

APPENDIX C

This benchmarking analysis critiques the Network Strategies analysis used by TelstraClear in its response to the Issues Paper and provides an alternative benchmarking analysis. This supports the Broadband section in which we provide evidence to support our submission that generally speaking New Zealand's perceived broadband "problem" does not exist.

Benchmarking Analysis

In support of Telecom New Zealand Limited's response
to the Commerce Commission's Draft Report

Prepared for Steven Bailey, Telecom New Zealand Ltd

Bronwyn Howell
July 31 2003

Executive Summary

1. The Network Strategies benchmarking analyses provided by TelstraClear in support of its submission to the Commerce Commission in the inquiry into unbundling finds that New Zealand ADSL prices are lower than the benchmark countries for both business and residential retail consumers at low levels of usage, but are significantly higher at higher levels of usage.
2. However, a critique of the Network Strategies reports reveals some shortcomings with the methodology employed for this analysis. Firstly, Network Strategies analyses only ADSL products, despite the Commerce Commission having identified that the inquiry into unbundling is seeking to address issues pertaining to the entire broadband market in New Zealand, which encompasses a variety of infrastructure providers. Thus, the study ignores the role played in all examined markets of alternative infrastructures such as cable modem and satellite.
3. Secondly, by selecting a low speed (500kbps) for examining prices, and sampling only the lowest-priced products from the sample providers, the significantly faster standard New Zealand product (2000kbps) is benchmarked against significantly inferior products. This creates a biased impression of the relative price for quality in the New Zealand market.
4. Thirdly, by eliminating products with speeds lower than 500kbps from the analysis, the alternative DSL product in the New Zealand market (128kbps) is not benchmarked against like products. As this product has an approximate 40% market share of the broadband market, failure to benchmark this category results in a failure to compare actual usage patterns with actual prices paid.
5. Fourthly, the Network Strategies analysis shows no evidence of attempting to identify underlying differences in the nature of the markets selected for benchmarking that may contribute to the price differentials detected. Principally, despite having observed that the higher prices in both Australian and New Zealand products appears to be a factor of low usage caps and high per megabyte charges for data transfer above the cap, there is no apparent analysis of the input costs of each market to determine whether market-specific factors may account for observed differences. Neither is there any recognition of the role of government policies, such as a state subsidy for infrastructure deployment, that may contribute to observed differences.
6. These shortcomings result in the Network Strategies benchmarking results being of limited value in informing the Commerce Commission about behaviours in the market in which decisions are to be made.
7. To overcome these shortcomings, this paper undertakes a more comprehensive benchmarking analysis based upon the Oftel methodology, but expanded to include Australian and New Zealand products. This analysis benchmarks all products by sector and product quality, including the low-speed 128kbps product, against products of comparable quality. Furthermore, this analysis benchmarks consumption not at the standardised quantities of the Network Strategies exercise, but at quantities that reflect average and median New Zealand usage. Thus, the comparison reflects not only differences in posted prices, but differences in price at the levels of consumption that are actually occurring.
8. Whilst this analysis confirms the broad finding of the Network Strategies exercise – that at high volumes the New Zealand products are more expensive than products in Europe and the United States – when correcting for the speed and quality factors the differences are far less than those found by Network Strategies. Indeed, for most levels of consumption and speed, the New Zealand products are very similar in price to products

in Germany, one of the European Union's earliest and most ardent practitioners of local loop unbundling. Moreover, at the average levels of consumption, New Zealand products enjoy a significant advantage over comparable Australian products. This difference is even greater if the Australian products are adjusted for the surcharges incurred by provincial and rural consumers, as New Zealand provincial and rural consumers face the same prices as their urban counterparts for the same services.

9. Furthermore, by considering market and environmental factors, such as the higher costs of data transfer from the United States, it is possible to rationalise the per-megabyte charging practice in both Australia and New Zealand. That New Zealand prices are competitive with European and North American products over lower volumes, and that Australian products are also relatively more expensive at higher volumes, suggests that underlying cost differences rather than strategic charging practices may offer the best explanation for observed prices.
10. Accordingly, the alternative benchmarking below provides a much more comprehensive information base upon which the Commerce Commission should base decisions.

Alternative benchmarking analysis

11. Whilst the Network Strategies benchmarking methodology, which TelstraClear refers to in its response to the Issues Paper, offers an interesting 'snapshot' of New Zealand prices compared to those in other countries, it is inappropriate in evaluating the state of the New Zealand market relative to those in other countries. Rather, the following three-step benchmarking process offers a more rigorous and informative alternative.
12. The price benchmarking analysis comprises a three-step approach that addresses the need to obtain an indication of the relative position of New Zealand product prices compared to those in other countries. In addition, it addresses the differences in the commercial and regulatory environments that may account for observed differences.
13. **Step One** of this benchmarking analysis utilises and extends the Oftel methodology and reported prices from the June 2003 report.¹ The Oftel methodology defines the market as being all broadband information services. Hence, it benchmarks products based upon all infrastructures from all ISPs and infrastructure providers in target markets. Sample products are drawn from France, Sweden, Germany, the United Kingdom and the United States. Typically, the cheapest seventy products in each class across each of the identified market segments are reported.
14. For a detailed comparison, the broadband market is segmented into business and residential segments, and further segmented within each of these categories based upon the speed of the product and a consumption basket based on anticipated usage in each category.
15. Residential products are separated into:
 - (a) 'entry level' always-on products with a downstream speed of between 128kbps² and 256kbps; and
 - (b) residential products, with a minimum downstream speed of 256kbps,

¹ Oftel, *International Benchmarking Study of Internet Access (Dial-Up and Broadband)*, June 2003. This benchmarking study uses tariffs from February 2003.

² It is noted that the range of products in this category is actually increasing, especially in the United States and Canada, as telephony service providers seek to expand residential market shares and compete with the cable modem products that dominate this segment: "SBC Announced DSL Service Tiers", *Broadband Networking News*, August 27 2002, p 1.

and are benchmarked using the OfTel average usages of 1.2GB/month and 3GB/month respectively.

16. The OfTel report separates the business market into three categories based upon combinations of speed and consumption. These are:
 - (a) Business - High with minimum downstream speed of 1000kbps and 16GB/month usage;
 - (b) Business - Medium with minimum downstream speed of 500kbps and 9GB/month usage; and
 - (c) Business - Low with minimum downstream speed of 256kbps and 6GB/month usage.

17. However, in the New Zealand market, where the standard business ADSL product has a downstream speed of 2000kbps, benchmarking against the OfTel product speeds of under 500 and 500-999kbps is of little value, as products of vastly different quality cannot be expected to be of comparable price. To overcome this problem the modified benchmarking separates business price comparisons into three categories that better reflect the nature of the products available in New Zealand:
 - (a) Business - High usage with minimum downstream speed of 1000kbps and 16GB/month;
 - (b) Business - Medium usage with minimum downstream speed of 1000kbps and 9GB/month; and
 - (c) Business - Low usage with minimum downstream speed of 1000kbps and 6GB/month.

18. The sample range takes the prices as reported in the OfTel report and extends it to include sample products in the relevant classes from New Zealand and Australia. New Zealand products from telecommunications companies Telecom (Xtra – DSL) and TelstraClear (Paradise – cable modem) are juxtaposed with products from alternative technology providers ihug (satellite) and Actrix (Ethernet LAN) and resellers of Telecom's DSL product ihug, Actrix and Paradise. This sampling covers the major providers by market share.³ Sampling is more difficult in the Australian market due to the very large number of providers.⁴ To ensure a wide but not overwhelming selection, due to the wide variety of providers in the Australian market, the analysis includes DSL and alternative infrastructure products from telecommunications providers Optus, Telstra (via Telstra BigPond) and TransACT (via WebOne), plus average, maximum and minimum prices from a sample of seventy-five Australian resellers taken in the second week of July 2003.⁵

19. **Step Two** analyses the results of the price benchmarking taking cognisance of the regulatory and commercial environment of the sample markets. As Australian and New Zealand pricing policies differ from those of the OfTel countries, and there is evidence of significantly different input costs and usage patterns associated with accessing United States content in the Australian and New Zealand markets, a separate analysis of solely Australian and New Zealand products is indicated.

20. This comparison is based upon four residential categories:

³ TelstraClear owns two ISPs: Paradise and ClearNet. The broadband hyperlink from the TelstraClear site leads to Paradise. ClearNet broadband products were not sampled.

⁴ At least 75 providers of ADSL alone: <http://www.adslusers.com.au>.

⁵ A list of the sampled ISPs is contained in Appendix 1.

- (a) residential (all speeds) with New Zealand median usage across all products of 500MB/month;
- (b) residential (all speeds) with New Zealand median usage across high cap products of 700MB/month;
- (c) residential (all speeds) with usage of 1GB/month in order to compare standardised product offerings in both markets; and
- (d) residential (all speeds) with New Zealand average usage of high cap products of 1.5GB/month.
21. **Step Three** utilises the results of steps one and two to draw some preliminary conclusions and indications for future analysis.
22. The Australian prices used in this analysis are Metropolitan prices, faced by consumers in the major urban areas as defined by TelstraClear. Most Australian ADSL providers charge a premium of between \$8 and \$15 per month for Region 1 consumers (provincial centres) and between \$15 and \$30 per month for Region 2 consumers (rural). This is in direct contrast to New Zealand broadband providers, who charge a single national (universal) price for access to the service. Whilst a comprehensive benchmarking analysis would also segment and analyse these markets separately, for brevity this has not been undertaken in the present exercise. Thus, the comparison analyses urban Australian prices against standard prices in each of the sample countries.

Extended OfTel Benchmarking: Step One.

Residential Prices

23. **Figure 1** shows the modified OfTel table for entry-level 'always on' residential products with downstream speeds of less than 257kbps, based on a monthly consumption of 1.2GB. Whilst the lowest New Zealand prices are less than the lowest Australian prices in this category, they are slightly dearer than the OfTel average. The lowest priced New Zealand product, Paradise Jetstart, is priced similarly to comparable French products, and all of the New Zealand DSL products are significantly cheaper (between 30% and 3%) than the solitary US product in this category. Telstra's lowest priced Australian product in this comparison is more expensive than all of the New Zealand products (twice the price of the least expensive and 20% dearer than the most expensive).

Figure 1: Modified OfTel Benchmarking: Residential 'Entry Level' 1.2GB/month <257kbps

Country	ISP	Package	DSL/ cable modem	fixed monthly charge	monthly usage charge	total monthly charges	down stream speed	upstream speed
UK	NTL	128k Package	CM	16	0	16	128	56
UK	Tiscali - UK	Tiscali Broadband	DSL	23	0	23	256	256
France	AOL.fr	Forfait Decouverte	CM	23	0	23	128	64
Germany	PrimaCom	_easy	CM	24	0	24	256	128
Germany	PrimaCom	_start	CM	13	10	24	128	64
France	Wanadoo	Wanadoo ADSL Xtense128K	DSL	24	0	24	128	64
France	AOL.fr	Forfait AOL ADSL 128	DSL	25	0	25	128	128
France	Noos	Noosnet Forfait Presto	CM	25	0	25	128	64
France	Nerim	Pack Nerim Light	DSL	25	0	25	128	64
France	Tiscali.fr	Pack ADSL Original was Pack ADSL Tiscali Liberty	DSL	25	0	25	128	64
OfTel	Average					25,6		
France	Club Internet	Le Haut Debit 128 without modem	DSL	26	0	26	128	64
France	Cib Internet	Pack Modem Haut Debit Le Haut Debit 128	DSL	26	0	26	128	64
NZ	Paradise	Jetstart	DSL	27	0	27	128	128
NZ	Xtra	Jetstream Starter 5000	DSL	29	0	29	128	128

Country	ISP	Package	DSL/ cable modem	fixed monthly charge	monthly usage charge	total monthly charges	down stream speed	upstream speed
Australia	OzEmail	OzESpeed Plus	DSL	31	0	31	256	64
Australia	Optus	Lite 550MB	CM	31	speed	31		
Australia	BigBlue	No Limits	DSL	33	0	33	256	64
Australia	All Other Provs	1.2GB 256 metered Min	DSL	24	11	34	256	64
NZ	Paradise	High Speed Starter	CM	34	0	34	256	128
US	Qwest	MSN Broadband Powered by Qwest	DSL	35	0	35	256	256
Australia	Optus	Standard 3GB	CM	38	0	38		
Australia	WebOne	AL200	DSL	40	0	40	256	64
Australia	All Other Provs	1.2GB 256 metered Avge	DSL	30	10	40	256	64
Australia	WebOne	AL100	DSL	33	11	43	256	64
Australia	All Other Provs	Unlimited 256 Avge	DSL	47	0	47	256	64
NZ	ihug	Ultrastarter	1-way Satellite	16	31	47	128	56
Australia	Telstra BigPond	1GB	DSL	45	14	59	256	64
Australia	OzEmail	OzESpeed	DSL	29	32	61	256	64
Australia	WebOne	AF23	DSL	63	0	63	256	64
Australia	OzEmail	OzESpeed Special	DSL	24	51	74	256	64
Australia	WebOne	AL30	DSL	27	48	75	256	64
Australia	BigBlue	Mach256	DSL	24	58	82	256	64
Australia	Telstra BigPond	500MB	DSL	37	54	90	256	64
Australia	Telstra BigPond	2 Way-Blast Off	2-way Satellite	70	64	133	256	256

All prices are in UK£ PPP. New Zealand and Australian tariffs at July 2003, all others tariffs at February 2003

'speed' indicates that charges are not made for consumption above the specified limit. Rather, when consumption above the limit occurs, speed is downgraded.

24. **Figure 2** extends the OfTel survey to include residential products of all speeds at the 1.2GB/month consumption level. In this category, the New Zealand offerings compare very favourably. The lowest-priced New Zealand product based upon speed is ihug's satellite product. Both ihug's satellite product and the two 128kbps products rank lower than the OfTel average. It is noted that the ihug product is very competitively priced compared to products of similar quality, being marginally dearer than Sweden's Telia product and marginally less expensive than Sweden's Chello (both cable modem products). These three products are the only residential products with a downstream speed greater than 768kbps to be priced lower than the OfTel average. Whilst the Jetstream-based 2000kbps products are dearer than the OfTel average, they compare very favourably with the Australian products (Telstra's 1GB product is 2% dearer than Telecom's), despite the fact that the Australian products offer only between 10% and 25% of the downstream speed.

