants to the fixed broadband market.
- 17.3 The time for supply is dependent on when a competitor can access spectrum and has developed its technology to a suitable standard.

18. COMPETITIVE CONSTRAINT ON TELECOM

- 18.1 Telecom's future activities would be constrained by their competitors, as set out in response to question 19 below.

19. LOOKED AT OVERALL, AND BEARING IN MIND THE INCREASE IN MARKET CONCENTRATION THAT WOULD BE BROUGHT ABOUT BY THE ACQUISITION, TO WHAT EXTENT DO YOU CONSIDER THAT THE MERGED ENTITY WOULD BE CONSTRAINED IN ITS ACTIONS BY THE CONDUCT OF EXISTING COMPETITORS IN THE MARKETS AFFECTED?

- 19.1 There will not be any increase in concentration in any of the affected markets as a result of Telecom acquiring the management rights.
- 19.2 If Telecom deploys WiMax it will be constrained by the WiMax offerings of each of the other successful bidders and/or any spectrum licensees of those bidders. As a result of auction 9, there are 6 other companies holding management rights which can be used to deploy WiMax services (being the 5 successful bidders and Hautaki Limited, which was allocated spectrum outside of the auction process).
- 19.3 If Telecom had not bid or is not cleared to acquire the management rights, then there could potentially have been 8 companies holding WiMax capable spectrum. However, Telecom believes it does not substantially lessen competition to clear Telecom to acquire the management rights, for the following reasons:
 - (a) In Telecom's view (which is shared by most of the submitters on the MED Discussion Paper, as noted at page 1 above), 30MHz of contiguous spectrum plus a guardband of 5MHz is the ideal minimum amount of spectrum to offer optimum WiMax services. [

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- (b) The bidders who have acquired spectrum are large, well-resourced, highly-active and serious competitors. This will ensure active competition in the WiMax market. Those bidders include an SOE (Kordia Limited), Telecom's major telecommunications competitor (Vodafone), a company listed on the

Toronto stock exchange (Craig Wireless Systems Limited), and two vigorous competitors (Woosh Wireless Limited and Blue Reach Limited, which is the wholesale arm of established telecommunications company CallPlus);

- (c) Telecom understands that it is the intention of Hautaki Limited (which acquired 25MHz of 2.3GHz spectrum) to partner with NZ Communications to constitute a seventh competitor in the WiMax market. As set out above, NZ Communications is also a significant competitor. Telecom notes that there is an effective 4MHz guardband above Hautaki's spectrum, as that spectrum is allocated to amateur radio on a secondary basis.
- (d) The absence of those bidders who were unable to acquire spectrum (being Compass Communications Limited and Snap Internet Limited) will not substantially lessen competition, compared to a counterfactual in which they, rather than Telecom, acquired the 20MHz paired spectrum. Although Compass Communications is a significant company, it would not be a substantially more competitive company than any of the successful bidders. Indeed, if Compass Communications valued the spectrum more highly than the successful bidders, it would have been prepared to pay a higher bid, to ensure it obtained further spectrum - that is what an auction is designed to achieve.
- (e) The existing competitors in the fixed wired and wireless broadband access market will continue to compete vigorously with companies offering WiMax services, to the extent that those services are demand side substitutes (ie where the service provider does not offer, or the consumer does not wish to utilise, the nomadic or portable functionality associated with WiMax).
- (f) Further, Telecom notes that the auction rules were designed to ensure that only a certain number of bidders could win. This is the result of MED's auction design, not any action of Telecom. The design can be explained by looking at the section headed "Commercial Viability of Multiple WiMAX Providers" in part 3.1 of the Discussion Paper, which acknowledges that "it is questionable whether a small country like New Zealand can sustain" "up to six nationwide providers of WiMAX". This shows that MED is of the view that letting further companies acquire management rights is unlikely to increase competition.
- (g) The Government has made available an MSP in the 2.5GHz range, comprising a large amount of spectrum (45MHz) which will be available to the unsuccessful bidders (amongst others) to offer a competing WiMax service, should they wish to do so. This service can be regionally targeted, by using a frequency range only in areas in which the relevant company wishes to compete.
- (h) In any event, spectrum can be licensed from holders of management rights to enable those who did not acquire it in auction 9 to have access to spectrum. Again, such services can be geographically targeted to allow a company to focus on competing in a certain area.

19.4 If Telecom deploys LTE technology it will be constrained by Vodafone's offering, which will likely utilise the lower frequency ranges. As it is cheaper to offer cellular services over lower frequency ranges, Vodafone will have a cost advantage when competing with Telecom's LTE offering. This, combined with Vodafone's larger cellular customer base will make it a very effective competitor (see "Vodafone customers the winners as prices come down" published on 20 July 2007 on Vodafone.co.nz, <http://www.vodafone.co.nz/personal/about/media-centre/2007-media-releases/vodafone-releases-q1-results.jsp>).

- 19.5 Any 3G offering which NZ Communications subsequently develops will also constrain Telecom in the market for the provision of 3G and enhanced telephony services.
- 19.6 Telecom notes that it would not increase competition in the 3G telephony market to prevent Telecom acquiring spectrum. Neither Vodafone nor NZ Communications bid for paired spectrum. It follows that, if Telecom did not acquire the spectrum, the spectrum would not have been used for telephony services, which require paired spectrum. Accordingly, the acquisition will increase competition in the 3G market, []

20. CO-ORDINATED MARKET POWER

- 20.1 Telecom considers that both the WiMax market and the fixed broadband internet access market have a number of characteristics which would impede co-ordination effects post-acquisition, including:
- (a) the level of differentiation between products; and
 - (b) the number of competitors.

Differentiated products

- 20.2 The current broadband internet access market is characterised by differentiated products and therefore it is more difficult for participants to tacitly agree on a price. Such behaviour is further constrained by different cost structures for the main participants. There is no reason to expect that WiMax internet access would be any different in this regard.

Presence of competitors

- 20.3 As set out above, there are many competitors in the fixed broadband access market.
- 20.4 Telecom is just one of six successful bidders for national management rights. Each of the other bidders (as well as Hautaki Limited/NZ Communications) will be able to facilitate a competing WiMax offering, either by implementing one themselves or licensing others to do so (including regional licenses). The other bidders include well resourced and experienced participants.
- 20.5 As the WiMax market is essentially a new market created by the auction, it does not make sense to speak of increasing or reducing the risk of co-ordinated behaviour. Instead, it is appropriate to consider whether this new market might be at risk of co-ordination in the future. Telecom believes it is not.
- 20.6 Given the rigorous competition between the Telecom group and Vodafone in existing markets for the provision of cellphone services, Telecom does not believe there will be any risk of co-ordinated behaviour in the 3G telephony market.

THIS NOTICE is given by Telecom Leasing Limited

The company hereby confirms that:

- all information specified by the Commission has been supplied;
- all information known to the applicant which is relevant to the consideration of this application has been supplied;
- all information supplied is correct as at the date of this application/notice.

The company undertakes to advise the Commission immediately of any material change in circumstances relating to the application/notice.

Dated this 28th day of January 2008.

Mark Verbiest, Director, Telecom Leasing Limited

I am a director/officer of the company and am duly authorised to make this application/notice.