Submission on
Competition in evolving communications markets
Issues Paper
September 2016

TrueNet
Unit 4
3 Britannia Street
Petone 5012

About TrueNet

TrueNet is a New Zealand based company measuring broadband performance of ISPs in New Zealand and publishing monthly reports on the results of those measurements. Reporting since 2012, the market in NZ has responded by improving performance consistently to the point that comparisons with a small number of Australian panelists connections on TPG are no longer considered relevant due to the gap opening up with NZ ISPs. Just like the All Blacks.

Chart 1: Performance trend on ADSL since 2012

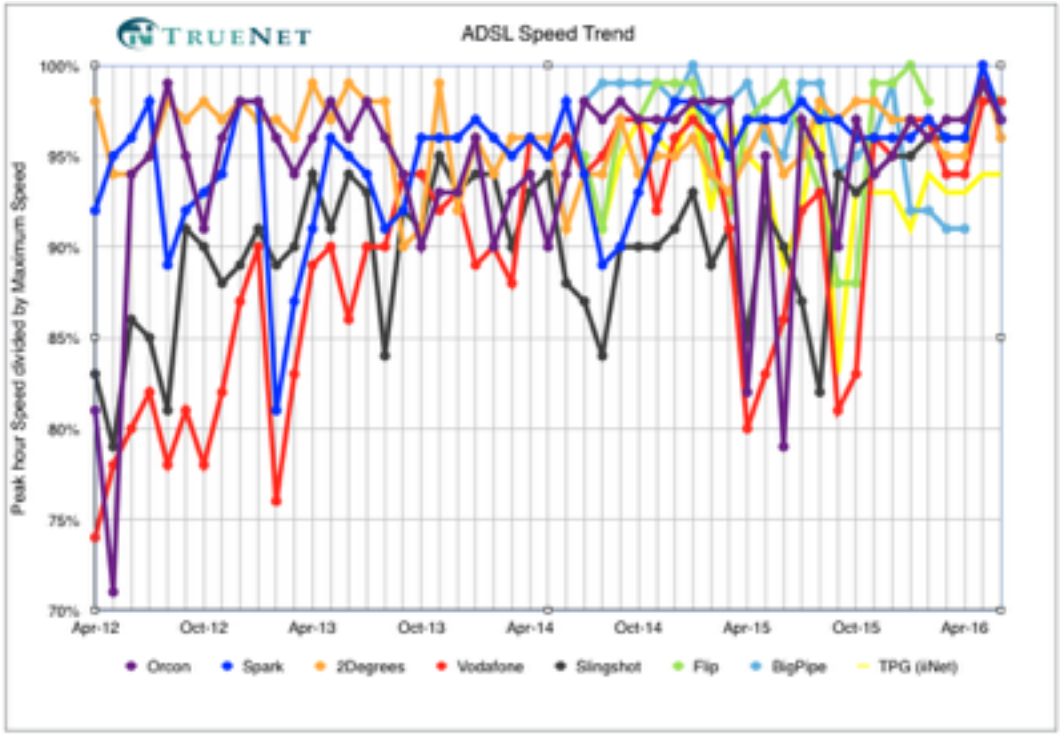


Chart 1 shows the peak demand speed as a percentage of the best speed of the day (usually 3-5am), for each month since reporting began. ISP response is clear, as is the impact of Netflix introduction and subsequent correction in early 2015.

TrueNet's consumer focus delivers long term benefits to end users"; is consistent with international crowd sourcing practice; and is achieving long term success in encouraging New Zealand ISPs to improve broadband quality, and performance.

Without ongoing, regular publication of ISP performance, the NZ consumer would have no way of knowing how their ISP is performing relative to other providers; there would be no motivation for ISPs to remain honest, and deliver the service advertised.

This service fundamentally corrects the imbalance of product quality knowledge between suppliers and consumers.

Contact

John Butt
CEO

+64 2166 1300

john@truenet.co.nz

Contents

Introduction

TrueNet thanks the ACCC for the opportunity to provide comment on the “development of competition and efficiency in communications markets over the next five years or thereabouts”.

TrueNet has a simple brief in New Zealand, measure the performance of major ISPs using home based panelists connections and report the results every month in a readable format.

Actual measurements are described loosely in the contract to enable technology updates with time, but the requirement to report is absolute, to ensure that the public are kept informed about the current performance of ISPs. Reporting is expected to be accompanied by promotion to gather readership of the reports by both those contemplating change as well as ISP management to encourage investment.