25. Moreover, when comparing products of similar speed, the New Zealand ADSL product is between 4% and 15% less expensive than the lowest priced Australian products of similar quality, although at 1500kbps these offer only 75% of the downstream speed of the Telecom-based ADSL product. The lowest posted Telstra residential price for this product quality has a minimum monthly purchase of 5GB, and is the same price as the most expensive New Zealand offering, Telecom's Home500, based upon a monthly purchase of 500MB and 700 additional megabytes purchased at a premium. Thus, when comparing products of similar quality, the New Zealand products are very price competitive with the OfTel offerings, and priced considerably lower than comparable Australian products.

Figure 2: Modified OfTel Benchmarking Residential 'Entry Level' 1.2GB/month all speeds

Country	ISP	Package	DSL/ cable modem	fixed monthly charge	monthly usage charge	total monthly charges	down stream speed	upstream speed
UK	NTL	128k Package	CM	16	0	16	128	56

Country	ISP	Package	DSL/ cable modem	fixed monthly charge	monthly usage charge	total monthly charges	down stream speed	upstream speed
Sweden	Tele2	Tele2Internet Kabel	CM	18	0	18	512	64
France	Free	Free Haut Debit - Unlimited ADSL	DSL	21	0	21	512	128
Sweden	Telia	High speed internet IC 500	CM	22	0	22	512	128
Sweden	Spray	ADSL Broadband	DSL	23	0	23	512	400
Sweden	Bostream	istream	DSL	23	0	23	500	500
UK	Tiscali - UK	Tiscali Broadband	DSL	23	0	23	256	256
France	AOL.fr	Forfait Decouverte	CM	23	0	23	128	64
Sweden	UPC	Chello	CM	24	0	24	640	256
UK	Pipex	Pipex Xtreme Solo2Go	DSL	24	0	24	512	256
Germany	PrimaCom	_easy	CM	24	0	24	256	128
France	Wanadoo	Wanadoo ADSL Xtense128K	DSL	24	0	24	128	64
Germany	PrimaCom	_start	CM	13	10	24	128	64
Sweden	Tiscali - Se	Tiscali ADSL Bredband	DSL	25	0	25	512	400
France	AOL.fr	Forfait AOL ADSL 128	DSL	25	0	25	128	128
France	Noos	Noosnet Forfait Presto	CM	25	0	25	128	64
France	Nerim	Pack Nerim Light	DSL	25	0	25	128	64
France	Tiscali.fr	Pack ADSL Original was Pack ADSL Tiscali Liberty	DSL	25	0	25	128	64
Sweden	Telia	High speed internet IC 1000	CM	26	0	26	1000	200
UK	NTL	600k Package was 512 Package	CM	26	0	26	600	256
UK	Telewest	Blueyonder Broadband Internet	CM	26	0	26	512	128
France	Club Internet	Le Haut Debit 128 without modem	DSL	26	0	26	128	64
France	Club Internet	Pack Modem Haut Debit Le Haut Debit 128	DSL	26	0	26	128	64
NZ	ihug	Ultrafast 2000	1-way Satellite	27	0	27	1000	56
NZ	Paradise	Jetstart	DSL	27	0	27	128	128
Germany	Tiscali - de	Tiscali DSL time1000	DSL	25	2	27	768	128
Germany	T-Online	T-Online DSL 1000 MB	DSL	25	2	27	768	128
Sweden	Tele2	Tele2 ADSL	DSL	27	0	27	512	512
UK	Pipex	Pipex Xtreme Solo	DSL	27	0	27	512	256
Sweden	UPC	Chello Plus	CM	28	0	28	1024	348
Sweden	Telenordia	Telenordia ADSL Bredband	DSL	28	0	28	512	512
Sweden	Telia	Telia ADSL Broadband	DSL	28	0	28	512	512
UK	Virgin	Broadband	DSL	28	0	28	512	256
NZ	ihug	Ultrafast 1000	1-way Satellite	20	9	29	1000	56
Germany	Tiscali - de	Tiscali DSL time2000	DSL	29	0	29	768	128
Germany	Tiscali - de	Tiscali DSL 500	DSL	21	8	29	768	128
UK	Tiscali - UK	Tiscali Broadband Plus	DSL	29	0	29	512	512
UK	Demon	Express Solo	DSL	29	0	29	512	256
UK	Demon	Express Total	DSL	29	0	29	512	256
UK	Demon	Express Total for Mac	DSL	29	0	29	512	256
NZ	Xtra	Jetstream Starter 5000	DSL	29	0	29	128	128
Oftel	Average					29.1		
Germany	NGI	NGI T- DSL Flat	DSL	30	0	30	768	128
UK	AOL.uk	AOL Broadband	DSL	30	0	30	512	256
US	Verizon	Online DSL Package Annual plan	DSL	31	0	31	768	128
France	Nerim	Pack Nerim Base	DSL	31	0	31	512	128
UK	BT	BT Broadband	DSL	31	0	31	512	256
US	SBC	Basic Package	DSL	31	0	31	384	128
US	Covad	TeleSurfer Link	DSL	31	0	31	384	128
Australia	OzEmail	OzESpeed Plus	DSL	31	0	31	256	64
Australia	Optus	Lite 550MB	CM	31	speed	31		
US	Comcast	High Speed Internet Service	CM	32	0	32	1500	128
France	9 Telecom	9Online ADSL 1024 was 9Online ADSL512	DSL	32	0	32	1024	256
France	Noos	Noosnet Forfait Rapido	CM	32	0	32	512	128
France	Wanadoo	Forfait 512 was CableWanadoo	CM	32	0	32	512	128
UK	Freeserve	Freeserve Broadband	DSL	32	0	32	512	256
UK	Freeserve	Connection-only pack	DSL	32	0	32	512	256
Germany	Tiscali - de	Tiscali DSL Flat	DSL	33	0	33	768	128
Germany	Arcor	Arcor DSL - Flatrate 768	DSL	33	0	33	768	128
France	AOL.fr	Forfait Performance	CM	33	0	33	512	128
UK	Zen Internet	ZenADSL Home	DSL	33	0	33	512	256
UK	Onetel	Unplugged 500U	DSL	33	0	33	512	256
Australia	All Other	Unlimited 256 Min	DSL	33	0	33	512	128

Country	ISP	Package	DSL/ cable modem	fixed monthly charge	monthly usage charge	total monthly charges	down stream speed	upstream speed
	Provs							
Australia	BigBlue	No Limits	DSL	33	0	33	256	64
Australia	OzEmail	OzEHI-Speed	DSL	34	0	34	512	128
UK	BT	Home 500 Plug & Go	DSL	34	0	34	512	256
UK	BT	Home 500 Plug & Go line only	DSL	34	0	34	512	256
Australia	All Other Provs	1.2GB 256 metered Min	DSL	24	11	34	256	64
NZ	Paradise	High Speed Starter	CM	34	0	34	256	128
Sweden	Bostream	xstream used to be ADSL private	DSL	35	0	35	2500	768
US	Road Runner	Residential Service	CM	35	0	35	1500	300
US	Earthlink	EarthLink Cable Internet powered by AT&T	CM	35	0	35	1500	256
US	AT&T	Broadband Cable Internet (Customers with AT&T	CM	35	0	35	1500	250
Germany	PrimaCom	_pro	CM	35	0	35	1024	256
Germany	AOL.de	AOL High Speed DSL Flat (12months)	DSL	35	0	35	768	128
France	9 Telecom	Pack 9Online ADSL 512	DSL	35	0	35	512	128
France	Wanadoo	Wanadoo ADSL Xtense512K	DSL	35	0	35	512	128
UK	Pipex	Pipex Xtreme Home Office Standard Self Install	DSL	35	0	35	512	256
US	Qwest	MSN Broadband Powered by Qwest 256	DSL	35	0	35	256	256
France	AOL.fr	Forfait AOL ADSL 512 was AOL ADSL	DSL	36	0	36	512	128
France	Tiscali.fr	Pack ADSL Optimal	DSL	36	0	36	512	128
France	Club Internet	Le Haut Debit 512 without modem	DSL	36	0	36	512	128
Australia	Optus	Standard 3GB	CM	38	0	38		
Australia	WebOne	AL200	DSL	40	0	40	256	64
Australia	All Other Provs	1.2GB 256 metered Avge	DSL	30	10	40	256	64
Australia	All Other Provs	1.2GB 512 metered Min	DSL	29	13	42	512	128
Australia	All Other Provs	Unlimited 512 Min	DSL	43	0	43	512	128
Australia	WebOne	AL100	DSL	33	11	43	256	64
Australia	All Other Provs	1.2GB 512 metered Avge	DSL	35	10	45	512	128
Australia	WebOne	AM100	DSL	35	11	46	512	128
Australia	All Other Provs	Unlimited 256 Avge	DSL	47	0	47	256	64
Australia	BigBlue	Mach512	DSL	34	14	48	512	128
NZ	ihug	Ultrastarter	1-way Satellite	16	31	47	128	56
Australia	WebOne	AM300	DSL	53	0	53	512	128
Australia	Telstra BigPond	3GB	DSL	54	0	54	512	128
NZ	Xtra	Jetstream Home1000	DSL	40	18	58	2000	128
Australia	Telstra BigPond	1GB	DSL	45	14	59	256	64
Australia	All Other Provs	1.2GB1500 metered Min	DSL	46	14	60	1500	256
Australia	OzEmail	OzESpeed	DSL	29	32	61	256	64
Australia	Telstra BigPond	Business Sat	1-way Satellite	37	25	62	400	56
Australia	WebOne	AF23	DSL	63	0	63	256	64
Australia	All Other Provs	1.2GB1500 metered Avge	DSL	59	10	69	1500	256
Australia	OzEmail	OzESpeed Special	DSL	24	51	74	256	64
Australia	WebOne	AL30	DSL	27	48	75	256	64
Australia	All Other Provs	Unlimited 512 Avge	DSL	76	0	76	512	128
Australia	BigBlue	Mach256	DSL	24	58	82	256	64
Australia	Telstra BigPond	500MB	DSL	37	54	90	256	64
NZ	Xtra	Jetstream Home500	DSL	31	63	94	2000	128
Australia	Telstra BigPond	5GB	DSL	94	0	94	1500	256
Australia	All Other Provs	Unlimited 1500 Avge	DSL	123	0	123	1500	256
Australia	Telstra BigPond	2 Way-Blast Off	2-way Satellite	70	64	133	256	256
Australia	Telstra BigPond	2 Way Standard	2-way Satellite	115	18	134	512	512

All prices are in UK£ PPP. New Zealand and Australian tariffs at July 2003, all others tariffs at February 2003

Country	ISP	Package	DSL/ cable modem	fixed monthly charge	monthly usage charge	total monthly charges	down stream speed	upstream speed
---------	-----	---------	------------------------	----------------------------	----------------------------	-----------------------------	-------------------------	-------------------

speed' indicates that charges are not made for consumption above the specified limit. Rather, when consumption above the limit occurs, speed is downgraded.

26. **Figure 3** shows the modified OfTel comparison based on the standard residential basket of 3GB/month with a minimum downstream speed of 257kbps.
27. This figure shows that the Australian and New Zealand products are above the OfTel average in this category. Once again, the ihug satellite products are the cheapest means of securing the required quantity of information in New Zealand.
28. Despite the unfavourable price comparison for the New Zealand ADSL product at 3GB usage, it is the second fastest residential product in the analysis after Sweden's Bostream (2500kbps), equal with the United States' Earthlink cable modem service. Logically, faster services are generally more expensive, with the cheaper Australian products being the 512kbps products, offering only 25% of the speed of Telecom's Jetstream. Telecom's product is still more expensive than most of the Australian 1500kbps services, which offer 75% of the downstream speed, but is 35% less expensive than the faster 6000kbps Australian product.

Figure 3: Modified OfTel Benchmarking: Residential 3GB/month >256kbps

Country	ISP	Package	DSL/ cable modem	fixed monthly charge	monthly usage charge	total monthly charges	down stream speed	upstream speed
Sweden	Tele2	Tele2Internet Kabel	CM	18	0	18	512	64
France	Free	Free Haut Debit - Unlimited ADSL	DSL	21	0	21	512	128
Sweden	Telia	High speed internet IC 500	CM	22	0	22	512	128
Sweden	Spray	ADSL Broadband	DSL	23	0	23	512	400
Sweden	Bostream	istream	DSL	23	0	23	500	500
Sweden	UPC	Chello	CM	24	0	24	640	256
UK	Pipex	Pipex Xtreme Solo2Go	DSL	24	0	24	512	256
Sweden	Tiscali - Se	Tiscali ADSL Bredband	DSL	25	0	25	512	400
Sweden	Telia	High speed internet IC 1000	CM	26	0	26	1000	200
UK	NTL	600k Package was 512 Package	CM	26	0	26	600	256
UK	Telewest	Blueyonder Broadband Internet	CM	26	0	26	512	128
UK	Pipex	Pipex Xtreme Solo	DSL	27	0	27	512	256
Sweden	Tele2	Tele2 ADSL	DSL	27	0	27	512	512
Sweden	UPC	Chello Plus	CM	28	0	28	1024	348
Sweden	Telenordia	Telenordia ADSL Bredband	DSL	28	0	28	512	512
Sweden	Telia	Telia ADSL Broadband	DSL	28	0	28	512	512
UK	Virgin	Broadband	DSL	28	0	28	512	256
UK	Demon	Express Solo	DSL	29	0	29	512	256
UK	Demon	Express Total	DSL	29	0	29	512	256
UK	Tiscali - UK	Tiscali Broadband Plus	DSL	29	0	29	512	512
UK	Demon	Express Total for Mac	DSL	29	0	29	512	256
Germany	NGI	NGI T- DSL Flat	DSL	30	0	30	768	128
UK	AOL.uk	AOL Broadband	DSL	30	0	30	512	256
US	Verizon	Online DSL Package Annual plan	DSL	31	0	31	768	128
UK	BT	BT Broadband	DSL	31	0	31	512	256
France	Nerim	Pack Nerim Base	DSL	31	0	31	512	128
US	SBC	Basic Package	DSL	31	0	31	384	128
US	Covad	TeleSurfer Link	DSL	31	0	31	384	128
US	Comcast	High Speed Internet Service	CM	32	0	32	1500	128
France	9 Telecom	9Online ADSL 1024	DSL	32	0	32	1024	256
France	Noosnet	Noosnet Forfait Rapido	CM	32	0	32	512	128
France	Wanadoo	Forfait 512 was CableWanadoo	CM	32	0	32	512	128
UK	Freeserve	Freeserve Broadband	DSL	32	0	32	512	256
UK	Freeserve	Connection-only pack	DSL	32	0	32	512	256
OfTel	Average			1		32.1		
Germany	Tiscali - de	Tiscali DSL Flat	DSL	33	0	33	768	128
Germany	Arcor	Arcor DSL - Flatrate 768	DSL	33	0	33	768	128
UK	Zen Internet	ZenADSL Home	DSL	33	0	33	512	256
UK	Onetel	Unplugged 500U	DSL	33	0	33	512	256
France	AOL.fr	Forfait Performance	CM	33	0	33	512	128
UK	BT	Home 500 Plug & Go	DSL	34	0	34	512	256

