



**COMMERCE COMMISSION**

**Decision No. 635**

Determination pursuant to the Commerce Act 1986 in the matter of an application for Proposal

**TELECOM LEASING LIMITED**

and

**2.5 GHZ SPECTRUM**

- The Commission:** Paula Rebstock  
Donal Curtin  
Anita Mazzoleni
- Summary of Application:** The acquisition by Telecom Leasing Limited of Radio Frequency Spectrum management rights and licences in the 2.5 GHz band from the New Zealand Government.
- Determination:** Pursuant to section 66(3)(a) of the Commerce Act 1986, the Commission determines to give clearance to Telecom Leasing Limited for the acquisition.
- Date of Determination:** 7 March 2008

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## THE PROPOSAL

1. A notice pursuant to s 66(1) of the Commerce Act 1986 (the Act) was registered on 29 January 2008 seeking clearance for Telecom Leasing Limited (Telecom) to acquire from the New Zealand Government management rights in the 2.5 GHz radio spectrum band. Specifically, 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).

## RADIO SPECTRUM

### Radio Frequency Auction Number 9

2. In late 2007, the Ministry of Economic Development (MED) held radio frequency auction number 9 in which it auctioned management rights to 2.3 GHz and 2.5 GHz spectrum. The auction concluded on 18 December 2007.

#### *Existing Use and Timing of Transfer of Rights*

3. Four different parties (Telecom, Woosh, Kordia and Sky) hold management rights to the 2.3 GHz band. These rights were granted in 1990 and expire on 25 November 2010. The Government has decided not to offer renewals to the four existing rightholders, as it considers the spectrum is being under-utilised. The 2.3 GHz management rights auctioned in December 2007 do not commence until December 2010. However, parties may be able to negotiate agreements with existing rightholders to have them relinquish their rights before 2010.
4. There are currently no management rights in the 2.5 GHz band. Instead the 2.5 GHz band is currently used for itinerant fixed links for television outside of normal broadcast services (for example, for a special sporting fixture). Various licensees use this band on an ad hoc basis. MED plans to revoke these licences by December 2008 and migrate these users to alternative technologies or the 2.7 GHz band. The 2.5 GHz management rights auctioned in December do not commence until January 2009.

#### *Future Use*

5. MED's August 2007 discussion paper on the 2.3 and 2.5 GHz bands<sup>1</sup> discusses the potential future uses of the spectrum. It identifies four potential uses, being:
  - WiMAX wireless broadband;
  - IMT 2000 cellular (next generation mobile services);
  - remote rural uses, in particular Customer Multi Access Radio (CMAR) services; and
  - point to point linking uses (e.g. telecommunications backhaul) and outside broadcast media linking.
6. WiMAX is a relatively new technology which aims to provide high speed wireless data over relatively long distances and in a variety of ways, from fixed point to point links to fully mobile services. However, WiMAX developments are uncertain. MED's discussion paper comments at para 34:

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<sup>1</sup> "Radio Frequency Auction: 2.3 GHz and 2.5 GHz Bands", MED Discussion Paper, August 2007.

The WiMAX technology path is not certain. WiMAX wireless technologies are undergoing rapid change and standards are not completely settled. In particular it is unclear whether the first or dominant WiMAX band for major international deployment will be 2.3 GHz or be 2.5 GHz. It is also unclear whether mobile WiMAX will be able to effectively compete with the cellular IMT2000 technologies. WiMAX may also be available using FDD technology in future.

7. IMT 2000 is a third generation (3G) cellular technology. MED's discussion paper identified that there may be interest in the 2.5 GHz spectrum for next generation mobile services. These services are likely to be IP-based and offer broadband capability. Like WiMAX, this technology is characterised by rapid technology developments and considerable uncertainty.

#### *Lots and Auction Results*

8. Radio frequency auction number 9 included the following lots of management rights to 2.3 GHz and 2.5 GHz spectrum:
- four nationwide lots suitable for WiMAX services (two in the 2.3 GHz band and two in the 2.5 GHz band) – three lots of 35 MHz and one lot of 30 MHz; and
  - four nationwide lots suitable for either WiMAX or advanced cellular type services – two blocks of 40 MHz contiguous spectrum or two sets of 20 MHz pairs.
9. Two further lots of spectrum were not auctioned, being:
- a 45 MHz lot reserved for a “managed spectrum park” that will be available for shared use by regional and local users (allowing for at least 2-3 local WiMAX providers); and
  - a 25 Mhz nationwide lot reserved for Maori, that has been allocated by the Ministry of Maori Affairs to Hautaki Limited.<sup>2</sup>
10. Table 1 summarises the provisionally successful bidders for the 2.3 and 2.5 GHz spectrum rights, as at the conclusion of the auction in December 2007.