Usually the first readers are the technologists inside the ISPs, probably to check out the only “score” they have for their groups performance when compared with colleagues in competitive companies. Technologists regularly use the data to demand investment from management to resolve known bottlenecks that are ignored without other pressure.

The second major group of readers are those looking for technology explanations from an independent source. The most popular page is one comparing ADSL with VDSL(FTTN)

This is the power of reporting regularly and in sufficient time for a competitive response prior to the next report.

Scope and Objectives

TrueNet will limit comment to measurement issues, in the bullet point on page 10:

“Consider whether the transparency and comparability of consumer product information and costs of switching service providers impede competitive outcomes.”

Our experience in measurement and reporting is evident in the results of measurement on New Zealand ISP performance. An exceptionally competitive environment that Telstra exited a few years ago.

The market in New Zealand has included sufficient residential FTTN (VDSL) since early 2012, and Fibre for testing since 2013. Fixed Mobile is now available throughout NZ with competitive pricing and performance.

TrueNet measurement and reporting is very transparent and provides comparable consumer product information by ISP and technology to enable provider switching cost to be lowered. There are over 106k visitors to the site last year, leading to a conclusion that at close to 10% of NZ’s 1.2m internet consumers are reviewing their options using TrueNet website information.

Information available to consumers (Page 20)

Our further comments are restricted to sections 4.21 to 4.34. starting at 4.21, page 20 of the Issues Paper

21. Transparent and accurate

To be transparent and accurate requires the testing methodology explained, the results presented and the results explained in plain language in a timely fashion to remain relevant and actionable. International practice is to publish a comprehensive, statistically detailed long report that is unread and unvalued because it is too much too late. To be fully transparent it needs to be read within a month of the data being collected.

ISPs need the ability to respond to a bad month, often through investment, to return to a position they see as critical to their brand. Waiting three months for the next report can be destructive of brand perception.

Accuracy is limited to the results of the measurements. This is a real market with real results and real outcomes. Sometimes when taking samples, that means accuracy is limited to the frailties of the technology being measured.

To ensure accuracy is maximised, TrueNet review the results by test for every panelist each month to see if the results form a common pattern. The review is used to identify issues such as faulty lines, volunteer competition with the tests, or insufficient tests for whatever reason. The review enables rejection of probes lacking perceived accuracy. Testing procedures are reviewed constantly as technology, speeds and practices change in the market to ensure that what is being measured is a reasonable representation of actual performance.

22. Information to meet Australian law

Accurate information on specific internet connections is not actually possible. Variations are possible from many sources, including but not limited to:

- For Copper connections, distance to the exchange equipment
- Home connection method, overhead or underground
- Condition of the copper, especially any cross-connection cabinets en-route
- Home wiring from the drop-lead to the house
- Home wiring internal to the house
- The potential use of telephone extension cables (upper speed limit about 2Mb/s)
- Congestion by Time of Day
  - Local aggregator, eg DSLAM or splitter congestion
  - ISP congestion
  - Backhaul or International congestion

The test requires reasonableness, which may provide a range of speeds with a performance record by Time of Day over specific periods, e.g. “for the last 3 months”

23. Misleading information

The focus on speed throughput the Internet world is based on an assumption that speed is good, yet the majority use of the internet is not dependent on simple download speed. Using the internet relies on many factors including:

- File finding response time, often measured as DNS response time
- Latency, which is dependent on the distance to a server
- The capability of the sending servers
  - Video is often limited to 5 or 15Mb/s, so 100Mb/s only enables multiple users
  - Websites are often multi-file, so that means multi-DNS lookups
  - Video conference is usually dependent on upload speed from the far end, not download
  - File saves for remote workers where the file is in the cloud, depend on upload speed

- The age of the client, an old PC may have limited page rendering speed

The result may lead to “incorrect or misleading information”, based on an “expert” opinion, but for the layman, simplified results are necessary for informed selection of ISP, computer and technology.

24. Next generation networks

The impact of the new offerings will increase confusion unless there is a common denominator. The one aspect in common is the ability to deliver services over the ethernet transmission protocol common to all technologies. This can be measured using simple home quality routers loaded with firmware that runs tests at regular intervals over ethernet, ignoring the underlying technology.

TrueNet tests do just that.

25. New Technologies

Any new technology is limited in definition by the fact that the internet is ethernet based, so any testing must be common to any technology, as discussed in point 24 above.