Country	ISP	Package	DSL/ cable modem	fixed monthly charge	monthly usage charge	total monthly charges	down stream speed	upstream speed
UK	BT	Home 500 Plug & Go line only	DSL	34	0	34	512	256
Sweden	Bostream	xstream used to be ADSL private	DSL	35	0	35	2500	768
US	Road Runner	Residential Service	CM	35	0	35	1500	300
US	AT&T	Broadband Cable Internet	CM	35	0	35	1500	250
US	Earthlink	EarthLink Cable Internet powered by AT&T	CM	35	0	35	1500	256
Germany	PrimaCom	_pro	CM	35	0	35	1024	256
Germany	AOL.de	AOL High Speed DSL Flat (12months)	DSL	35	0	35	768	128
UK	Pipex	Pipex Xtreme Home Office Standard - Self Install	DSL	35	0	35	512	256
France	9 Telecom	Pack 9Online ADSL 512	DSL	35	0	35	512	128
France	Wanadoo	Wanadoo ADSL Xtense512K	DSL	35	0	35	512	128
US	Earthlink	Earthlink Higspeed Internet	CM	36	0	36	2000	384
UK	NTL	1MB Package	CM	36	0	36	1000	512
Germany	T-Online	T-Online DSL 5000 MB	DSL	36	0	36	768	128
France	AOL.fr	Forfait AOL ADSL 512 was AOL ADSL	DSL	36	0	36	512	128
France	Tiscali.fr	Pack ADSL Optimal	DSL	36	0	36	512	128
France	Club Internet	Le Haut Debit 512 without modem	DSL	36	0	36	512	128
France	Club Internet	Pack Modem Haut Debit Le Haut Debit 512 with	DSL	36	0	36	512	128
US	MSN	MSN 8 Broadband was DSL	DSL	37	0	37	1500	768
UK	BT	Home 500 Engineer assisted	DSL	37	0	37	512	256
UK	AOL.uk	AOL Broadband Traveller	DSL	37	0	37	512	256
US	Covad	TeleSurfer Plus	DSL	38	0	38	1500	128
US	Verizon	Online DSL Package Monthly plan	DSL	38	0	38	768	128
Australia	All Other Provs	3GB 512 metered Min	DSL	38	0	38	512	128
Australia	WebOne	Blink 512	DSL	38	0	38	512	128
Australia	Optus	Standard 3GB	CM	38	speed	38		
US	SBC	Standard Package	DSL	39	0	39	768	128
France	Wanadoo	Wanadoo ADSL 128/512	DSL	39	0	39	500	128
Germany	Arcor	Arcor DSL Flatrate 1500	DSL	40	0	40	1500	256
US	AOL.us	High Speed DSL	DSL	40	0	40	1472	300
Germany	Tiscali - de	Tiscali DSL time2000	DSL	29	11	40	768	128
Germany	T-Online	T-Online DSL Flat	DSL	40	0	40	768	128
US	Speak Easy	Classic ADSL Plus 608/128	DSL	40	0	40	608	128
US	Qwest	MSN Broadband Powered by Qwest 640	DSL	42	0	42	640	256
Australia	All Other Provs	Unlimited 512 Min	DSL	43	0	43	512	128
Australia	OzEmail	OzEHi-Speed Plus	DSL	43	0	43	512	128
Australia	All Other Provs	3GB 512 metered Avge	DSL	45	0	45	512	128
Australia	Telstra BigPond	GigaSat	1-way Satellite	45	0	45	400	56
Australia	Telstra BigPond	3GB	DSL	54	0	54	512	128
Australia	All Other Provs	3GB 512 metered Max	DSL	58	0	58	512	128
Australia	All Other Provs	3GB1500 metered Max	DSL	60	0	60	1500	256
Australia	BigBlue	Mach1500	DSL	60	0	60	1500	256
Australia	OzEmail	OzETop Speed Plus	DSL	60	0	60	1500	256
Australia	All Other Provs	3GB1500 metered Avge	DSL	63	0	63	1500	256
NZ	ihug	Ultrafast 2000	1-way Satellite	27	45	72	1000	56
Australia	All Other Provs	Unlimited 1500 Min	DSL	72	0	72	1500	256
Australia	All Other Provs	3GB1500 metered Min	DSL	72	0	72	1500	256
Australia	WebOne	Blink1500	DSL	72	0	72	1500	256
Australia	All Other Provs	Unlimited 512 Avge	DSL	76	0	76	512	128
Australia	Telstra BigPond	5GB	CM	77	0	77	uncapped	
Australia	Telstra BigPond	5GB	DSL	94	0	94	1500	256
NZ	ihug	Ultrafast 1000	1-way Satellite	20	90	110	1000	56
Australia	OzEmail	OzETop Speed	DSL	48	67	115	1500	256
Australia	All Other Provs	Unlimited 1500 Avge	DSL	123	0	123	1500	256
Australia	OzEmail	OzEHi-Speed	DSL	34	101	135	512	128

Country	ISP	Package	DSL/ cable modem	fixed monthly charge	monthly usage charge	total monthly charges	down stream speed	upstream speed
Australia	BigBlue	Mach512	DSL	34	144	178	512	128
Australia	Telstra BigPond	Business Plus	2-way Satellite	216	0	216	512	512
NZ	Xtra	Jetstream Home1000	DSL	40	179	219	2000	128
NZ	Xtra	Jetstream Home500	DSL	31	224	255	2000	128
Australia	All Other Provs	Unlimited 1500 Max	DSL	286	0	286	1500	256
Australia	Telstra BigPond	2 Way Standard	2-way Satellite	115	182	297	512	512
Australia	All Other Provs	4GB 6000 Metered Avge	DSL	335	0	335	6000	640
Australia	All Other Provs	2GB 6000 Metered Avge	DSL	272	64	336	6000	640
Australia	All Other Provs	Unlimited 512 Max	DSL	336	0	336	512	128
Australia	Telstra BigPond	Business Sat	1-way Satellite	37	254	772	400	56

All prices are in UK£ PPP. New Zealand and Australian tariffs at July 2003, all others tariffs at February 2003
 speed' indicates that charges are not made for consumption above the specified limit. Rather, when consumption above the limit occurs, speed is downgraded.

Business Usage

29. As the standard business DSL offering in New Zealand is a 2000kbps service, and the alternative business technology platform in the market is the very fast Ethernet LAN service provided by CityLink, it is appropriate in the New Zealand context to compare only those services that provide Business-High capable products under the OfTel methodology – that is, downstream speeds in excess of 1000kbps.
30. **Figure 4** shows the results for this analysis based upon the OfTel usage of 16GB/month, for all providers of plans offering in excess of 10GB/month. The New Zealand products are at the higher end of this analysis, some 50% higher than the OfTel average, but comparable to prices for similar metered plans of comparable quality offered in Germany, the only OfTel country to offer metered business plans at this volume quality. The faster Australian products (6000kbps) are all significantly (35%) more expensive than the New Zealand products.
31. The Australian products are widely distributed throughout the table, showing very large levels of price dispersion. However, only products offered by DSL resellers are priced lower than the OfTel average. The cheapest Telstra product is above the average, but less expensive than the alternative provider's products (WebOne's TransACT fibre). Telstra's 10GB product is 35% less expensive than the New Zealand product of similar volume (Telecom's Jetstream 1000). However, the Telstra product is only 75% as fast as the New Zealand product. Australian metered products with 15GB caps are 3rd and 5th cheapest in the survey.

Figure 4: Modified OfTel Benchmarking: Business - High 16GB/month >1000kbps

Country	ISP	Package	DSL/ cable modem	fixed monthly charge	monthly usage charge	total monthly charges	down stream speed	upstream speed
Sweden	Bostream	istream.pro 1Mb	DSL	62	0	62	1000	1000
US	Qwest	DSL Pro, 1 + Qwest Basic Broadband	DSL	70	0	70	1000	1000
Australia	All Other Provs	1500 Metered 16G Min	DSL	73	0	73	1500	256
US	Speak Easy	NetCommuter ADSL 1.5/768	DSL	77	0	77	1500	768
Australia	All Other Provs	1500 Metered 16G Avge	DSL	97	0	97	1500	256
Sweden	Bostream	istream.pro 2Mb	DSL	106	0	106	2000	2000
Sweden	Telia	Telia Bredband Foretag -2.0 Mbits	DSL	117	0	117	2000	512
US	SBC	Expert S Package	DSL	120	0	120	4000	384
Australia	All Other Provs	1500 Metered 16G Max	DSL	120	0	120	1500	256
US	Qwest	DSL Pro, 4 Qwest Basic Broadband	DSL	122	0	122	4000	1000

Country	ISP	Package	DSL/ cable modem	fixed monthly charge	monthly usage charge	total monthly charges	down stream speed	upstream speed
US	Speak Easy	NetCommuter 1100K	DSL	162	0	162	1100	1100
US	Speak Easy	NetCommuter 1500K	DSL	179	0	179	1500	1500
US	XO	Business DSL 1.1Mbps	DSL	179	0	179	1100	1100
Australia	All Other Provs	1500 Metered 15G Avge	DSL	132	58	190	1500	256
Australia	WebOne	Blink Biz1500+	DSL	192	0	192	1500	256
US	Qwest	DSL Pro, 7 + Qwest Basic Broadband	DSL	196	0	196	7000	1000
US	Speak Easy	Multi-Office 1100K	DSL	196	0	196	1100	1100
Australia	All Other Provs	1500 Metered 15G Max	DSL	144	53	197	1500	256
US	Covad	Telespeed 1.1	DSL	205	0	205	1100	1100
Sweden	Bostream	xstream.pro 1Mb	DSL	207	0	207	1000	1000
Australia	All Other Provs	1500 Metered 15G Min	DSL	144	67	211	1500	256
US	XO	Business DSL 1.5Mbps	DSL	213	0	213	1500	1500
US	Speak Easy	Net Advantage 1100K	DSL	213	0	213	1100	1100
US	Speak Easy	Net Advantage Plus 1100K	DSL	226	0	226	1100	1100
US	AT&T	Multi User SDSL - 1100/1100	DSL	244	0	244	1100	1100
US	Earthlink	Earthlink Biz DSL 1.1 Mbps	DSL	245	0	245	1100	1100
US	XO	Business DSL 2.3Mbps	DSL	246	0	246	2300	2300
US	Speak Easy	Multi-Office 1500K	DSL	247	0	247	1500	1500
US	Covad	Telespeed 1.5	DSL	253	0	253	1500	1500
Australia	All Other Provs	1500 Metered 10G Min	DSL	111	144	255	1500	256
Sweden	Bostream	xstream.pro 2Mb	DSL	275	0	275	2000	2000
US	AT&T	Multi User SDSL - 1500/1500	DSL	278	0	278	1500	1500
US	Earthlink	Earthlink Biz DSL 1.5 Mbps	DSL	279	0	279	1500	1500
US	Speak Easy	Net Advantage 1500K	DSL	280	0	280	1500	1500
US	Speak Easy	Net Advantage Plus 1500K	DSL	280	0	280	1500	1500
Sweden	Bostream	jetstream.pro MB	DSL	282	0	282	2000	2000
Germany	Claranet	sDSL 1024	DSL	287	0	287	1024	1024
Sweden	Bostream	xstream.pro 3Mb	DSL	316	0	316	3000	3000
Sweden	Bostream	jetstream.pro 3Mb	DSL	316	0	316	3000	3000
Sweden	Bostream	xstream.pro 4Mb	DSL	349	0	349	4000	4000
Sweden	Bostream	jetstream.pro 4Mb	DSL	349	0	349	4000	4000
Germany	Broadnet	Mediascape Professional DSL Volume 1000K	DSL	133	236	368	1000	1000
Germany	Broadnet	Mediascape Professional DSL Volume 1500K	DSL	152	236	387	1500	1500
Germany	NGI	NGI SDSL 1000 Volume Rate	DSL	139	289	427	1000	1000
Germany	Broadnet	Mediascape Professional DSL Volume 2000K	DSL	204	236	440	2000	2000
Oftel	Average					440.9		
Germany	Broadnet	Mediascape Professional DSL Flatrate 1000K	DSL	443	0	443	1000	1000
Germany	NGI	NGI SDSL 1500 Volume Rate	DSL	160	289	448	1500	1500
Germany	Claranet	sDSL2300	DSL	449	0	449	2300	2300
Germany	NGI	NGI SDSL 1000 Flat Rate	DSL	450	0	450	1000	1000
Australia	Telstra BigPond	10GB	DSL	167	286	452	1500	256
Germany	Claranet	sDSL 2300 small business	DSL	300	162	462	2300	2300
US	Covad	TeleXtend 1500	DSL	470	0	470	1500	1500
Australia	All Other Provs	1500 Metered 20G Avge	DSL	479	0	479	1500	256
Australia	All Other Provs	1500 Unmetered Avge	DSL	479	0	479	1500	256
Germany	NGI	NGI DSL 2000 Volume Rate	DSL	197	289	486	2000	2000
Germany	WorldCom	Worldcom Internet DSL Office 1024	DSL	488	0	488	1024	1024
Australia	WebOne	TransACT TC1200	Fibre	265	250	515	2000	2000
Australia	WebOne	TransACT TC2400	Fibre	529	0	529	2000	2000
Germany	Broadnet	Mediascape Professional DSL Flatrate 1500K	DSL	538	0	538	1500	1500
Germany	NGI	NGI SDSL 1500 Flat Rate	DSL	546	0	546	1500	1500
Germany	QSC	DSL Business 10	DSL	232	320	553	1024	1024
Germany	Broadnet	Mediascape Professional DSL Flatrate 2000K	DSL	575	0	575	2000	2000
Australia	iPrimus	BizJet Lite 1500/256 10G	DSL	240	338	578	1500	256
Australia	All Other Provs	1500 Metered 10G Avge	DSL	232	347	579	1500	256
Germany	NGI	NGI SDSL 2000 Flat Rate	DSL	583	0	583	2000	2000
Germany	QSC	DSL Business 20	DSL	306	320	626	2300	2300
Germany	WorldCom	Worldcom Internet DSL Office 2300	DSL	635	0	635	2300	2300
NZ	Actrix	FibreByte10	Ethernet LAN	358	295	653	100000	100000

