



Comparison of United Kingdom and New Zealand Domestic Broadband Markets

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Executive Summary

This brief paper compares UK broadband data products with those available in New Zealand. A comparison of xDSL products was taken during February 2006 and factors such as speed, price, contention ratio and cap considered. New Zealand clearly lags behind the UK in terms of uptake and in terms of what is available. On the surface New Zealand appears price competitive but it is clear from the data that customers lack choice and receive relatively poor levels of network service. The existence of a network monopoly limits variety in the market so price becomes a significant discriminating factor. New Zealand's slow upload speeds and high contention ratios are a concern. They suggest a higher likelihood of poor network performance and New Zealand customers lack true high speed options. The data suggests that New Zealand could gain benefits from greater competition at an infrastructure level and that greater transparency of network standards and service levels is required. Alternatives to the current data capping practices should be explored.

Introduction

This brief paper uses broadband pricing and performance data from the UK and New Zealand to compare broadband options between the two countries. The paper is not intended to be an in-depth review of broadband practices simply an attempt to contribute to the current debate on broadband pricing, performance and regulation. It will briefly compare and discuss speed, price, contention ratios and data caps.

New Zealand has good broadband coverage; mainstream broadband solutions reach around 95% of the country and the remainder can be connected via satellite. However, despite high uptake of the internet, broadband usage remains in the lower third of the OECD¹. According to UK figures,

¹ Ministry of Economic Development (2005). Broadband Internet Access Service Performance. Wellington, NZ: www.med.govt.nz/templates/MultipageDocumentPage___12367.aspx

99.7% of households have access to mainstream broadband and there are 8.9 million broadband customers (50.7% of all internet users)². This places the UK above the OECD average at 22%.

The markets are different. The UK is operating in an environment where local loop unbundling (LLU) has occurred. The evidence is that this is leading to increased choice and service for customers who are able to access xDSL enabled exchanges. The New Zealand local loop is managed by Telecom New Zealand and other ISPs have no access to it. The result is a narrower range of services. This should not be taken as promoting LLU as a panacea; it does not appear to have necessarily increased the role out of xDSL enabled exchanges and it is still too early to tell if current operational reform to BT will achieve this any faster.

Data

The UK data is drawn from 268 xDSL packages (it excludes cable) provided by 73 different companies. Data has been gathered from a range of publicly available sources including broadbandhelp.co.uk, adslguide.co.uk and from company websites. The New Zealand data is drawn from 21 packages from six national ISPs and was taken from their respective websites.

All pricing data has had tax removed (UK data excludes VAT and New Zealand data excludes GST). Only home, small office/home office or telework packages have been included. The comparison specifically excludes packages identified as 'business' or 'commercial'. New Zealand packages exclude discounts for customers who opt for telephone toll calling through the same provider. The data was collected in the last week of February 2006 and refers only to packages that were available at this time.

Exclusion

This discussion paper draws on temporal cost and performance data and, therefore, makes no attempt to directly address issues such as infrastructure investment or regulation. Only xDSL-based products have been used in this comparison.

Download speeds

The International Telecommunications Union³ defines broadband as "transmission capacity that is faster than primary rate Integrated Services Digital Network (ISDN) at 1.5 or 2.0 Megabits per second (Mbits)." Forty eight percent of the New Zealand broadband packages surveyed meet this requirement, as do 47% of the UK packages. UK download speeds were comparatively higher than New Zealand's.

Table 1 shows that 68% of UK packages were 1Mb or higher whereas this was the case for 62% in New Zealand. At the bottom end, only one UK package was available offering 256Kbps, whereas 38% of New Zealand packages offered this speed. The highest download speed available in New Zealand was 2Mb, whereas more than 8% of UK packages were over this speed, with speeds of 8Mb becoming quite common (7.8%).

² Ovum. (2006). UK Broadband Status Report: A report for the Department of Trade and Industry.

³ See: www.itu.int

Table 1: Download speeds

Speed	UK		NZ	
	Number	%age	Number	%age
256K	1	0.4%	8	38.1%
512K	83	31.0%	0	0.0%
1Mb	57	21.3%	3	14.3%
2Mb	104	38.8%	10	47.6%
4Mb	1	0.4%	0	0.0%
8Mb	21	7.8%	0	0.0%
22Mb	1	0.4%	0	0.0%
<i>Total</i>	<i>268</i>		<i>21</i>	

Upload Speeds

A contention in the New Zealand market is low upload speeds and this is certainly supported by the data. Table 2 shows that the only upload speeds available in New Zealand were 128Kbps, whereas 98% of UK offerings were at least double this.

Table 2: Upload speeds

Speed	UK		NZ	
	Number	%age	Number	%age
128K	4	1%	21	100%
256K	257	96%	0	0%
512K	3	1%	0	0%
1Mb	1	0%	0	0%
2Mb	3	1%	0	0%
<i>Total</i>	<i>268</i>		<i>21</i>	

There was very little evidence of synchronous connectivity in either country. New Zealand offered none and in the UK, 97.8% of packages were asynchronous. The exceptions to this are two 512Kbps, one 1Mbps and three 2Mbps packages. Higher price was a significant factor in each of these packages.