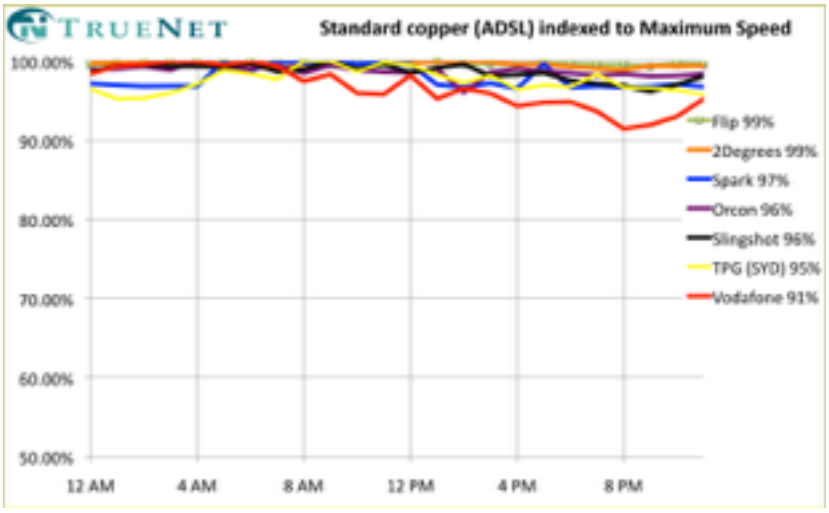
26. Peak hour differentiation

ISPs purchase connections from wholesale connection providers, in almost all cases they have no influence over the best speed performance on any line. ISPs must purchase backhaul and core capacity to meet speed demands (Mb/s) while selling to a demand based on data totals (GB/Month)

Because of this, ISPs are almost the sole contributor to Time of Day (ToD) performance and should have regular, consistent and reasonable measurements published that show that variation.

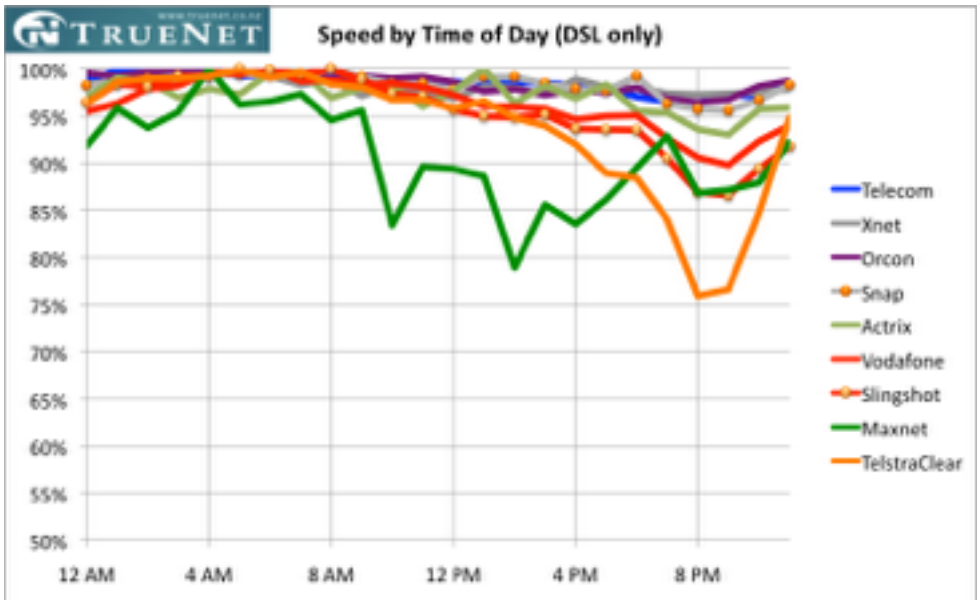
TrueNet has consistently published speeds, website download times, Latency and DNS query times - all by Time of Day to provide the critical information that consumers need to identify the best ISP for their use. ToD performance for DSL speeds are compared to the best speed delivered during the day, so that peak demand speed is shown as a percentage below 100% of the speed possible.

Some examples from July 2016 include:



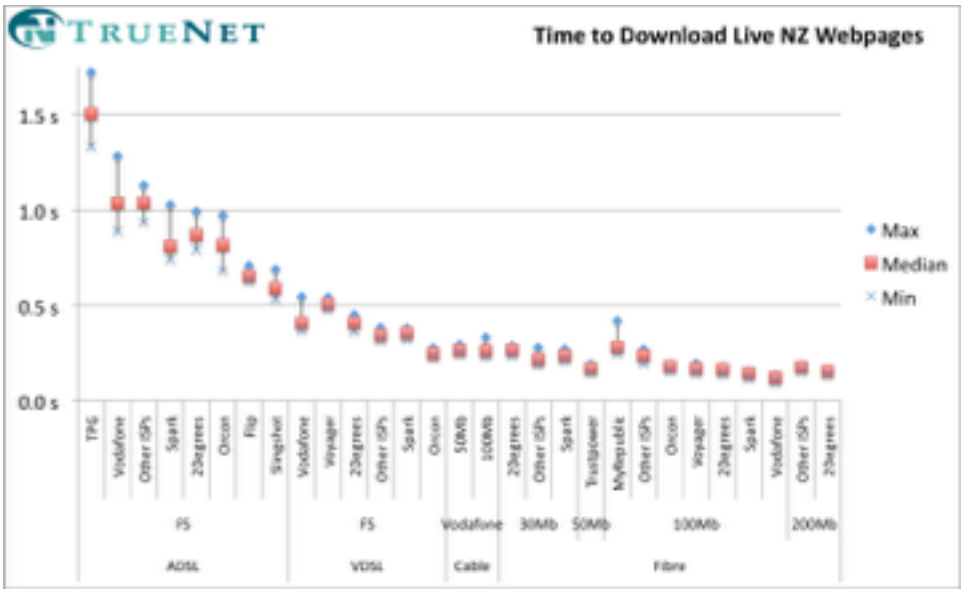
ADSL has been reported since 2012, so this chart demonstrates a problem for Vodafone not matching the performance of other ISPs in July 2016, this is typically a temporary issue for that month. Competition means this will be sorted quickly.

Here is the same ADSL chart from 2012 showing how much improvement has occurred.



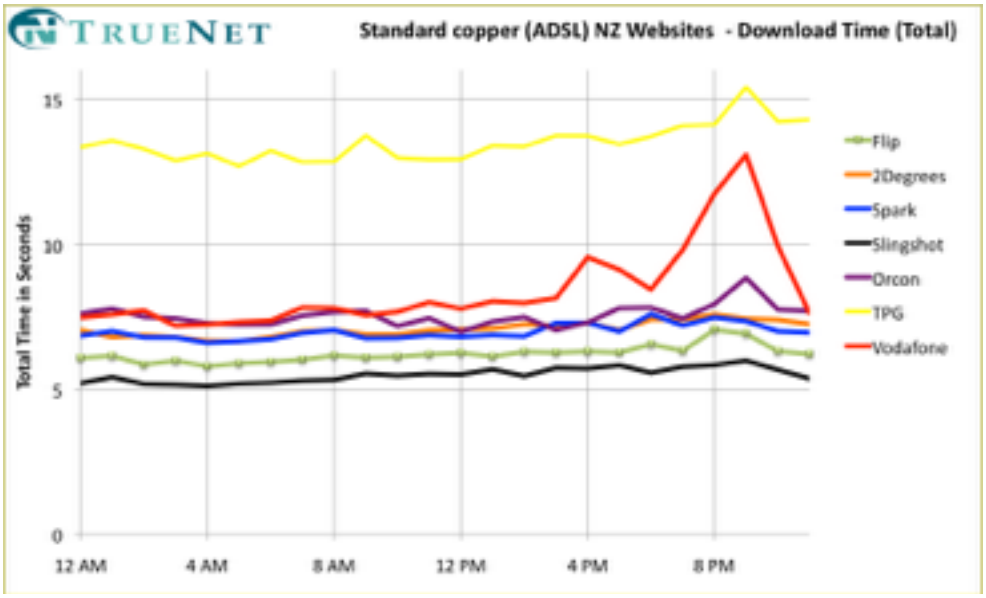
TrueNet updates trend charts to show performance changes every month here: https://truenet.nz/isp-speed-trend

More recently TrueNet have published website downloads from three countries, NZ, Australia and USA, We use a “Stock” chart to show the median, minimum (ToD usually 3-5am) and maximum (ToD usually 8-9pm) times to download a group of 7 popular webpages in New Zealand.