Country	ISP	Package	DSL/ cable modem	fixed monthly charge	monthly usage charge	total monthly charges	down stream speed	upstream speed
Germany	Arcor	Arcor Internet Business Flatrate 2300/2300	DSL	667	0	667	2300	2300
NZ	Xtra	Jetstream 10000	DSL	405	287	693	2000	128
NZ	ihug	ADSL Jetstream10000	DSL	406	295	702	2000	128
NZ	Xtra	Jetstream 20000	DSL	724	0	724	2000	128
Australia	WebOne	TransACT TC4500	Fibre	779	0	779	2000	2000
Germany	T-Online	T-Interconnect Basic 1.9Mbit/s	DSL	622	271	893	1920	1920
Australia	All Other Provs	1500 Metered 10G Max	DSL	632	289	921	1500	256
Germany	Arcor	Arcor Internet Business Flatrate 385/4000	DSL	955	0	955	4000	384
Australia	All Other Provs	6000 Unmetered Min	DSL	1068	0	1068	6000	640
Germany	Broadnet Mediascape	Professional DSL Flatrate 4000K	DSL	1105	0	1105	4000	4000
Germany	T-Online	Interconnect 3 - volume rate	DSL	639	470	1109	4096	384
Germany	T-Online	Interconnect 3 - flat rate	DSL	1117	0	1117	4096	384
Germany	NGI	NGI SDSL 4000 Flat Rate	DSL	1130	0	1130	4000	4000
Germany	T-Online	Interconnect 4 - volume rate	DSL	749	470	1219	6016	576
Australia	All Other Provs	1500 Unmetered Max	DSL	1442	0	1442	1500	256
Germany	T-Online	Interconnect 4 - flat rate	DSL	2148	0	2148	6016	576
Australia	All Other Provs	6000 Unmetered Avge	DSL	2761	0	2761	6000	640
Australia	All Other Provs	6000 Unmetered Max	DSL	5771	0	5771	6000	640

All prices are in UK£ PPP. New Zealand and Australian tariffs at July 2003, all others tariffs at February 2003

32. If the benchmarking is restricted to solely those products with a downstream speed equal to or greater than that of the standard New Zealand DSL offering, then **Figure 5** results. The New Zealand products rank in the middle of this table, again amongst comparable German products. It is noted however, that the New Zealand DSL products are approximately 25% more expensive than the Australian fibre products. Likewise, the New Zealand Ethernet LAN products are 20% dearer than the fibre products, though the speed offered is vastly superior. However, the New Zealand DSL products are all less expensive than all of the fast (6000kbps) Australian ADSL products.

Figure 5: Modified OfTel Benchmarking: Business – High; 16GB/month >2000kbps

Country	ISP	Package	DSL/ cable modem	fixed monthly charge	monthly usage charge	total monthly charges	down stream speed	upstream speed
Sweden	Bostream	istream.pro 2Mb	DSL	106	0	106	2000	2000
Sweden	Telia	Telia Bredband Foretag -2.0 Mbits	DSL	117	0	117	2000	512
US	SBC	Expert S Package	DSL	120	0	120	4000	384
US	Qwest	DSL Pro, 4 Qwest Basic Broadband	DSL	122	0	122	4000	1000
US	Qwest	DSL Pro, 7 + Qwest Basic Broadband	DSL	196	0	196	7000	1000
US	XO	Business DSL 2.3Mbps	DSL	246	0	246	2300	2300
Sweden	Bostream	xstream.pro 2Mb	DSL	275	0	275	2000	2000
Sweden	Bostream	jetstream.pro 2Mb	DSL	282	0	282	2000	2000
Sweden	Bostream	xstream.pro 3Mb	DSL	316	0	316	3000	3000
Sweden	Bostream	jetstream.pro 3Mb	DSL	316	0	316	3000	3000
Sweden	Bostream	xstream.pro 4Mb	DSL	349	0	349	4000	4000
Sweden	Bostream	jetstream.pro 4Mb	DSL	349	0	349	4000	4000
Germany	Broadnet	Mediascape Professional DSL Volume 2000K	DSL	204	236	440	2000	2000
Germany	Claranet	sDSL2300	DSL	449	0	449	2300	2300
Germany	Claranet	sDSL 2300 small business	DSL	300	162	462	2300	2300
Germany	NGI	NGI DSL 2000 Volume Rate	DSL	197	289	486	2000	2000
Australia	WebOne	TransACT TC1200	Fibre	265	250	515	2000	2000
Australia	WebOne	TransACT TC2400	Fibre	529	0	529	2000	2000
Germany	Broadnet	Mediascape Professional DSL Flatrate 2000K	DSL	575	0	575	2000	2000
Germany	NGI	NGI SDSL 2000 Flat Rate	DSL	583	0	583	2000	2000
Germany	QSC	DSL Business 20	DSL	306	320	626	2300	2300
Germany	WorldCom	Worldcom Internet DSL Office 2300	DSL	635	0	635	2300	2300
NZ	Actrix	FibreByte10	Ethernet LAN	358	295	653	100000	100000

Country	ISP	Package	DSL/ cable modem	fixed monthly charge	monthly usage charge	total monthly charges	down stream speed	upstream speed
Germany	Arcor	Arcor Internet Business Flatrate 2300/2300	DSL	667	0	667	2300	2300
NZ	Xtra	Jetstream 10000	DSL	405	287	693	2000	128
NZ	ihug	ADSL Jetstream10000	DSL	406	295	702	2000	128
NZ	Xtra	Jetstream 20000	DSL	724	0	724	2000	128
Australia	WebOne	TransACT TC4500	Fibre	779	0	779	2000	2000
Germany	Arcor	Arcor Internet Business Flatrate 385/4000	DSL	955	0	955	4000	384
Australia	All Other Provs	6000 Unmetered Min	DSL	1068	0	1068	6000	640
Germany	Broadnet Mediascape	Professional DSL Flatrate 4000K	DSL	1105	0	1105	4000	4000
Germany	T-Online	Interconnect 3 - volume rate	DSL	639	470	1109	4096	384
Germany	T-Online	Interconnect 3 - flat rate	DSL	1117	0	1117	4096	384
Germany	NGI	NGI SDSL 4000 Flat Rate	DSL	1130	0	1130	4000	4000
Germany	T-Online	Interconnect 4 - volume rate	DSL	749	470	1219	6016	576
Germany	T-Online	Interconnect 4 - flat rate	DSL	2148	0	2148	6016	576
Australia	All Other Provs	6000 Unmetered Avge	DSL	2761	0	2761	6000	640
Australia	All Other Provs	6000 Unmetered Max	DSL	5771	0	5771	6000	640

All prices are in UK£ PPP. New Zealand and Australian tariffs at July 2003, all others tariffs at February 2003

33. Benchmarking the OfTel consumption baskets of 6GB and 9GB for products with speeds in excess of 1000kbps in the OfTel, Australian and New Zealand markets results in **Figure 6** and **Figure 7** respectively.
34. In both cases, the New Zealand products are all priced below the sample averages, but there is wide variation in the prices. Whilst some Australian products offered by resellers are priced lower than the New Zealand ones, the higher speed products are all significantly more expensive at these volumes of usage. Only nine products of higher speed than the New Zealand ADSL products rank as less expensive in the 9GB table, and four in the 6GB. Furthermore, only a further seven of equal quality are cheaper at the 9GB usage and five at the 6GB usage level. The Ethernet LAN products are the cheapest New Zealand products at both usage levels, and offer far higher speeds than any of the other products benchmarked.
35. Thus, at these lower usage volumes, the New Zealand products are very competitively priced, given the speed of the products. Indeed, at these usage levels the products compare very favourably with similar speed products available in Sweden and Germany. Whilst a few Australian products are cheaper in these tables, the downstream speeds are slower. The higher-speed Australian products are generally higher-priced than the New Zealand ones at these levels of usage. The one exception is TransAct, which is priced very similarly to Actrix's Ethernet LAN product.

Figure 6: Modified OfTel Benchmarking: Business – High; 9GB/month >1000kbps

Country	ISP	Package	DSL/ cable modem	fixed monthly charge	monthly usage charge	total monthly charges	down stream speed	upstream speed
Sweden	Bostream	istream.pro 1MB	DSL	62	0	62	1000	1000
US	Qwest	DSL Pro, 1 + Qwest Basic Broadband	DSL	70	0	70	1000	1000
US	Speak Easy	NetCommuter ADSL 1.5/768	DSL	77	0	77	1500	768
Australia	All Other Provs	1500 Unmetered Min	DSL	99	0	99	1500	256
Sweden	Bostream	istream.pro 2Mb	DSL	106	0	106	2000	2000
Australia	All Other Provs	1500 Metered 10G Min	DSL	111	0	111	1500	256
Sweden	Telia	Telia Bredband Foretag -2.0 Mbits	DSL	117	0	117	2000	512
US	SBC	Expert S Package	DSL	120	0	120	4000	384
US	Qwest	DSL Pro, 4 Qwest Basic Broadband	DSL	122	0	122	4000	1000
Germany	Broadnet	Mediascape Professional DSL Volume 1000K	DSL	133	0	133	1000	1000
Germany	NGI	NGI SDSL 1000 Volume Rate	DSL	139	0	139	1000	1000

Country	ISP	Package	DSL/ cable modem	fixed monthly charge	monthly usage charge	total monthly charges	down stream speed	upstream speed
Germany	Broadnet	Mediascape Professional DSL Volume 1500K	DSL	152	0	152	1500	1500
Australia	All Other Provs	1500 Metered 5G Min	DSL	61	96	157	1500	256
Germany	NGI	NGI SDSL 1500 Volume Rate	DSL	160	0	160	1500	1500
US	Speak Easy	NetCommuter 1100K	DSL	162	0	162	1100	1100
Australia	Telstra BigPond	10GB	DSL	167	0	167	1500	256
US	Speak Easy	NetCommuter 1500K	DSL	179	0	179	1500	1500
US	XO	Business DSL 1.1Mbps	DSL	179	0	179	1100	1100
US	Qwest	DSL Pro, 7 + Qwest Basic Broadband	DSL	196	0	196	7000	1000
US	Speak Easy	Multi-Office 1100K	DSL	196	0	196	1100	1100
Germany	NGI	NGI DSL 2000 Volume Rate	DSL	197	0	197	2000	2000
Germany	Broadnet	Mediascape Professional DSL Volume 2000K	DSL	204	0	204	2000	2000
US	Covad	Telespeed 1.1	DSL	205	0	205	1100	1100
Sweden	Bostream	xstream.pro 1MB	DSL	207	0	207	1000	1000
US	XO	Business DSL 1.5Mbps	DSL	213	0	213	1500	1500
US	Speak Easy	Net Advantage 1100K	DSL	213	0	213	1100	1100
US	Speak Easy	Net Advantage Plus 1100K	DSL	226	0	226	1100	1100
Australia	All Other Provs	1500 Metered 10G Avge	DSL	232	0	232	1500	256
Australia	iPrimus	BizJet Lite 1500/256 10G	DSL	240	0	240	1500	256
US	AT&T	Multi User SDSL - 1100/1100	DSL	244	0	244	1100	1100
US	Earthlink	Earthlink Biz DSL 1.1 Mbps	DSL	245	0	245	1100	1100
US	XO	Business DSL 2.3Mbps	DSL	246	0	246	2300	2300
US	Speak Easy	Multi-Office 1500K	DSL	247	0	247	1500	1500
US	Covad	Telespeed 1.5	DSL	253	0	253	1500	1500
Sweden	Bostream	xstream.pro 2Mb	DSL	275	0	275	2000	2000
US	AT&T	Multi User SDSL - 1500/1500	DSL	278	0	278	1500	1500
US	Earthlink	Earthlink Biz DSL 1.5 Mbps	DSL	279	0	279	1500	1500
US	Speak Easy	Net Advantage 1500K	DSL	280	0	280	1500	1500
US	Speak Easy	Net Advantage Plus 1500K	DSL	280	0	280	1500	1500
Sweden	Bostream	jetstream.pro 2Mb	DSL	282	0	282	2000	2000
Germany	Claranet	sDSL 1024	DSL	287	0	287	1024	1024
Germany	Claranet	sDSL 2300 small business	DSL	300	0	300	2300	2300
Germany	QSC	DSL Business 20	DSL	306	0	306	2300	2300
Sweden	Bostream	xstream.pro 3Mb	DSL	316	0	316	3000	3000
Sweden	Bostream	jetstream.pro 3Mb	DSL	316	0	316	3000	3000
Australia	Telstra BigPond	5GB	DSL	94	229	323	1500	256
Australia	Optus	Optus 5	DSL	94	231	325	1500	256
Australia	WebOne	TransACT TC600	Fibre	144	188	331	2000	2000
NZ	Actrix	FibreLite 5	Ethernet LAN	151	197	347	10000	10000
Sweden	Bostream	xstream.pro 4Mb	DSL	349	0	349	4000	4000
Sweden	Bostream	jetstream.pro 4Mb	DSL	349	0	349	4000	4000
NZ	Actrix	FibreByte10	Ethernet LAN	358	0	358	100000	100000
Australia	iPrimus	BizJet Lite 1500/256 5G	DSL	132	240	373	1500	256
NZ	Xtra	Jetstream 10000	DSL	405	0	405	2000	128
NZ	ihug	ADSL Jetstream10000	DSL	406	0	406	2000	128
Australia	All Other Provs	1500 Metered 5G Avge	DSL	181	231	412	1500	256
NZ	Actrix	FibreByte5	Ethernet LAN	206	215	421	100000	100000
NZ	Xtra	Jetstream 5000	DSL	213	224	437	2000	128
Germany	Broadnet	Mediascape Professional DSL Flatrate 1000K	DSL	443	0	443	1000	1000
NZ	ihug	ADSL Jetstream5000	DSL	214	233	447	2000	128
Germany	Claranet	sDSL2300	DSL	449	0	449	2300	2300
Germany	NGI	NGI SDSL 1000 Flat Rate	DSL	450	0	450	1000	1000
US	Covad	TeleXtend 1500	DSL	470	0	470	1500	1500
Australia	All Other Provs	1500 Unmetered Avge	DSL	479	0	479	1500	256
Germany	WorldCom	Worldcom Internet DSL Office 1024	DSL	488	0	488	1024	1024
Sample		Average		494				
Germany	Broadnet	Mediascape Professional DSL Flatrate 1500K	DSL	538	0	538	1500	1500
Germany	NGI	NGI SDSL 1500 Flat Rate	DSL	546	0	546	1500	1500
Germany	QSC	DSL Business 10	DSL	232	0	553	1024	1024
Germany	Broadnet	Mediascape Professional DSL Flatrate 2000K	DSL	575	0	575	2000	2000