Price

It is difficult to compare relative pricing of UK and New Zealand products. This is not simply due to currency variations but also because the cost of living in both countries is different. Whilst it might appear flippant, a choice was made to 'level the playing field' by applying The Economist's Big Mac Index⁴, which uses a comparison of McDonald's Big Mac prices around the world to define purchasing-power parity. Therefore, prices are shown in US dollars and adjusted according to the

⁴ This is a long established purchasing-parity measure that is described at www.economist.com/markets/Bigmac/Index.cfm.

relative cost of a Big Mac⁵. Table 3 shows that further difficulty arises when attempting to directly compare prices as package specifications differ quite substantially, most notably New Zealand ISPs offer a slower upload speed.

Table 3: Price comparisons by product (per month/US\$)

Download	Upload	UK (US\$)	NZ (US\$)
256K	128K	\$ 18.35	\$ 24.55
512K	128K	\$ 140.43	-
512K	256K	\$ 42.36	-
512K	512K	\$ 269.41	-
1Mb	128K	-	\$ 28.64
1Mb	256K	\$ 52.53	-
1Mb	1Mb	\$ 357.64	-
2Mb	128K	na	\$ 34.54
2Mb	256K	\$ 48.96	-
2Mb	512K	\$ 701.25	-
2Mb	2Mb	\$ 413.36	-
4Mb	256K	\$ 36.68	-
8Mb	256K	\$ 43.94	-
22Mb	256K	\$ 55.03	-

Comparisons can be drawn in terms of levels of package that a consumer might expect within the market, such as basic or entry level, medium level and high level. Table 4 shows that there is significantly greater variation in UK product offerings, which could reasonably be expected as a result of the larger market size. Any impact of LLU is unclear from the data reviewed. New Zealand costs compare favourably with those of the UK, excepting the lack of choice and significantly lower levels of performance.

Table 4: Basic, medium and high end packages (per month/US\$)

Level	Speed	Min (US\$)	Max (US\$)	Mean (US\$)
UK				
Basic	512K/256K	\$19.27	\$128.07	\$42.36
Medium	2Mb/256K	\$0.00	\$285.80	\$48.96
High	8Mb/256K	\$19.27	\$81.22	\$43.94
New Zealand				
Basic	256K/128K	\$22.33	\$28.63	\$24.55
Medium	2Mb/128K	\$28.63	\$45.85	\$34.54
High	Not available			

⁵ The current Economist data set lists the UK price of a 'Big Mac' as US\$3.32, in New Zealand US\$3.08 and in the US US\$3.15.

Contention Ratio

A significant factor in determining UK pricing is contention ratio. A lower contention ratio attracts a higher monthly charge. For example, Figure 1 shows that for 2Mb packages offering 256Kbps upload the impact of contention ratio on pricing becomes clear:

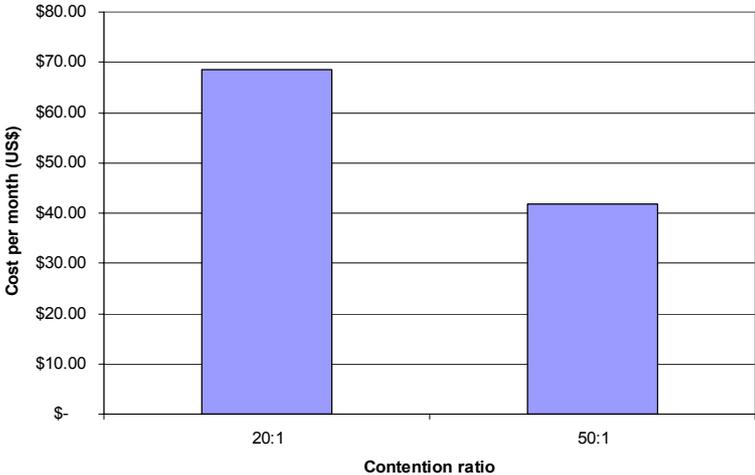


Figure 1: Impact of contention ratio on cost on 2Mb packages.

The availability of data on contention ratios marks a difference between the UK and New Zealand markets. As New Zealand has a monopoly xDSL network that is wholesaled to other providers by Telecom, contention is not something that can be controlled or competed on. Contention ratios are not made public, however, anecdotal evidence suggests that they are significantly higher than those in the UK and, according to sources such as the ISP Association of New Zealand⁶, this is detrimental to network performance. It has been suggested by industry sources that New Zealand’s contention ratios can be in the region of 85:1⁷.

When the higher UK contention ratio (50:1) is used as a benchmark, the average monthly costs shown in Table 4 fall:

- The 512K/256K average falls from US\$42.36 to US\$39.04
- The 2Mb/512K average falls from US\$48.96 to US\$41.70

Data Caps

Performance is only one aspect of usability and value. The pricing data above only takes into account the basic monthly plan cost, however, it is clear from Figure 2 that New Zealand ISPs are not only offering lower levels of performance but are capping the available bandwidth at significantly lower levels than in the UK. The majority of UK packages have no data cap at all (63%), compared with 100% of New Zealand packages which are capped. One third of the New

⁶ See: Letter to Minister of Communication, June 2005 (www.ispanz.org.nz/press_release4)

⁷ Saarinen, J. (14 February, 2006). High contention rate and low margin leaves ISPs unimpressed. Computerworld. www.computerworld.co.nz/news.nsf/news/28363DAAB75B1F61CC2571140028E35A.