**Table 1: Provisionally Successful Bidders for 2.3 and 2.5 GHz Spectrum Rights**

Lot	Lot Size	Provisionally Successful Bidder	Suitable For
1	35 MHz	Kordia	WiMAX
2	35 MHz	Woosh Wireless	WiMAX
3	20 MHz	Craig Wireless Systems <sup>3</sup>	WiMAX or Cellular
4	20 MHz	Telecom	WiMAX or Cellular
5	35 MHz	Vodafone	WiMAX
6	20 MHz	Craig Wireless Systems	WiMAX or Cellular
7	20 MHz	Telecom	WiMAX or Cellular
8	30 MHz	Blue Reach <sup>4</sup>	WiMAX

11. The only registered bidders to miss out on lots were Compass Communications and Snap Internet. These parties were invited to make submissions to the Commission but none were received.

<sup>2</sup> Hautaki is a major shareholder of NZ Communications Limited (NZC).

<sup>3</sup> Craig Wireless Systems Limited is listed on the Toronto stock exchange. Overseas it offers a broad range of telecommunications services. It does not provide any services in New Zealand at present.

<sup>4</sup> Blue Reach Limited is a wholly-owned subsidiary of CallPlus Holdings Limited. It was formed to build a wireless network and operate as an internet telecommunications wholesaler. 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.

*Provisions and Clauses pertaining to Auction and Management Rights*

12. The auction set an acquisition limit of 40 MHz per bidder. The cap is designed to ensure that one or two parties cannot acquire all the spectrum, and limit competition in downstream markets. The acquisition limit is, however, only temporary and after December 2012 bidders are free to buy up more spectrum, subject to the provisions of the Commerce Act 1986 (the Act).
13. The management rights are subject to ‘use it or lose it’ rules. These rules are intended to ensure that spectrum is not simply “warehoused” without services actually being implemented. These requirements will be implemented by the Government only granting an initial set of rights that expire in December 2014, with the further rights only being granted on evidence of satisfactory use. Spectrum owners will have an option to purchase (at a defined price) a single two year “extension” to meet the implementation requirement. The ultimate rights expire no later than 31 December 2028.

**Other Spectrum Rights**

14. Telecom already holds management rights to other bands of spectrum. As noted above, its rights to the 2.3 GHz band expire on 25 November 2010 (if not earlier). Table 2 summarises the other spectrum rights that Telecom will continue to have beyond 2010 in both the factual and counterfactual. The table also identifies the other parties that hold rights in the same bands.

**Table 2: Telecom’s Other Spectrum Rights**

Bands	MHz Held by Telecom	Other Rightholders
800 & 900 MHz	2 x 15 MHz	Vodafone (2 x 15.2 MHz), NZC (2 x 10.8 MHz) <sup>5</sup>
1.8 GHz	2 x 25 MHz	Vodafone (2 x 15 MHz), NZC (2 x 10 MHz), TelstraClear (2 x 25 MHz)
2.1 GHz	2 x 15 MHz	Vodafone (2 x 15M Hz), TelstraClear (2 x 15 MHz), Hautaki Trust (2 x 15 MHz) <sup>6</sup>
3.5GHz	2 x 7 MHz	TelstraClear (2 x 21 MHz), Vodafone (2 x 7 MHz), Compass (2 x 7 MHz), Kordia (2 x 21 MHz)

15. None of the above spectrum has been utilised by Telecom for either WiMAX or advanced cellular type services such as LTE enhanced 3G cellular services.

**PREVIOUS COMMISSION DECISIONS**

**Decision 423 (2001) – Telecom’s Acquisition of 2 GHz Spectrum**

16. The Commission’s last clearance Decision in respect of Telecom was in 2001, when it acquired 2 GHz spectrum auctioned by MED. In Decision 423, the Commission defined two separate markets for the provision of mobile telephony services and third generation mobile telephony services.
17. In the yet to be developed 3G market, the Commission considered whether the proposed acquisition would be likely to prevent or inhibit competition from developing in that market. The Commission thought that this would only occur if the amount of spectrum that Telecom was seeking to acquire was such as to leave other potential 3G providers with insufficient spectrum to operate a

<sup>5</sup> NZC is gaining this spectrum from Telecom and Vodafone as part of renewals of their 800 & 900 MHz rights.