Country	ISP	Package	DSL/ cable modem	fixed monthly charge	monthly usage charge	total monthly charges	down stream speed	upstream speed
Germany	NGI	NGI SDSL 2000 Flat Rate	DSL	583	0	583	2000	2000
Germany	T-Online	T-Interconnect Basic 1.9Mbit/s	DSL	622	0	622	1920	1920
Australia	All Other Provs	1500 Metered 10G Max	DSL	632	0	632	1500	256
Germany	WorldCom	Worldcom Internet DSL Office 2300	DSL	635	0	635	2300	2300
Germany	T-Online	Interconnect 3 - volume rate	DSL	639	0	639	4096	384
Australia	All Other Provs	1500 Metered 5G Max	DSL	474	192	666	1500	256
Germany	Arcor	Arcor Internet Business Flatrate 2300/2300	DSL	667	0	667	2300	2300
Australia	All Other Provs	6000 Metered 5G Avge	DSL	445	274	719	6000	640
Australia	All Other Provs	6000 Metered 5G Avge	DSL	445	274	719	6000	640
Germany	T-Online	Interconnect 4 - volume rate	DSL	749	0	749	6016	576
Germany	Arcor	Arcor Internet Business Flatrate 385/4000	DSL	955	0	955	4000	384
Australia	All Other Provs	6000 Unmetered Min	DSL	1068	0	1068	6000	640
Germany	Broadnet	Mediascape Professional DSL Flatrate 4000K	DSL	1105	0	1105	4000	4000
Germany	T-Online	Interconnect 3 - flat rate	DSL	1117	0	1117	4096	384
Germany	NGI	NGI SDSL 4000 Flat Rate	DSL	1130	0	1130	4000	4000
Australia	All Other Provs	1500 Unmetered Max	DSL	1442	0	1442	1500	256
Germany	T-Online	Interconnect 4 - flat rate	DSL	2148	0	2148	6016	576
Australia	All Other Provs	6000 Unmetered Avge	DSL	2761	0	2761	6000	640
Australia	All Other Provs	6000 Unmetered Max	DSL	5771	0	5771	6000	640

All prices are in UK£ PPP. New Zealand and Australian tariffs at July 2003, all others tariffs at February 2003

Figure 7: Modified OfTel Benchmarking: Business – High; 6GB/month >1000kbps

Country	ISP	Package	DSL/ cable modem	fixed monthly charge	monthly usage charge	total monthly charges	down stream speed	upstream speed
Sweden	Bostream	istream.pro 1MB	DSL	62	0	62	1000	1000
US	Qwest	DSL Pro, 1 + Qwest Basic Broadband	DSL	70	0	70	1000	1000
US	Speak Easy	NetCommuter ADSL 1.5/768	DSL	77	0	77	1500	768
Australia	All Other Provs	1500 Metered 5G Min	DSL	61	24	85	1500	256
Australia	All Other Provs	1500 Unmetered Min	DSL	99	0	99	1500	256
Sweden	Bostream	istream.pro 2Mb	DSL	106	0	106	2000	2000
Australia	All Other Provs	1500 Metered 10G Min	DSL	111	0	111	1500	256
Sweden	Telia	Telia Bredband Foretag -2.0 Mbits	DSL	117	0	117	2000	512
US	SBC	Expert S Package	DSL	120	0	120	4000	384
US	Qwest	DSL Pro, 4 Qwest Basic Broadband	DSL	122	0	122	4000	1000
Germany	Broadnet	Mediascape Professional DSL Volume 1000K	DSL	133	0	133	1000	1000
Germany	NGI	NGI SDSL 1000 Volume Rate	DSL	139	0	139	1000	1000
Australia	WebOne	TransACT TC600	Fibre	144	0	144	2000	2000
Australia	Optus	Optus 5	DSL	94	58	152	1500	256
Australia	Telstra BigPond	5GB	DSL	94	57	152	1500	256
Germany	Broadnet	Mediascape Professional DSL Volume 1500K	DSL	152	0	152	1500	1500
Germany	NGI	NGI SDSL 1500 Volume Rate	DSL	160	0	160	1500	1500
US	Speak Easy	NetCommuter 1100K	DSL	162	0	162	1100	1100
Australia	Telstra BigPond	10GB	DSL	167	0	167	1500	256
US	Speak Easy	NetCommuter 1500K	DSL	179	0	179	1500	1500
US	XO	Business DSL 1.1Mbps	DSL	179	0	179	1100	1100
Australia	iPrimus	BizJet Lite 1500/256 5G	DSL	132	60	192	1500	256
US	Qwest	DSL Pro, 7 + Qwest Basic Broadband	DSL	196	0	196	7000	1000
US	Speak Easy	Multi-Office 1100K	DSL	196	0	196	1100	1100
Germany	NGI	NGI DSL 2000 Volume Rate	DSL	197	0	197	2000	2000
NZ	Actrix	FibreLite 5	Ethernet LAN	151	49	200	10000	10000
Germany	Broadnet	Mediascape Professional DSL Volume 2000K	DSL	204	0	204	2000	2000
US	Covad	Telespeed 1.1	DSL	205	0	205	1100	1100

Country	ISP	Package	DSL/ cable modem	fixed monthly charge	monthly usage charge	total monthly charges	down stream speed	upstream speed
Sweden	Bostream	xstream.pro 1Mb	DSL	207	0	207	1000	1000
Australia	WebOne	TransACT TC400	Fibre	87	125	212	2000	2000
US	XO	Business DSL 1.5Mbps	DSL	213	0	213	1500	1500
US	Speak Easy	Net Advantage 1100K	DSL	213	0	213	1100	1100
US	Speak Easy	Net Advantage Plus 1100K	DSL	226	0	226	1100	1100
Australia	All Other Provs	1500 Metered 3G Min	DSL	72	159	231	1500	256
Australia	All Other Provs	1500 Metered 10G Avge	DSL	232	0	232	1500	256
Germany	QSC	DSL Business 10	DSL	232	0	232	1024	1024
Australia	All Other Provs	1500 Metered 5G Avge	DSL	181	58	239	1500	256
Australia	iPrimus	BizJet Lite 1500/256 10G	DSL	240	0	240	1500	256
US	AT&T	Multi User SDSL - 1100/1100	DSL	244	0	244	1100	1100
US	Earthlink	Earthlink Biz DSL 1.1 Mbps	DSL	245	0	245	1100	1100
US	XO	Business DSL 2.3Mbps	DSL	246	0	246	2300	2300
US	Speak Easy	Multi-Office 1500K	DSL	247	0	247	1500	1500
US	Covad	Telespeed 1.5	DSL	253	0	253	1500	1500
NZ	Actrix	FibreByte5	Ethernet LAN	206	54	260	100000	100000
NZ	Xtra	Jetstream 5000	DSL	213	56	269	2000	128
NZ	ihug	ADSL Jetstream5000	DSL	214	58	272	2000	128
Sweden	Bostream	xstream.pro 2MB	DSL	275	0	275	2000	2000
US	AT&T	Multi User SDSL - 1500/1500	DSL	278	0	278	1500	1500
Australia	iPrimus	BizJet Lite 1500/256 3G	DSL	84	195	279	1500	256
US	Earthlink	Earthlink Biz DSL 1.5 Mbps	DSL	279	0	279	1500	1500
US	Speak Easy	Net Advantage 1500K	DSL	280	0	280	1500	1500
US	Speak Easy	Net Advantage Plus 1500K	DSL	280	0	280	1500	1500
Sweden	Bostream	jetstream.pro 2Mb	DSL	282	0	282	2000	2000
Germany	Claranet	sDSL 1024	DSL	287	0	287	1024	1024
Germany	Claranet	sDSL 2300 small business	DSL	300	0	300	2300	2300
Australia	All Other Provs	1500 Metered 3G Avge	DSL	130	174	304	1500	256
Germany	QSC	DSL Business 20	DSL	306	0	306	2300	2300
Sweden	Bostream	xstream.pro 3Mb	DSL	316	0	316	3000	3000
Sweden	Bostream	jetstream.pro 3Mb	DSL	316	0	316	3000	3000
NZ	ihug	ADSL Jetstream3000	DSL	140	188	328	2000	128
NZ	Xtra	Jetstream 3000	DSL	139	192	331	2000	128
Sweden	Bostream	xstream.pro 4Mb	DSL	349	0	349	4000	4000
Sweden	Bostream	jetstream.pro 4Mb	DSL	349	0	349	4000	4000
NZ	Actrix	FibreByte10	Ethernet LAN	358	0	358	100000	100000
NZ	Xtra	Jetstream 10000	DSL	405	0	405	2000	128
NZ	ihug	ADSL Jetstream10000	DSL	406	0	406	2000	128
Germany	Broadnet	Mediascape Professional DSL Flatrate 1000K	DSL	443	0	443	1000	1000
Germany	Claranet	sDSL2300	DSL	449	0	449	2300	2300
Germany	NGI	NGI SDSL 1000 Flat Rate	DSL	450	0	450	1000	1000
Sample		Average				459		
US	Covad	TeleXtend 1500	DSL	470	0	470	1500	1500
Germany	WorldCom	Worldcom Internet DSL Office 1024	DSL	488	0	488	1024	1024
Australia	All Other Provs	6000 Metered 5G Avge	DSL	445	68	514	6000	640
Australia	All Other Provs	1500 Metered 5G Max	DSL	474	48	522	1500	256
Australia	All Other Provs	1500 Metered 3G Max	DSL	382	144	527	1500	256
Germany	Broadnet	Mediascape Professional DSL Flatrate 1500K	DSL	538	0	538	1500	1500
Germany	NGI	NGI SDSL 1500 Flat Rate	DSL	546	0	546	1500	1500
Germany	Broadnet	Mediascape Professional DSL Flatrate 2000K	DSL	575	0	575	2000	2000
Germany	NGI	NGI SDSL 2000 Flat Rate	DSL	583	0	583	2000	2000
Germany	T-Online	T-Interconnect Basic 1.92Mbit/s	DSL	622	0	622	1920	1920
Australia	All Other Provs	1500 Metered 10G Max	DSL	632	0	632	1500	256
Germany	WorldCom	Worldcom Internet DSL Office 2300	DSL	635	0	635	2300	2300
Germany	T-Online	Interconnect 3 - volume rate	DSL	639	0	639	4096	384
Germany	Arcor	Arcor Internet Business Flatrate 2300/2300	DSL	667	0	667	2300	2300
Germany	T-Online	Interconnect 4 - volume rate	DSL	749	0	749	6016	576
Germany	Arcor	Arcor Internet Business Flatrate 385/4000	DSL	955	0	955	4000	384
Australia	OzEmail	Ozepro 1500 4000MB	DSL	144	866	1010	1500	256

Country	ISP	Package	DSL/ cable modem	fixed monthly charge	monthly usage charge	total monthly charges	down stream speed	upstream speed
Australia	All Other Provs	6000 Unmetered Min	DSL	1068	0	1068	6000	640
Germany	Broadnet	Mediascape Professional DSL Flatrate 4000K	DSL	1105	0	1105	4000	4000
Germany	T-Online	Interconnect 3 - flat rate	DSL	1117	0	1117	4096	384
Germany	NGI	NGI SDSL 4000 Flat Rate	DSL	1130	0	1130	4000	4000
Australia	All Other Provs	1500 Unmetered Max	DSL	1442	0	1442	1500	256
Germany	T-Online	Interconnect 4 - flat rate	DSL	2148	0	2148	6016	576
Australia	All Other Provs	6000 Unmetered Avg	DSL	2761	0	2761	6000	640
Australia	All Other Provs	6000 Unmetered Max	DSL	5771	0	5771	6000	640

All prices are in UK£ PPP. New Zealand and Australian tariffs at July 2003, all others tariffs at February 2003

Extended OfTel Benchmarking: Step Two

36. The extended OfTel benchmarking above reveals that both the Australian and New Zealand residential and business products are very competitive with European and United States products at low levels of usage, but are generally less competitive as usage levels rise. This is principally because of the predominant pricing method of fixed prices up to specific caps, with per megabyte charges for usage over this level. This is in contrast to the majority of European and United States products (Germany is the exception) where pricing is generally on the basis of unlimited consumption of a product at a given speed. One factor that could account for this charging practice is the higher costs associated with transporting traffic from the United States, as identified above.⁶
37. If per-megabyte charges are significant, it is feasible that average usage in Australia and New Zealand is not as high as that used in the OfTel baskets. Howell (2003) finds that the average consumption of the low-speed high-cap (5000MB/month) residential product is 1500MB/month with a median consumption of 700MB/month.⁷ At March 2003, 40% of ADSL accounts in New Zealand were 128kbps accounts. These accounts are only available to residential consumers. Furthermore, the median consumption of residential 2000kbps products was 300MB/month for the product with a 500MB cap and 700MB/month for the 1000MB cap product. Hence, average residential consumption in New Zealand is considerably lower than the 1.2GB and 3GB baskets used in the OfTel survey. Whilst business use is not known with certainty, it appears that it is also low. Although business accounts comprise nearly 50% of ADSL accounts, anecdotal evidence from an ISP suggests that average data volumes consumed during business hours are lower than in non-business hours, when residential use dominates.⁸
38. Whilst a comprehensive benchmarking exercise would entail pricing an average New Zealand basket against products from other countries, the nature of input costs has been identified as a reason why higher costs are evidenced in Australian and New Zealand products. The predominance of flat-rate pricing in countries other than Australia and New Zealand means that pricing low levels of usage is problematic. A more useful analysis may be obtained by comparing prices in just the two countries that face the additional and significant data charges. Hence, it has been decided to limit the benchmarking of New Zealand baskets to the Australian and New Zealand markets. **Figure 8, Figure 9, Figure 10 and Figure 11** report Australian and New Zealand residential products of all speeds benchmarked at usage levels of 500MB, 700MB, 1000MB and 1500MB respectively. Business products were not benchmarked as it was

⁶ It is also noted that in the United States, ISPs are contemplating the introduction of capped products in an endeavour to encourage increased broadband uptake by low users who have so far refrained from purchasing broadband due to the extent that flat rate pricing subsidises many users and penalises light users: Telephony, *Pirate's Cap*, June 17 2002, p 22.