Zealand caps are set at 10Gb, which would seem is ample for most users, however, 29% of packages have a 1Gb limit, which seems untenable for all but very basic internet use. Also worth noting is that UK packages, upon reaching a bandwidth cap, continue but charge for additional bandwidth. The majority of New Zealand packages throttle-back bandwidth to dial up levels, thereby defeating the object of having a broadband connection. Whether this is a technically-oriented decision or a marketing-based one, to encourage users to move to a higher capped and more expensive plan, is open to debate.

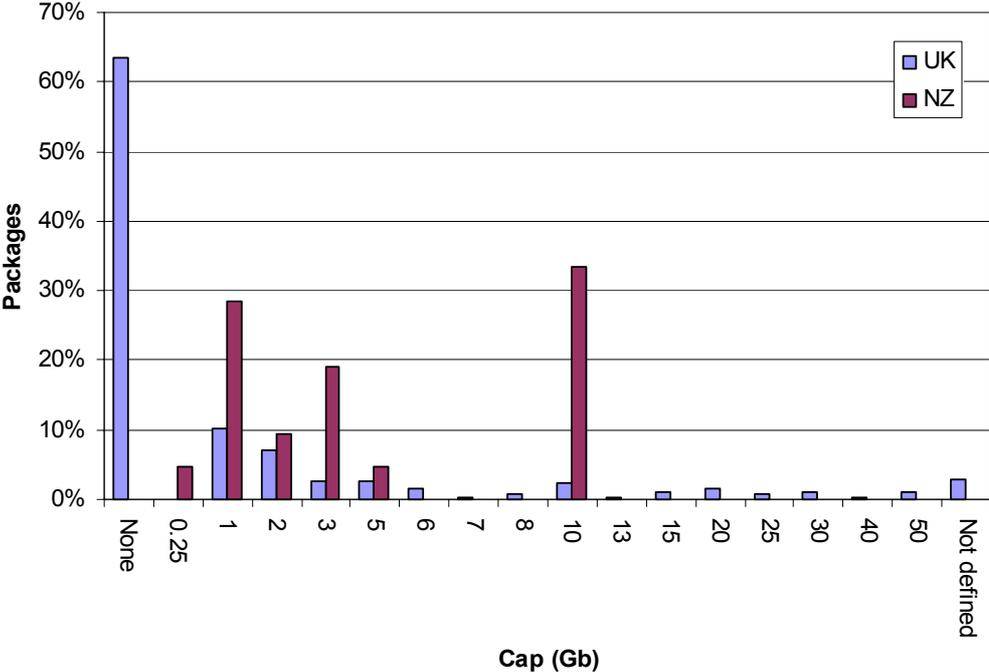


Figure 2: Data caps.

Conclusion

The New Zealand broadband market appears on the surface to be competitive in terms of price. However, it is under performing in terms of connection speeds, is restricted in terms of upload speed and places unreasonable constraints on use through draconian capping policies. The single network means that one company is able to control performance and this is particularly clear in terms of contention ratio. Overall, the data available leads to the conclusion that the New Zealand market is reasonably well served in terms of price but poorly served in terms of performance.

The data suggests that the New Zealand market is superficially buoyant. Network performance is obviously a significant issue and one that has attracted much criticism from those in the industry, however, it is also obvious that the current market is failing to offer variety to consumers. In effect what is on offer is a repackaged version of what the network owner wishes to make available. This contrasts strongly with the UK where there is significant flexibility in terms of price and performance and where consumers can choose to pay more for synchronous connections or to

ensure lower contention ratios. Data caps are a serious impediment for New Zealand users, they are more likely to be lower than the UK and also to result in performance reductions if exceeded.

The overall conclusion is that New Zealand lags behind the UK not only in terms of broadband uptake but also in terms of market maturity and the range of choices available to consumers. Operating as retailers over a single wholesaled network means that ISPs in New Zealand are effectively unable to offer alternatives or flexibility and are, therefore, forced to compete largely on price. Whilst this has obvious short term benefits to the consumer it limits both choice and competition.

Summary of Points Raised
The New Zealand consumer pays less but receives an inferior service.
The current network monopoly leads to poorer quality of service and less choice for consumers.
New Zealand ISPs cannot compete properly because they have no control over the network.
Opening access to the network has led to increased choice in the UK and there is no reason to suggest that this would be different in New Zealand.

Recommendations to Enhance the New Zealand Broadband Market

The following recommendations are made based solely on the data considered for this report:

- Competition at an infrastructure level is required for New Zealanders to have real choice in broadband.
- Greater transparency of network standards and service levels is required.
- The low level of data caps should be reconsidered and alternatives for those exceeding limits explored.