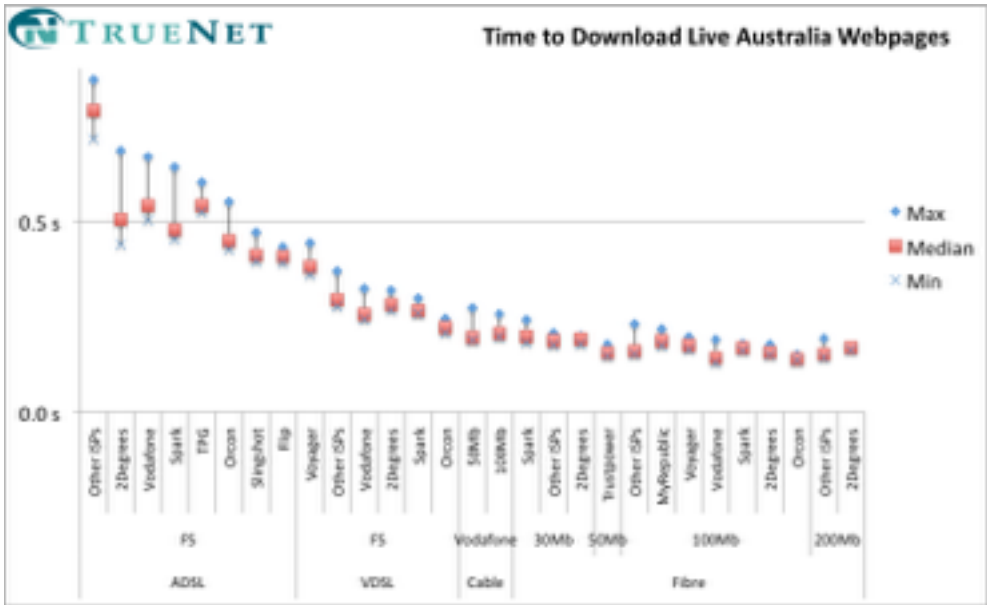


It is not possible to compare longitudinally because these are live webpages which change size and speed base on the owner’s investment. However comparing data for all ISPs when they are tested over the same period provides accurate comparisons between ISPs.

Fibre and FTTN (VDSL) tend to all have roughly the same results in the previous chart, but ADSL is very different. So here is a ToD chart to show how variations occur in peak usage periods. This chart is also published, but less frequently. TPG average performance is very different for NZ websites, and the peak evening increase in time to download the websites is poor compared to most NZ ISPs (Vodafone excluded)



Here is the Website Download chart for Australian websites:



Lack of Australian competition based on quality may be behind TPGs panelists being no better than NZ ISPs in downloading the Australian websites. Note this is TPG panelists downloading from Australia AND NZ panelists downloading from Australia.

All this information was published on the TrueNet website - truenet.nz, reducing search costs dramatically to find the best performance.

27. Unambiguous information

There is no better information than actual performance, but not in terms of 'fast' or 'quick', but in terms of best or best equal by Time of Day. This may involve many comparisons, depending on the purpose of the consumer. Do they want the best performance for Gaming, Video or browsing for example. Unfortunately while information may be unambiguous, consumer's demand may vary and be ill defined, often due to ignorance of technology rather than lack of data.

Producing a monthly report and gaining feedback from consumers is one way of ensuring that information provided can effectively be unambiguous.

28. ISP competition based on service performance

TrueNet's website is searched by approximately 10% of NZ internet consumers every year, looking for information. The most popular pages are

- comparing technologies such as VDSL and ADSL(education)
- monthly reports
- Our specialist "ISP Performance" page; the ADSL chart from this page is in our Introduction

29. Broadband Speed Claims

As above, speed is not the most important factor in internet performance. Once sufficient speed is enabled to download all common services, it only becomes a factor with multiple users.

30. Data charges

Unlimited capacity is becoming the normal product in New Zealand, and is likely to be similar in Australia as the cost of capacity reduces.

31. Confusion as a Marketing tool

The NZ government introduced a **Service Offer** requirement for all products that uses not only a list of common terms to describe every product, but also includes a requirement to demonstrate performance of any product.

The Service Offer must be monitored and enforced to be useful. Examples of this document are included below.

32. Comparator Websites

Funding for comparator websites must be free of a conflict-of-interest to create confidence. Too often comparator websites are funded by ISPs through fees for connections, advertising or similar. That is obviously an issue for both the comparator website as well as being an issue for broadband measurement websites. Independent funding is necessary to ensure that the market is informed.

33. Accredited price comparison

The ACCC must fund and support a website that can offer comparisons that are fair and free of conflicts of interest. Market support for such a website is not a viable solution.