⁷ Howell, Bronwyn, 2003. *Building Best Practice Broadband for New Zealand's Future*, Wellington: ISCR Research Paper. <http://www.iscr.org.nz>.

⁸ Howell, Bronwyn; and Mark Obren. 2003. *Telecommunications in New Zealand: 1993-2003*. Wellington: ISCR <http://www.iscr.org.nz>

unclear what constituted appropriate New Zealand business baskets. However, it is recommended that this exercise be repeated when a realistic business basket can be defined.

39. Whilst New Zealand products are scattered throughout all of these tables, clear patterns emerge. At all volumes of usage, New Zealand products are amongst the cheapest, with the higher cap 128kbps products becoming increasingly more economic as usage increases. ihug satellite services are cheapest in all cases. Hence for the typical levels of usage in New Zealand, broadband Internet access is very competitively priced compared to Australia. The caveat to this is, though, that the faster ADSL products with low caps become less competitive after 1000MB.
40. Given that satellite is the only technology to have 100% coverage in New Zealand and despite its current small share of the broadband market, there is evidence that the prices for this technology are able to provide significant competitive pressure upon prices for telecommunications-based broadband products.

Figure 8. Australia and New Zealand – 500MB/month all speeds

Country	ISP	Package	DSL/ cable modem	fixed monthly charge	monthly usage charge	total monthly charges	down stream speed	upstream speed
NZ	ihug	Ultrafast 1000	1-way Satellite	20	0	20	128	56
Australia	OzEmail	OzESpeed Special	DSL	24	0	24	256	64
Australia	All Other Provs	1GB 256 metered Min	DSL	24	0	24	256	64
NZ	ihug	Ultrafast 2000	1-way Satellite	27	0	27	1000	56
NZ	Paradise	Jetstart	DSL	27	0	27	128	128
Australia	All Other Provs	0.7GB 512 metered Min	DSL	29	0	29	512	128
Australia	All Other Provs	1GB 512 metered Min	DSL	29	0	29	512	128
Australia	OzEmail	OzESpeed	DSL	29	0	29	256	64
NZ	Xtra	Jetstream Starter 5000	DSL	29	0	29	128	128
Australia	All Other Provs	1GB 256 metered Avge	DSL	30	0	30	256	64
NZ	Xtra	Jetstream Home500	DSL	31	0	31	2000	128
Australia	BigBlue	Mach256	DSL	24	7	31	256	64
Australia	OzEmail	OzESpeed Plus	DSL	31	0	31	256	64
Australia	Optus	Lite 550MB	CM	31	speed	31		
Australia	WebOne	AL100	DSL	33	0	33	256	64
Australia	All Other Provs	Unlimited 256 Min	DSL	33	0	33	512	128
Australia	BigBlue	Mach512	DSL	34	0	34	512	128
Australia	OzEmail	OzEHi-Speed	DSL	34	0	34	512	128
NZ	Paradise	High Speed Starter	CM	34	0	34	256	128
Australia	WebOne	AM100	DSL	35	0	35	512	128
Australia	All Other Provs	1GB 512 metered Avge	DSL	35	0	35	512	128
Australia	All Other Provs	0.7 256 metered Avge	DSL	25	10	35	256	64
Australia	Telstra BigPond	500MB	DSL	37	0	37	256	64
Australia	Telstra BigPond	Business Sat	1-way Satellite	37	0	37	400	56
Australia	WebOne	AL30	DSL	27	11	38	256	64
Australia	WebOne	Blink 512	DSL	38	0	38	512	128
Australia	Optus	Standard 3GB	CM	38	speed	38		
NZ	Xtra	Jetstream Home1000	DSL	40	0	40	2000	128
Australia	WebOne	AL200	DSL	40	0	40	256	64
Australia	All Other Provs	0.7GB 512 metered Avge	DSL	42	0	42	512	128
Australia	OzEmail	OzEHi-Speed Plus	DSL	43	0	43	512	128
Australia	All Other Provs	Unlimited 512 Min	DSL	43	0	43	512	128
Australia	Telstra BigPond	GigaSat	1-way Satellite	45	0	45	400	56

Country	ISP	Package	DSL/ cable modem	fixed monthly charge	monthly usage charge	total monthly charges	down stream speed	upstream speed
Australia	Telstra BigPond	1GB	DSL	45	0	45	256	64
Australia	All Other Provs	3GB 512 metered Avge	DSL	45	0	45	512	128
Australia	All Other Provs	Unlimited 256 Avge	DSL	47	0	47	256	64
Australia	WebOne	AM300	DSL	53	0	53	512	128
Australia	Telstra BigPond	3GB	DSL	54	0	54	512	128
Australia	All Other Provs	3GB 512 metered Max	DSL	58	0	58	512	128
Australia	BigBlue	Mach1500	DSL	60	0	60	1500	256
Australia	OzEmail	OzETop Speed Plus	DSL	60	0	60	1500	256
Australia	WebOne	AF23	DSL	63	0	63	256	64
Australia	All Other Provs	3GB1500 metered Avge	DSL	63	0	63	1500	256
Australia	WebOne	Blink1500	DSL	72	0	72	1500	256
Australia	All Other Provs	Unlimited 1500 Min	DSL	72	0	72	1500	256
Australia	All Other Provs	Unlimited 512 Avge	DSL	76	0	76	512	128
Australia	Telstra BigPond	5GB	CM	77	0	77	uncapped	
Australia	Telstra BigPond	5GB	DSL	94	0	94	1500	256
Australia	OzEmail	OzETop Speed	DSL	48	67	115	1500	256
Australia	Telstra BigPond	2 Way Standard	2-way Satellite	115	0	115	512	512
Australia	Telstra BigPond	Business Standard	2-way Satellite	115	0	115	512	512
Australia	All Other Provs	Unlimited 1500 Avge	DSL	123	0	123	1500	256
Australia	Telstra BigPond	Business Plus	2-way Satellite	216	0	216	512	512
Australia	Telstra BigPond	2 Way-Blast Off	2-way Satellite	70	18	232	256	256
NZ	ihug	Ultrastarter	1-way Satellite	16	0	239	1000	56
Australia	All Other Provs	2GB 6000 Metered Avge	DSL	272	0	272	6000	640
Australia	All Other Provs	Unlimited 1500 Max	DSL	286	0	286	1500	256
Australia	All Other Provs	Unlimited 512 Max	DSL	336	0	336	512	128

Figure 9. Australia and New Zealand – 700MB/month all speeds

Country	ISP	Package	DSL/ cable modem	fixed monthly charge	monthly usage charge	total monthly charges	downstre am speed	upstream speed
NZ	ihug	Ultrafast 1000	1-way Satellite	20	0	20	128	56
Australia	All Other Provs	1GB 256 metered Min	DSL	24	0	24	256	64
NZ	ihug	Ultrafast 2000	1-way Satellite	27	0	27	1000	56
NZ	Paradise	Jetstart	DSL	27	0	27	128	128
Australia	All Other Provs	1GB 512 metered Min	DSL	29	0	29	512	128
Australia	OzEmail	OzESpeed	DSL	29	0	29	256	64
NZ	Xtra	Jetstream Starter 5000	DSL	29	0	29	128	128
Australia	All Other Provs	1GB 256 metered Avge	DSL	30	0	30	256	64
Australia	OzEmail	OzESpeed Plus	DSL	31	0	31	256	64
Australia	Optus	Lite 550MB	CM	31	speed downgr ade	31		
Australia	WebOne	AL100	DSL	33	0	33	256	64
Australia	All Other Provs	Unlimited 256 Min	DSL	33	0	33	512	128
Australia	All Other Provs	0.7GB 512 metered Min	DSL	29	5	34	512	128
Australia	BigBlue	Mach512	DSL	34	0	34	512	128

Country	ISP	Package	DSL/ cable modem	fixed monthly charge	monthly usage charge	total monthly charges	downstre am speed	upstream speed
Australia	OzEmail	OzEHi-Speed	DSL	34	0	34	512	128
NZ	Paradise	High Speed Starter	CM	34	0	34	256	128
Australia	WebOne	AM100	DSL	35	0	35	512	128
Australia	All Other Provs	1GB 512 metered Avge	DSL	35	0	35	512	128
Australia	All Other Provs	0.7 256 metered Avge	DSL	25	10	35	256	64
Australia	Telstra BigPond	Business Sat	1-way Satellite	37	0	37	400	56
Australia	OzEmail	OzESpeed Special	DSL	24	14	38	256	64
Australia	WebOne	Blink 512	DSL	38	0	38	512	128
Australia	Optus	Standard 3GB	CM	38	speed downgr ade	38		
NZ	Xtra	Jetstream Home1000	DSL	40	0	40	2000	128
Australia	WebOne	AL200	DSL	40	0	40	256	64
Australia	OzEmail	OzEHi-Speed Plus	DSL	43	0	43	512	128
Australia	All Other Provs	Unlimited 512 Min	DSL	43	0	43	512	128
Australia	Telstra BigPond	GigaSat	1-way Satellite	45	0	45	400	56
Australia	Telstra BigPond	1GB	DSL	45	0	45	256	64
Australia	All Other Provs	3GB 512 metered Avge	DSL	45	0	45	512	128
Australia	BigBlue	Mach256	DSL	24	22	46	256	64
Australia	All Other Provs	Unlimited 256 Avge	DSL	47	0	47	256	64
Australia	WebOne	AL30	DSL	27	21	48	256	64
NZ	Xtra	Jetstream Home500	DSL	31	18	49	2000	128
Australia	All Other Provs	0.7GB 512 metered Avge	DSL	42	10	52	512	128
Australia	Telstra BigPond	500MB	DSL	37	15	52	256	64
Australia	WebOne	AM300	DSL	53	0	53	512	128
Australia	Telstra BigPond	3GB	DSL	54	0	54	512	128
Australia	BigBlue	Mach1500	DSL	60	0	60	1500	256
Australia	OzEmail	OzETop Speed Plus	DSL	60	0	60	1500	256
Australia	WebOne	AF23	DSL	63	0	63	256	64
Australia	All Other Provs	3GB1500 metered Avge	DSL	63	0	63	1500	256
Australia	WebOne	Blink1500	DSL	72	0	72	1500	256
Australia	All Other Provs	Unlimited 1500 Min	DSL	72	0	72	1500	256
Australia	All Other Provs	Unlimited 512 Avge	DSL	76	0	76	512	128
Australia	All Other Provs	Unlimited 512 Avge	DSL	76	0	76	512	128
Australia	Telstra BigPond	5GB	CM	77	0	77	uncapped	
Australia	Telstra BigPond	5GB	DSL	94	0	94	1500	256
Australia	OzEmail	OzETop Speed	DSL	48	67	115	1500	256
Australia	Telstra BigPond	2 Way Standard	2-way Satellite	115	0	115	512	512
Australia	Telstra BigPond	Business Standard	2-way Satellite	115	0	115	512	512
Australia	All Other Provs	Unlimited 1500 Avge	DSL	123	0	123	1500	256
Australia	Telstra BigPond	Business Plus	2-way Satellite	216	0	216	512	512
NZ	ihug	Ultrastarter	1-way Satellite	16	9	248	1000	56
Australia	Telstra BigPond	2 Way-Blast Off	2-way Satellite	70	36	250	256	256
Australia	All Other Provs	2GB 6000 Metered Avge	DSL	272	0	272	6000	640
Australia	All Other Provs	Unlimited 1500 Max	DSL	286	0	286	1500	256
Australia	All Other Provs	Unlimited 512 Max	DSL	336	0	336	512	128