<sup>6</sup> NZC has an option to use the Hautaki Trust spectrum.

competing 3G network. Telecom was seeking to acquire 15 MHz of the 60 MHz of the available 2 GHz spectrum. The Commission was satisfied that Telecom's acquisition of 15 MHz would not prevent or materially impede new entry into the 3G market.

### **Section 47 Investigation (2006) – Telecom's Acquisition of 3.5 GHz Spectrum**

18. In 2006 Telecom acquired 3.5 GHz spectrum from Counties Power. In its investigation report, the Commission defined separate national wholesale markets for the provision of broadband access services (including wireless broadband) and mobile broadband access services (including nomadic and 3G broadband), as well as a number of local access markets.
19. On balance, the Commission decided that Telecom's acquisition of 3.5 GHz spectrum was not likely to result in a substantial lessening of competition.

### **MARKET DEFINITION**

20. Telecom submits that the relevant markets within which to assess the proposed acquisition are:
  - 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 3G cellular mobile telephony services and enhanced 3G services.
21. Telecom submits that any competition issues in this case can be assessed fully by simply considering the wholesale level of the affected markets. It argues that we do not have to analyse competition at the retail level.
22. While they may offer some of the same functionality, WiMAX, fixed broadband access and 3G mobile services may currently only compete at the margins.
23. If there are no competition concerns within narrow product markets for section 47 purposes, then competition concerns are unlikely to arise in respect of any wider product markets. Accordingly, the Commission analysed the competitive effects of the acquisition using the markets proposed by Telecom.

### **COMPETITION ANALYSIS**

24. When assessing the competitive impacts of a merger, the Commission assesses the likely situation with the merger (the factual) with the likely situation without the merger (the counterfactual).
25. Telecom submits that there is no aggregation of market share or substantial lessening competition in any of the relevant markets due to the proposed acquisition. The acquisition of spectrum is merely a raw asset that, by itself, will not change the competition dynamics of the affected markets. Also, the 'use it or lose it' rules mean that Telecom cannot acquire the spectrum to block entry by other parties.

#### *WiMAX*

26. The WiMAX market is yet to be developed. As such, the Commission has considered whether the proposed acquisition would be likely to prevent or inhibit competition from developing in that market.

27. Telecom is just one of a number of parties who now have obtained 2.3 and 2.5 GHz management rights. In developing the auction, MED consulted with parties to determine the size of the lots (the minimum amount of spectrum needed to offer WiMAX services). Each of successful bidders will be able to facilitate a competing WiMAX offering, either by implementing one themselves or licensing others to do so. If Telecom decides to deploy WiMAX it will be constrained by the offerings of those parties.
28. The Commission concludes that proposed acquisition is unlikely to prevent or inhibit competition from developing in the WiMAX market.

#### *Fixed Broadband Access*

29. To the extent that acquired spectrum is used to offer services which compete with fixed broadband, then the list of existing competitors will include the numerous participants in the fixed broadband access market. Accordingly, the proposed acquisition is unlikely to substantially lessen competition in the fixed broadband access market.

#### *3G and Enhanced Cellular Services*

30. At present there are no competitors offering LTE technology in the 3G market, as the technology has not yet been developed. The Commission has therefore considered whether the proposed acquisition would be likely to prevent or inhibit competition from developing in the 3G market.
31. Offering enhanced 3G mobile telephony services requires a company to have access to paired spectrum and an underlying 3G/2G cellular network. The only companies with an underlying cellular network in New Zealand are Telecom, Vodafone and, potentially in the future, NZC. Vodafone did not bid for either of the sets of paired spectrum available in the recent auction. NZC did not bid in the auction at all, as it has access to the spectrum lot allocated to its shareholder Hautaki Limited.
32. The likely counterfactual is one in which no-one acquires the 2.5 GHz spectrum for enhanced 3G telephony services. If Telecom deploys LTE technology in the factual it will be constrained by Vodafone's offering, which will likely utilise the lower frequency ranges. Accordingly, the factual may increase competition in the 3G market, relative to the counterfactual.
33. The Commission concludes that proposed acquisition is unlikely to prevent or inhibit competition from developing in the 3G market

#### **OVERALL CONCLUSION**

34. The Commission is satisfied that the proposed acquisition will not have, nor would be likely to have, the effect of substantially lessening competition in any relevant market.

**DETERMINATION ON NOTICE OF CLEARANCE**

35. Pursuant to section 66(3)(a) of the Commerce Act 1986, the Commission determines to give clearance to Telecom Leasing Limited for the acquisition.

Dated this 7<sup>th</sup> day of March 2008

A handwritten signature in black ink, appearing to read 'Paula Rebstock', written in a cursive style.

Paula Rebstock

Division Chair  
Commerce Commission