The market for internet access is extremely dynamic, prices change frequently but also offers with various inducements change more frequently. The next page has as graph that shows a sequence of price changes in NZ ADSL service over 12 months:

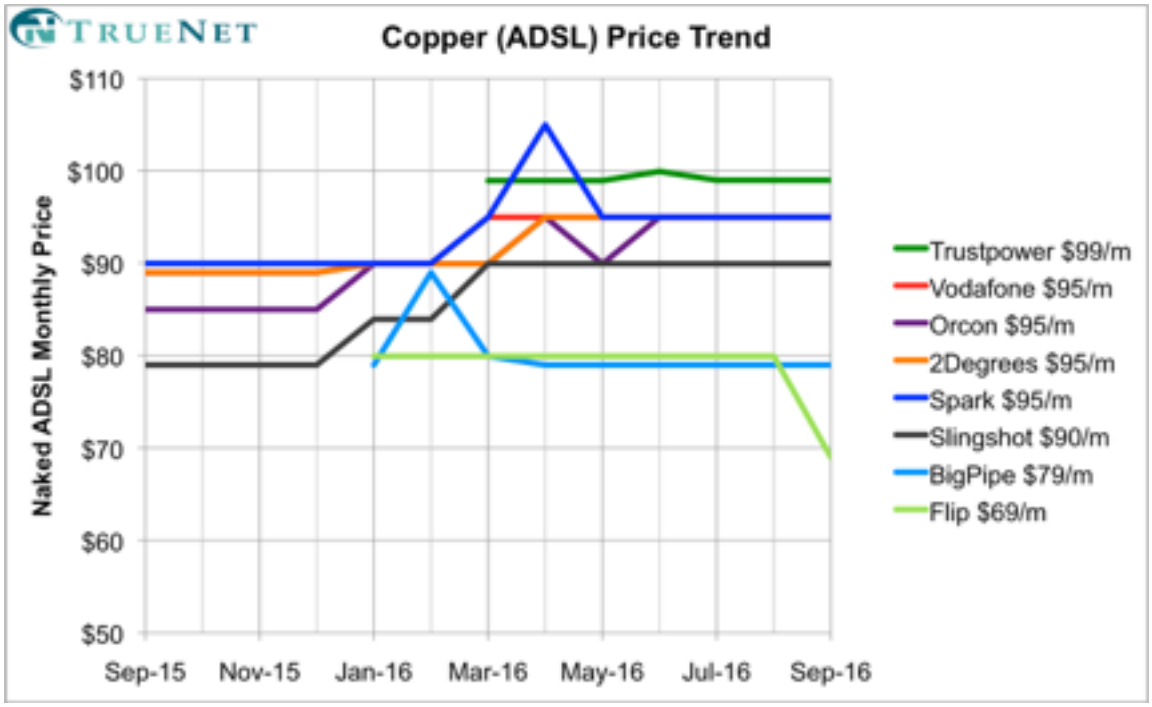
34. Internet of Things

Bundling, ISP owned names and confusing descriptions will slow the development of the IoT in Australia. This danger can be reduced by an insistence of industry agreed names and descriptions

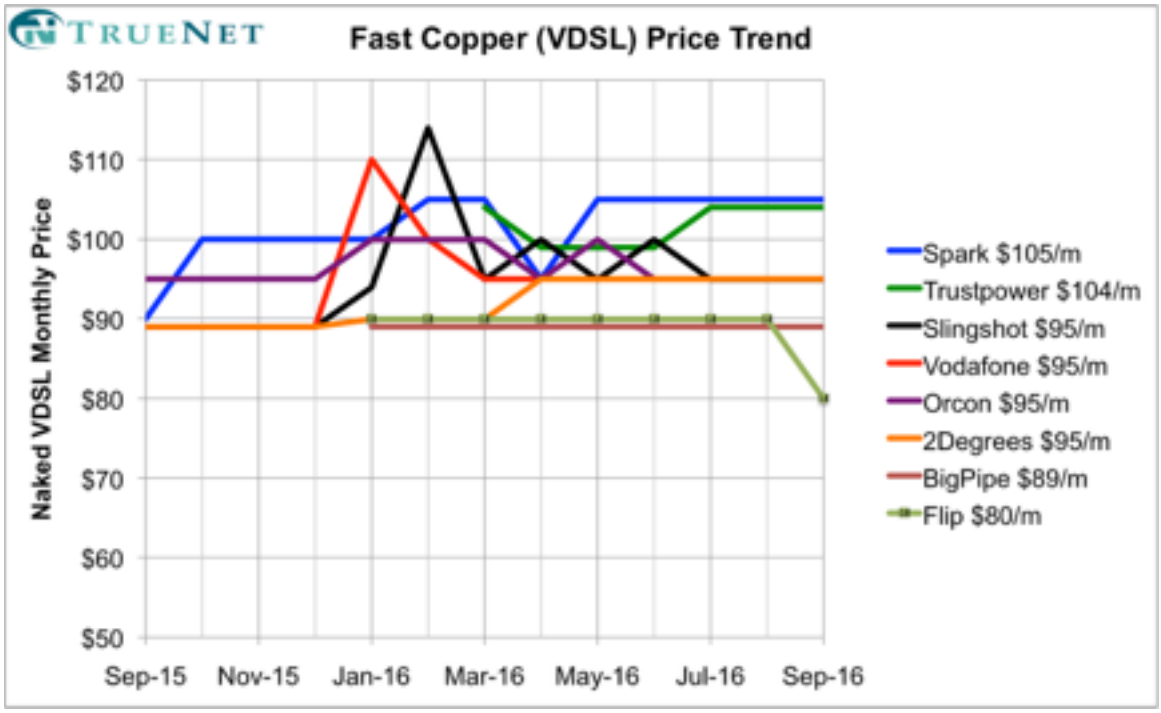
that appear in a committed Service Offer that is a requirement for the industry.