Figure 10. Australia and New Zealand – 1GB/month all speeds

Country	ISP	Package	DSL/ cable modem	fixed monthly charge	monthly usage charge	total monthly charges	down stream speed	upstream speed
NZ	ihug	Ultrafast 1000	1-way Satellite	20	0	20	128	56
Australia	All Other Provs	1GB 256 metered Min	DSL	24	0	24	256	64
NZ	ihug	Ultrafast 2000	1-way Satellite	27	0	27	1000	56
NZ	Paradise	Jetstart	DSL	27	0	27	128	128
Australia	All Other Provs	1GB 512 metered Min	DSL	29	0	29	512	128
NZ	Xtra	Jetstream Starter 5000	DSL	29	0	29	128	128
Australia	All Other Provs	1GB 256 metered Avge	DSL	30	0	30	256	64
Australia	OzEmail	OzESpeed Plus	DSL	31	0	31	256	64
Australia	Optus	Lite 550MB	CM	31	speed downgr ade	31		
Australia	WebOne	AL100	DSL	33	0	33	256	64
Australia	All Other Provs	Unlimited 256 Min	DSL	33	0	33	512	128
Australia	BigBlue	Mach512	DSL	34	0	34	512	128
Australia	OzEmail	OzEHi-Speed	DSL	34	0	34	512	128
NZ	Paradise	High Speed Starter	CM	34	0	34	256	128
Australia	WebOne	AM100	DSL	35	0	35	512	128
Australia	All Other Provs	1GB 512 metered Avge	DSL	35	0	35	512	128
Australia	Telstra BigPond	Business Sat	1-way Satellite	37	0	37	400	56
Australia	All Other Provs	3GB 512 metered Min	DSL	38	0	38	512	128
Australia	WebOne	Blink 512	DSL	38	0	38	512	128
Australia	Optus	Standard 3GB	CM	38	speed downgr ade	38		
NZ	Xtra	Jetstream Home1000	DSL	40	0	40	2000	128
Australia	WebOne	AL200	DSL	40	0	40	256	64
Australia	All Other Provs	0.7GB 512 metered Min	DSL	29	12	41	512	128
Australia	OzEmail	OzEHi-Speed Plus	DSL	43	0	43	512	128
Australia	All Other Provs	Unlimited 512 Min	DSL	43	0	43	512	128
Australia	Telstra BigPond	GigaSat	1-way Satellite	45	0	45	400	56
Australia	Telstra BigPond	1GB	DSL	45	0	45	256	64
Australia	All Other Provs	3GB 512 metered Avge	DSL	45	0	45	512	128
Australia	OzEmail	OzESpeed	DSL	29	18	47	256	64
Australia	All Other Provs	Unlimited 256 Avge	DSL	47	0	47	256	64
Australia	All Other Provs	0.7 256 metered Avge	DSL	25	25	51	256	64
Australia	WebOne	AM300	DSL	53	0	53	512	128
Australia	Telstra BigPond	3GB	DSL	54	0	54	512	128
Australia	All Other Provs	3GB 512 metered Max	DSL	58	0	58	512	128
Australia	OzEmail	OzESpeed Special	DSL	24	36	60	256	64
Australia	All Other Provs	3GB1500 metered Max	DSL	60	0	60	1500	256
Australia	BigBlue	Mach1500	DSL	60	0	60	1500	256
Australia	OzEmail	OzETop Speed Plus	DSL	60	0	60	1500	256
Australia	WebOne	AF23	DSL	63	0	63	256	64
Australia	All Other Provs	3GB1500 metered Avge	DSL	63	0	63	1500	256
Australia	All Other Provs	0.7GB 512 metered Avge	DSL	42	26	67	512	128
Australia	All Other Provs	3GB1500 metered Min	DSL	72	0	72	1500	256
Australia	WebOne	Blink1500	DSL	72	0	72	1500	256
Australia	All Other Provs	Unlimited 1500 Min	DSL	72	0	72	1500	256

Country	ISP	Package	DSL/ cable modem	fixed monthly charge	monthly usage charge	total monthly charges	down stream speed	upstream speed
Australia	Telstra BigPond	500MB	DSL	37	38	75	256	64
NZ	Xtra	Jetstream Home500	DSL	31	45	76	2000	128
Australia	All Other Provs	Unlimited 512 Avge	DSL	76	0	76	512	128
Australia	Telstra BigPond	5GB	CM	77	0	77	uncapped	
Australia	Telstra BigPond	5GB	DSL	94	0	94	1500	256
Australia	OzEmail	OzETop Speed	DSL	48	67	115	1500	256
Australia	Telstra BigPond	2 Way Standard	2-way Satellite	115	0	115	512	512
Australia	Telstra BigPond	Business Standard	2-way Satellite	115	0	115	512	512
Australia	All Other Provs	Unlimited 1500 Avge	DSL	123	0	123	1500	256
Australia	Telstra BigPond	Business Plus	2-way Satellite	216	0	216	512	512
NZ	ihug	Ultrastarter	1-way Satellite	16	22	262	1000	56
Australia	All Other Provs	2GB 6000 Metered Avge	DSL	272	0	272	6000	640
Australia	Telstra BigPond	2 Way-Blast Off	2-way Satellite	70	64	278	256	256
Australia	All Other Provs	4GB 6000 Metered Avge		335	0	335	6000	640

Figure 11: Australia and New Zealand – 1.5GB/month all speeds

Country	ISP	Package	DSL/ cable modem	fixed monthly charge	monthly usage charge	total monthly charges	down stream speed	upstream speed
NZ	ihug	Ultrafast 2000	1-way Satellite	27	0	27	1000	56
NZ	Paradise	Jetstart	DSL	27	0	27	128	128
NZ	Xtra	Jetstream Starter 5000	DSL	29	0	29	128	128
Australia	OzEmail	OzESpeed Plus	DSL	31	0	31	256	64
Australia	Optus	Lite 550MB	CM	31	speed downgr ade	31		
Australia	All Other Provs	Unlimited 256 Min	DSL	33	0	33	512	128
Australia	OzEmail	OzEHi-Speed	DSL	34	0	34	512	128
Australia	All Other Provs	0.7GB 256 metered Min	DSL	0	34	34	256	64
NZ	Paradise	High Speed Starter	CM	34	0	34	256	128
Australia	All Other Provs	3GB 512 metered Min	DSL	38	0	38	512	128
Australia	WebOne	Blink 512	DSL	38	0	38	512	128
Australia	Optus	Standard 3GB	CM	38	speed downgr ade	38		
Australia	WebOne	AL200	DSL	40	0	40	256	64
NZ	ihug	Ultrafast 1000	1-way Satellite	20	22	42	128	56
Australia	OzEmail	OzEHi-Speed Plus	DSL	43	0	43	512	128
Australia	All Other Provs	Unlimited 512 Min	DSL	43	0	43	512	128
Australia	Telstra BigPond	GigaSat	1-way Satellite	45	0	45	400	56
Australia	All Other Provs	3GB 512 metered Avge	DSL	45	0	45	512	128
Australia	All Other Provs	Unlimited 256 Avge	DSL	47	0	47	256	64
Australia	All Other Provs	1GB 256 metered Min	DSL	24	26	50	256	64
Australia	All Other Provs	0.7GB 512 metered Min	DSL	29	24	53	512	128
Australia	WebOne	AM300	DSL	53	0	53	512	128
Australia	Telstra BigPond	3GB	DSL	54	0	54	512	128
Australia	All Other Provs	1GB 256 metered Avge	DSL	30	25	55	256	64

Country	ISP	Package	DSL/ cable modem	fixed monthly charge	monthly usage charge	total monthly charges	down stream speed	upstream speed
Australia	All Other Provs	3GB 512 metered Max	DSL	58	0	58	512	128
Australia	WebOne	AL100	DSL	33	26	59	256	64
Australia	All Other Provs	3GB1500 metered Max	DSL	60	0	60	1500	256
Australia	BigBlue	Mach1500	DSL	60	0	60	1500	256
Australia	OzEmail	OzETop Speed Plus	DSL	60	0	60	1500	256
Australia	All Other Provs	1GB 512 metered Avge	DSL	35	26	61	512	128
Australia	WebOne	AM100	DSL	35	26	62	512	128
Australia	All Other Provs	1GB 512 metered Min	DSL	29	33	62	512	128
Australia	WebOne	AF23	DSL	63	0	63	256	64
Australia	All Other Provs	3GB1500 metered Avge	DSL	63	0	63	1500	256
Australia	BigBlue	Mach512	DSL	34	36	70	512	128
Australia	All Other Provs	3GB1500 metered Min	DSL	72	0	72	1500	256
Australia	WebOne	Blink1500	DSL	72	0	72	1500	256
Australia	All Other Provs	Unlimited 1500 Min	DSL	72	0	72	1500	256
Australia	All Other Provs	Unlimited 512 Avge	DSL	76	0	76	512	128
Australia	Telstra BigPond	5GB	CM	77	0	77	uncapped	
Australia	Telstra BigPond	1GB	DSL	45	36	81	256	64
Australia	OzEmail	OzESpeed	DSL	29	54	83	256	64
NZ	Xtra	Jetstream Home1000	DSL	40	45	85	2000	128
Australia	Telstra BigPond	5GB	DSL	94	0	94	1500	256
Australia	OzEmail	OzESpeed Special	DSL	24	72	96	256	64
Australia	Telstra BigPond	Business Sat	1-way Satellite	37	63	100	400	56
Australia	BigBlue	Mach256	DSL	24	79	103	256	64
Australia	Telstra BigPond	500MB	DSL	37	76	113	256	64
Australia	OzEmail	OzETop Speed	DSL	48	67	115	1500	256
NZ	Xtra	Jetstream Home500	DSL	31	90	120	2000	128
Australia	All Other Provs	Unlimited 1500 Avge	DSL	123	0	123	1500	256
Australia	Telstra BigPond	2 Way Standard	2-way Satellite	115	45	161	512	512
Australia	Telstra BigPond	Business Standard	2-way Satellite	115	45	161	512	512
Australia	Telstra BigPond	Business Plus	2-way Satellite	216	0	216	512	512
Australia	All Other Provs	2GB 6000 Metered Avge	DSL	272	0	272	6000	640
NZ	ihug	Ultrastarter	1-way Satellite	16	45	284	1000	56
Australia	Telstra BigPond	2 Way-Blast Off	2-way Satellite	70	109	323	256	256
Australia	All Other Provs	4GB 6000 Metered Avge		335	0	335	6000	640

Extended OfTel Benchmarking: Step Three

41. The extended OfTel benchmarking reveals that at New Zealand's average levels of usage, the New Zealand products are very favourably placed compared to products in markets that face similar input costs. That the New Zealand products are also competitive over these same ranges of usage with products from providers in other countries that face lower input costs and also have the benefit of government subsidies and other advantages, warrants comment. When these competitive prices are also compared on the basis of small population and limited access to scale economies in the delivery of services, the prices look even more remarkable.
42. The New Zealand market is also characterised by vigorous inter-platform competition, which appears to be a significant factor in low prices at typical levels of usage. Given

that satellite is the only technology to have 100% coverage in New Zealand, despite its current small share of the broadband market (around 5-6%),⁹ it appears that the low prices for this technology are able to provide significant competitive pressure upon prices for telecommunications-based broadband products. This is in direct contrast to the Australian market, where Telstra-owned satellite services are amongst the more expensive for low levels of data transfer.

43. It is significant in the comparisons between Australian and New Zealand providers that competitive pressure in the form of low prices in Australia are coming not from alternative infrastructure providers but from resellers of incumbents' services. It is only as data consumption increases that Optus' cable modem service Lite 550MB becomes one of the cheaper options. However, the price advantage of the Optus product is not straightforward, as the penalty for exceeding the relatively modest cap of 550MB/month is not an increase in price but a decrease in speed, firstly down to the level of a 56kbps dial-up modem, and then further if unduly excessive usage occurs. Thus, the ability for this product to exert competitive pressure on ADSL providers is compromised by the inability to compare like product with like product.
44. Furthermore, Australian market share figures show that despite the wide variety of retail broadband prices in Australia exhibited in Appendix 1, Telstra and Optus have broadband market shares by revenue of 64% and 24% respectively¹⁰. Alternative infrastructure providers comprise a combined market share of only 12%, which very closely approximates the share of the New Zealand broadband infrastructure market by account numbers.
45. As New Zealand prices at the lowest end of the comparison and at New Zealand average consumption levels are between 15% and 20% cheaper than Australian ones, this implies that infrastructure competition is resulting in both lower prices and greater product innovation to New Zealand consumers relative to Australian consumers, despite the much smaller number of sellers in the market. Competition in the Australian market appears to be much more strongly dependent upon price and product differentiation based upon data charging caps on a single infrastructure platform, whereas the competition in New Zealand is based on both price and technology differentiation, within similar data caps.

⁹ Phoenix Market Research, November 2002.

¹⁰ ABN Amro data, June 2003. Supplied by Telecom – see Appendix 2.

APPENDIX 1. AUSTRALIAN ISP SAMPLE

Figure A.1 lists the Australian ISPs used in the modified OfTel benchmarking exercise. The list was extracted from the website <http://www.adslusers.com.au>.

Figure A.1 Australian ISP Sample

Company	States	DSL Type	Suitability
.netXP	ALL STATES	ADSL	Home + Business
ACCESS PRO-DSL	NSW VIC QLD SA WA NT ACT	ADSL SHDSL VDSL SDSL HDSL	Home + Business
ADSLdirect	NSW VIC QLD WA	ADSL SHDSL	Home + Business
AlphaDSL	NSW VIC QLD	ADSL SHDSL	Home + Business
Apple Communications Pty Ltd	NSW VIC	ADSL	Home + Business
AussieISP	NSW	ADSL	Home + Business
Big Button	SA NT	ADSL	Home + Business
bigblue	NSW VIC QLD	ADSL	Home + Business
bigblue Internet	VIC	ADSL	Home
Bigdy Pty Ltd	NSW VIC QLD	ADSL SHDSL	Business
Blue Net Pty. Limited	ALL STATES	ADSL SHDSL	Business
BROADWIRE Communications Pty Ltd	ALL STATES	ADSL SHDSL SDSL	Business
Business Resource Development (BRD)	NSW VIC QLD SA	ADSL SHDSL SDSL	Home + Business
CairnsNet Pty Ltd	NSW VIC QLD SA WA ACT	ADSL SHDSL SDSL HDSL	Home + Business
Chariot netconnect	NSW VIC QLD SA NT	ADSL HDSL	Home + Business
Chilli Internet Solutions	ALL STATES	ADSL SHDSL VDSL SDSL HDSL	Home + Business
CIA	NSW	ADSL SHDSL	Home + Business
ClariNET Internet Solutions Pty Ltd	NSW VIC QLD SA WA	ADSL SHDSL	Business
Com-Cen Pty Ltd	ALL STATES	ADSL SHDSL HDSL	Home + Business
Commerce Australia	WA	ADSL	Home + Business
Concept Networks	WA	ADSL	Home + Business
Connexus Internet	NSW VIC QLD SA WA NT ACT	ADSL SHDSL SDSL HDSL	Home + Business
Cynergic Net Solutions	ALL STATES	ADSL SHDSL	Business
DataSolve Services	ALL STATES	ADSL SHDSL	Home + Business
DNet Internet Services	NSW VIC QLD SA WA NT ACT	ADSL	Home + Business
Dolphin DSL	ALL STATES	ADSL SHDSL HDSL	Business
dotnet dotau Pty Ltd	ALL STATES	ADSL	Home + Business
DSLNet Australia	NSW VIC QLD SA WA	ADSL SHDSL	Business
E-Talk Communications	NSW VIC QLD	ADSL SHDSL	Home + Business
EFTel	WA	ADSL	Home
Escape Communications Pty Ltd	ALL STATES	ADSL SHDSL SDSL	Home + Business
Fasternet.com.au	ALL STATES	ADSL	Home + Business
FLOW Communications	NSW VIC QLD SA TAS ACT	ADSL SHDSL HDSL	Home + Business
Global Dial	ALL STATES	ADSL SHDSL VDSL SDSL HDSL	Home + Business
GPM Internet Pty Ltd	ALL STATES	ADSL SHDSL	Business
GreenBay Communications Pty Ltd	ALL STATES	ADSL SHDSL VDSL	Business
Highway 1 Internet Solutions	ALL STATES	ADSL SDSL HDSL	Home + Business
Independent Service Providers	ALL STATES	ADSL SHDSL HDSL	Home + Business
Intermode Professional Access	NSW VIC QLD SA NT	ADSL SHDSL SDSL HDSL	Home + Business
ION Internet Services	ALL STATES	ADSL	Home + Business
ION Internet Services	ALL STATES	ADSL	Home + Business
iPrimus	ALL STATES	ADSL SHDSL HDSL	Home + Business
Kern Internet Pty Ltd	SA	ADSL SHDSL VDSL SDSL HDSL	Home + Business
KeyPoint Pty Ltd	NSW VIC QLD TAS	ADSL SHDSL SDSL	Home + Business
Maxinet	ALL STATES	ADSL SHDSL	Business
MediaWeb Pty. Ltd.	NSW VIC QLD WA ACT	ADSL	Home + Business
Netlink Connect	NSW VIC QLD SA WA ACT	ADSL SHDSL	Business
Netro	ALL STATES	ADSL SHDSL	Business
Netspace	ALL STATES	ADSL	Home + Business
NEXTEP Broadband	NSW VIC QLD WA	ADSL SHDSL	Business
NTT Australia IP	NSW VIC QLD WA	ADSL SHDSL HDSL	Business
Optraweb Internet Solutions	ALL STATES	ADSL	Home + Business
Outside Edge Australia Pty Ltd	NSW VIC QLD SA WA ACT	ADSL SHDSL VDSL	Business
OzEmail	NSW VIC QLD SA NT ACT	ADSL	Home + Business
Pacific Internet (Australia) Pty Ltd	ALL STATES	ADSL SHDSL SDSL HDSL	Home + Business

Company	States	DSL Type	Suitability
Panaseer	ALL STATES	ADSL HDSL	Business
Perth iX	ALL STATES	ADSL SHDSL	Business
PSINet Australia Pty Ltd	NSW	ADSL SHDSL HDSL	Business
Reverence Earthlink Internet Services	NSW VIC QLD WA	ADSL SHDSL SDSL	Home + Business
RUCC Pty Ltd	NSW VIC	ADSL SHDSL	Business
Satlink Internet Services	VIC	ADSL	Home + Business
SE Network Access Pty Ltd	SA	ADSL SDSL	Business
SmarterDSL Pty Ltd	NSW VIC QLD SA WA	ADSL SHDSL SDSL	Business
Spin Internet Services	NSW VIC QLD TAS ACT	ADSL SHDSL	Home + Business
STUNT COMMUNICATIONS	ALL STATES	ADSL	Home + Business
Sunet Internet	VIC	ADSL	Home + Business
Swiftel Communications Pty Ltd	NSW WA	ADSL SDSL	Home + Business
Techex Communications Prt Ltd	ALL STATES	ADSL SHDSL HDSL	Business
Tel.Pacific Pty Limited	NSW	ADSL	Home + Business
Ultrawave Internet	ALL STATES	ADSL SHDSL SDSL	Home + Business
viewQWEST Australia Pty Ltd	NSW VIC QLD SA WA NT ACT	ADSL SHDSL	Home + Business
Vintek	NSW VIC SA NT	ADSL SDSL	Home + Business
Web Ace	WA	ADSL	Home + Business
WebOne Internet	ACT	ADSL VDSL	Home + Business
WestNet Internet Services	WA	ADSL	Home + Business

The price sampling exercise resulted in prices being identified for 47 providers with residential services and 47 with business services (although the providers were different in each case). For each ISP in the sample, the product range and prices were identified. Figure A.2 summarises the Residential prices and Figure A.3 the Business prices.

Figure A.2 Australian ISP Residential Monthly Price Summary

Product Quality ¹¹	Monthly Limits	Number of Providers	Mean Price	Maximum Price	Minimum Price
256/64		43			
	Unlimited	28	98.27	299	68.95
	100MB	1	39.95	39.95	39.95
	200MB	2	42.95	42.95	42.95
	300MB	4	58.63	69.95	49.95
	350MB	1	49.00	49	49
	355MB	1	49.95	49.95	49.95
	400MB	1	49.95	49.95	49.95
	500MB	13	52.66	61	39.95
	600MB	1	59.00	59	59
	750MB	1	59.95	59.95	59.95
	1GB	20	62.01	89	49.5
	1.5GB	1	64.95	64.95	64.95
	2GB	14	72.12	132	49.95
	2.5GB	1	45.00	45	45
	3GB	6	88.13	129	69.95
	4GB	12	74.06	99.95	59
	4.5GB	2	69.95	69.95	69.95
	5GB	1	95.00	95	95
	6GB	3	106.63	155	74.95
	8GB	7	97.79	169.95	69.95
	10GB	3	168.67	279	69
	Add traffic		0.105	0.165	0.006
512/128		41			
	Unlimited	22	157.99	699	89.95
	100MB	1	49.95	49.95	49.95
	200MB	2	49.95	49.95	49.95
	300MB	1	64.00	64	64
	500MB	6	86.64	170	59.95
	1GB	20	73.09	110	59.95
	1.5GB	1	69.95	69.95	69.95
	2GB	7	95.25	150	69.95
	3GB	8	93.84	120	79.95
	4GB	10	88.67	109.95	69.95
	4.5GB	2	79.95	79.95	79.95
	5GB	2	110.00	115	105
	6GB	5	104.77	180	69.95
	7GB	1	159.95	159.95	159.95
	8GB	10	101.30	119.95	74.95
	10GB	4	234.25	299	168
	12GB	1	89.95	89.95	89.95
	14GB	1	79.00	79	79
	16GB	2	91.95	98.95	84.95
	20GB	3	265.98	320	199.95
	26GB	1	119.00	119	119
	Add traffic		0.107	0.165	0.020
1500/256		40			
	Unlimited	19	256.48	595	149.95
	100MB	1	89.95	89.95	89.95

¹¹ Product Quality measured in Downstream/Upstream speeds

Product Quality ¹¹	Monthly Limits	Number of Providers	Mean Price	Maximum Price	Minimum Price
	200MB	2	85.95	85.95	85.95
	500MB	4	148.49	280	85
	1GB	10	123.02	198	94.95
	1.5GB	3	128.28	139.95	119.95
	2GB	3	141.32	199	99.95
	3GB	6	131.13	149.95	124.95
	4GB	4	154.10	169.95	124.95
	4.5GB	2	129.95	129.95	129.95
	5GB	5	163.98	190	149.95
	6GB	4	152.49	200	125
	7GB	1	114.00	114	114
	8GB	11	156.74	199.95	109.95
	10GB	8	240.11	389	134
	12GB	3	184.65	289.95	125
	15GB	1	134.00	134	134
	16GB	3	221.98	265	178.95
	20GB	5	271.87	425	149.95
	24GB	1	189.00	189	189
	30GB	1	243.00	243	243
	35GB	1	249.00	249	249
	Add traffic		0.104	0.165	0.006
2000/384		2			
	Unlimited	1	2399.00	2399	2399
	8GB	1	125.95	125.95	125.95
	16GB	1	236.00	236	236
	Add traffic			0.149	0.090
6000/640		2			
	8GB	2	447.95	447.95	447.95

Prices are measured in Australian Dollars as reported in the 2nd week of July 2003

Figure A.3 Australian ISP Business Monthly Price Summary

Product Quality ¹²	Monthly Limits	Number of Providers	Mean Price	Maximum Price	Minimum Price
256/64		28			
	Unlimited	13	\$ 240.34	\$ 799.00	\$ 69.95
	300MB	2	\$ 76.16	\$ 79.00	\$ 73.32
	500MB	10	\$ 67.49	\$ 85.00	\$ 51.00
	1GB	8	\$ 130.78	\$ 242.00	\$ 55.00
	1.5GB	1	\$ 99.00	\$ 99.00	\$ 99.00
	2GB	8	\$ 126.47	\$ 313.32	\$ 79.00
	2.5GB	2	\$ 79.75	\$ 114.50	\$ 45.00
	3GB	1	\$ 109.00	\$ 109.00	\$ 109.00
	4GB	4	\$ 104.65	\$ 135.00	\$ 89.00
	5GB	2	\$ 461.66	\$ 623.32	\$ 300.00
	6GB	2	\$ 199.00	\$ 199.00	\$ 199.00
	8GB	2	\$ 88.00	\$ 88.00	\$ 88.00
	10GB	2	\$ 349.75	\$ 500.00	\$ 199.50
	20GB	1	\$1,000.00	\$ 1,000.00	\$1,000.00
	50GB	1	\$2,500.00	\$ 2,500.00	\$2,500.00
	100GB	1	\$5,000.00	\$ 5,000.00	\$5,000.00
	Add traffic	23	0.113	0.165	0.006
512/128		32			
	Unlimited	14	\$ 454.46	\$ 1,495.00	\$ 89.00
	300MB	2	\$ 90.52	\$ 92.04	\$ 89.00
	500MB	3	\$ 97.00	\$ 99.00	\$ 93.00
	1GB	16	\$ 117.23	\$ 268.00	\$ 63.00
	2GB	4	\$ 155.50	\$ 332.04	\$ 89.95
	2.5GB	1	\$ 143.50	\$ 143.50	\$ 143.50
	3GB	6	\$ 128.83	\$ 199.00	\$ 75.00
	4GB	2	\$ 141.98	\$ 179.00	\$ 104.95
	5GB	4	\$ 289.87	\$ 642.04	\$ 129.95
	6GB	4	\$ 149.50	\$ 210.00	\$ 79.00
	7GB	1	\$ 65.00	\$ 65.00	\$ 65.00
	8GB	3	\$ 129.63	\$ 169.95	\$ 99.00
	10GB	2	\$ 159.48	\$ 199.95	\$ 119.00
	15GB	2	\$ 272.23	\$ 294.50	\$ 249.95
	16GB	1	\$ 84.95	\$ 84.95	\$ 84.95
	Add traffic	22	0.116	0.150	0.006
1500/256		33			
	Unlimited	10	\$ 995.27	\$ 2,999.00	\$ 205.00
	300MB	2	\$ 164.58	\$ 195.00	\$ 134.16
	500MB	2	\$ 172.50	\$ 199.00	\$ 146.00
	750MB	1	\$ 500.00	\$ 500.00	\$ 500.00
	1GB	9	\$ 215.67	\$ 425.00	\$ 119.95
	1.5GB	2	\$ 122.45	\$ 124.95	\$ 119.95
	2GB	4	\$ 243.54	\$ 374.16	\$ 135.00
	3GB	7	\$ 270.28	\$ 795.00	\$ 149.00
	4GB	3	\$ 178.17	\$ 239.00	\$ 139.00
	5GB	9	\$ 376.40	\$ 985.00	\$ 126.00
	6GB	2	\$ 245.00	\$ 245.00	\$ 245.00
	8GB	5	\$ 257.09	\$ 539.00	\$ 169.00
	10GB	8	\$ 481.81	\$ 1,315.00	\$ 231.00

¹² Product Quality measured in Downstream/Upstream Speeds

Product Quality¹²	Monthly Limits	Number of Providers	Mean Price	Maximum Price	Minimum Price
	12GB	1	\$ 125.00	\$ 125.00	\$ 125.00
	15GB	2	\$ 274.48	\$ 299.95	\$ 249.00
	16GB	2	\$ 200.73	\$ 249.50	\$ 151.95
	20GB	1	\$ 995.00	\$ 995.00	\$ 995.00
	30GB	1	\$ 389.50	\$ 389.50	\$ 389.50
	32GB	1	\$ 204.95	\$ 204.95	\$ 204.95
	Add traffic	22	0.120	0.165	0.006
6000/640		12			
	Unlimited	3	\$5,739.65	\$11,999.00	\$2,220.00
	300MB	1	\$ 375.70	\$ 375.70	\$ 375.70
	1GB	7	\$ 468.81	\$ 695.00	\$ 179.00
	2GB	2	\$ 607.85	\$ 615.70	\$ 600.00
	4GB	2	\$ 749.50	\$ 1,200.00	\$ 299.00
	5GB	1	\$ 925.70	\$ 925.70	\$ 925.70
	Add traffic	9	0.142	0.165	0.100
<i>Prices are measured in Australian Dollars as reported in the 2nd week of July 2003</i>					

APPENDIX 2. SUPPLEMENTARY DATA

Telstra's Wholesale division is leading broadband growth for Telstra:

Rate of Growth	Telstra Retail	Telstra Wholesale	Telstra DSL Layer2 service	Total Broadband Customers	% of Wholesale customers
Q1 2002	88,000	5,000	-	93,000	5%
Q2 2002	102,000	8,000	-	110,000	7%
Q3 2002	115,000	13,000	-	128,000	10%
Q4 2002	145,000	21,000	3,000	169,000	14%
Q1 2003	172,000	25,000	9,000	197,000	17%
Q2 2003	192,000	30,000	23,000	245,000	21%
Q3 2003	214,000	35,000	41,000	290,000	26%

Source: Macquarie Research Equities, Wholesale DSL growth – more defensive than growth for Telstra, 7 May 2003

**Based on estimated revenues, ABN AMRO, June 2003*

Australian Broadband Access Services Technology Market Share, 2002-2007

	2002	2003	2004	2005	2006	2007
xDSL	54%	58%	67%	70%	72%	73%
Cable Modem	40%	35%	26%	21%	19%	16%
Metro Ethernet	0.7%	0.7%	0.5%	0.5%	0.5%	0.7%
FWA	1%	3%	3%	3%	4%	5%
Satellite	4%	4%	4%	4%	5%	5%

Source: IDC Australia, 2003

All data in this appendix was provided by Telecom New Zealand.