Price trends for Copper Services in New Zealand

ADSL



VDSL (FTTN in Australia)

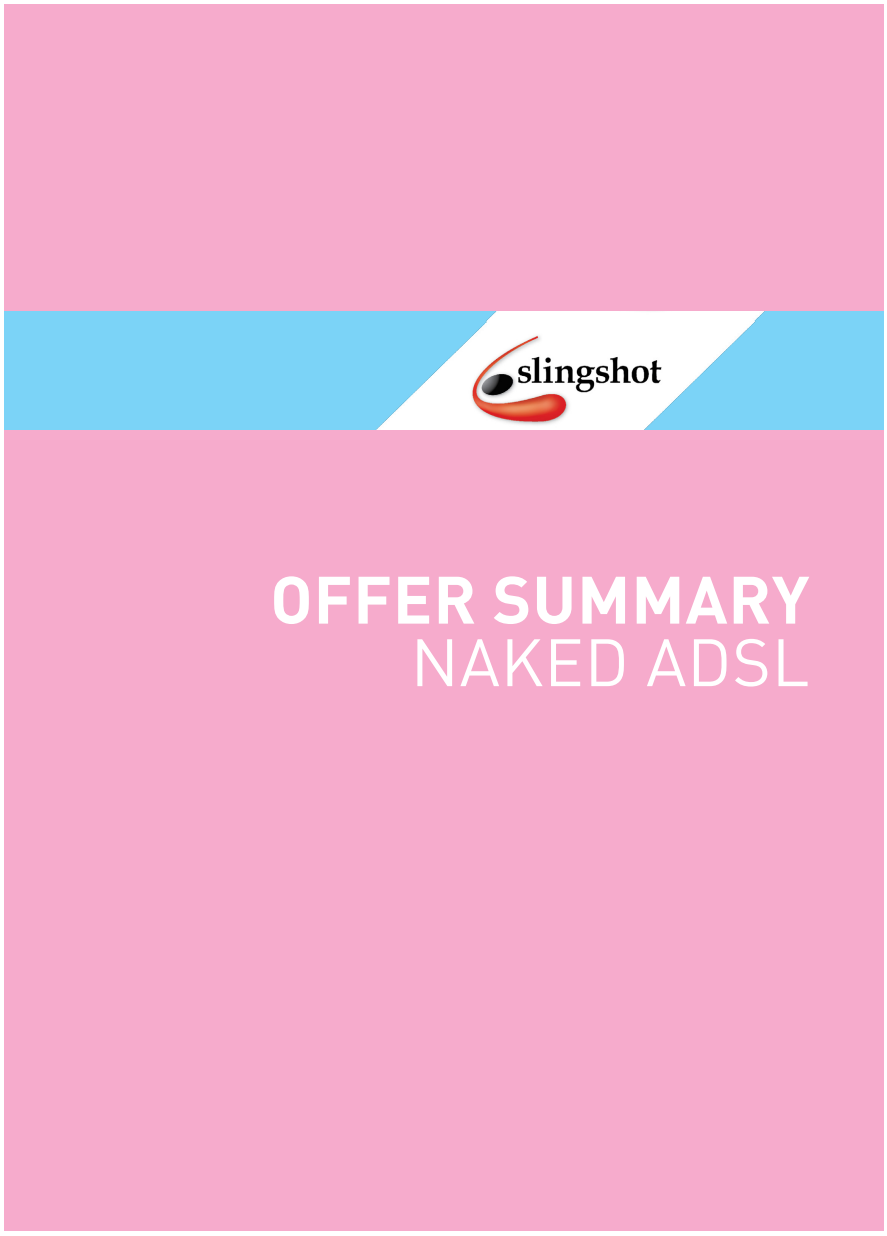


Service Offers from NZ

- Slingshot - https://www.slingshot.co.nz/assets/files/SS-ADSL-Naked.pdf?0.7.34
- Vodafone - http://www.vodafone.co.nz/cms/documents/adsl-naked-offer-summary.pdf
- Spark - https://store.spark.co.nz/internet/page/adslbroadbandoffersummary/
- Orcon - https://www.orcon.net.nz/myaccount-support/pdfs/Naked_ADSL.pdf
- 2Degrees - https://www.2degreesmobile.co.nz/termsofuse/broadband/2degrees-broadband-offer-summary/
- Trustpower - http://www.trustpower.co.nz/~/media/files/terms/legal%20offer%20summaries/tp0071-telco-summary-fibre%2010020-naked-02.pdf

A small sample of these are attached.

Slingshot Service Offer



Vodafone Service Offer

Standard Naked Broadband - ADSL

Offer Summary – 1 March 2016

SERVICE OVERVIEW		
Service Description	**For all plans** Standard Naked Broadband (ADSL) **On Account Discount** For 80GB and Unlimited plans only - $10 off your monthly bill for eligible Vodafone On Account customers **SKY on Your Vodafone Bill** For 80GB and Unlimited plans only - if your SKY TV service is charged to your Vodafone account you can get: • Free MY SKY HDi every month Minimum SKY package required is SKY Basic, and a 12 month term applies. See Other Requirements section for On Account discount and MY SKY offer details	
Availability	Broadband is not available everywhere. Address checker at vodafone.co.nz/broadband/	
Service Charge	**Charge**	**Monthly data allowance**
	$74.99 per month ($64.99 with discount)^** **$84.99 per month ($74.99 with discount)^	**80GB data** **Unlimited data**
	^$10 discount per month applies when linked to an eligible Vodafone On Account mobile plan. Prices are current as at 1 March 2016 and are subject to change. To see current pricing and On Account discount terms visit vodafone.co.nz/naked includes 99c telecommunications levy contribution	
Additional Data Charges	**Applies to 80GB plans**	**$2 per GB or part thereof** once you have used your allocated data allowance
	You'll receive an email notification when you have reached 80% or 100% of your data allowance. Manage your usage using My Vodafone at vodafone.co.nz/myvodafone	
Set Up Charge	**Open term contract**	A standard broadband connection fee of $101.20 applies. A Vodafone wireless modem may be purchased for $149 ($14.95 postage and handling charge applies) or you can choose to bring your own ADSL2+ capable modem
	12 month contract	Free standard broadband connection (or $101.20 off connection & wiring). Free Vodafone WiFi modem (normally $149, $14.95 postage and handling charge applies).
	See 'Other Charges' for additional setup charges which may apply.	
Access Type	**Copper ADSL**	

Spark Service Offer

ADSL BROADBAND OFFER SUMMARY

Spark

SERVICE OVERVIEW

Service description

ADSL is our standard broadband service for residential customers. It connects your home to our network via a copper connection to your house. From there, we connect you to the internet using our extensive international network.

We have two ADSL Broadband packages:

1. ADSL Broadband and Home Phone

With this package you'll get a landline and a phone number as well as your broadband. The landline connects you to the public phone network so you can make local, national, international and mobile calls from your home phone.

2. Naked ADSL Broadband

This is broadband only. You don't get a landline or phone number.

Availability

Our ADSL Broadband services are available in almost all areas of New Zealand. So if there are copper phone lines running in your area, there's a good chance you can get broadband as well.

Service Charges

ADSL with home phone

This package comes with a landline. Local calls are free.

Monthly data allowance	Charge
60GB	**$84.99** /month
120GB	**$94.99** /month
Unlimited Data	**$104.99** /month

Naked ADSL

Broadband without the landline.

Monthly data allowance	Charge
Unlimited Data	**$94.99** /month

Both options also come with:

1. Spark Security Suite - 5 free McAfee Security licenses for all broadband customers

2. Email - Free premium email service from Yahoo!

3. 24/7 Help and Support - over the phone and online, including a live webchat service

Additional Data Charges

If you exceed your monthly allowance you will be charged in data blocks of 5GB each at $5 up to a maximum of $50 at which point you will receive no extra data charges until your next billing cycle.

Find out more about additional data charges (http://www.spark.co.nz/shop/internet/datacap.html).

Note that customers on an Unlimited Data plan don't need to worry about reaching their monthly data cap.

Set Up Charges

Setup charges differ depending on the contract option you choose. There are 3 options:

1. You'll get a free standard connection and a modem on a 12 month contract.