

NZ ADSL outperforms UK and USA

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TrueNet Drives ISP Competition in NZ

Since TrueNet began operations in 2010, their focus on publishing Speed by Time of Day (ToD) performance has driven NZ ISPs to compete. This is not the case in the USA, or the UK where similar measurements over a longer period have not resulted in improvements in performance such as those achieved in NZ.

The result of increased competition shows that not only have all major ISPs improved dramatically, but the top 8 in NZ are significantly better than the top 8 in either the UK, or the USA.

Peak Period Speed Study

Speed for ADSL is mostly dependent on two factors:

1. Distance from the exchange (or cabinet), potential speed reduces a lot once the distance is greater than 1km.
2. The ISPs management practices, either speed control, or capacity constraints

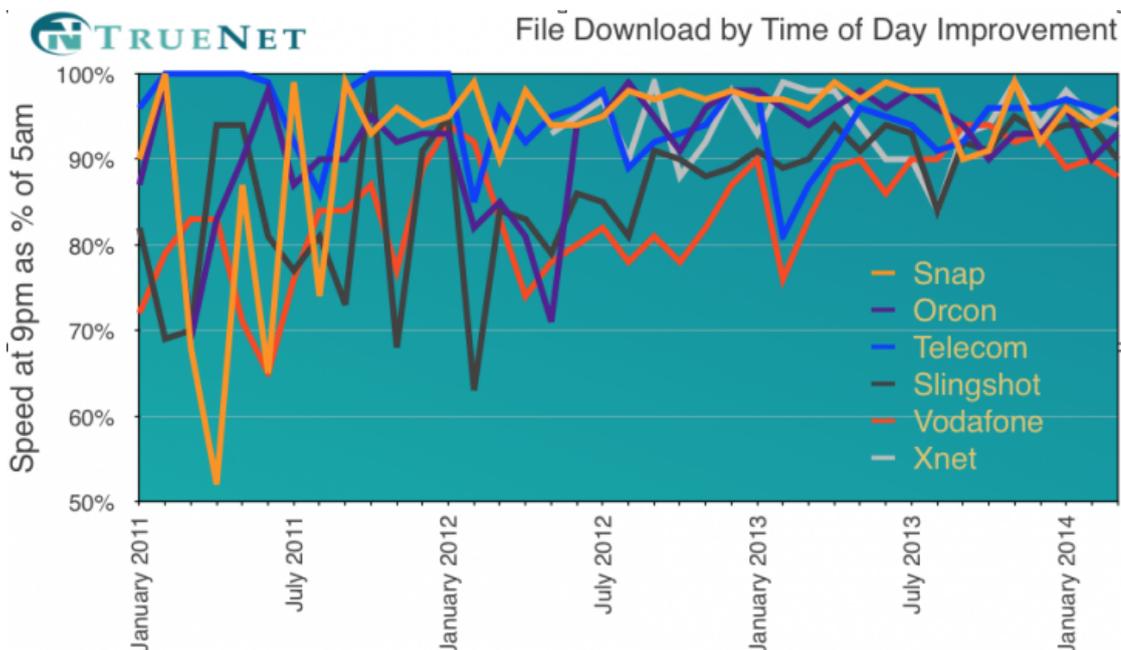
In the USA it is common practice to limit speeds to an "advertised price", starting at 256k and going up to not much more than 5Mb/s. In the UK ADSL is sold in a similar way to NZ, i.e. as fast as your line can go.

With ToD measurement, TrueNet compares the speed during peak demand at 9pm with that during quiet periods of the day at 5am. We get used to the best speed possible on our lines so the most annoying "feature" of internet performance is a change in speed during the evening busy period from 7pm to 11pm. TrueNet focuses on this period by measuring the median speed of each volunteer's connection, and dividing that by their maximum speed discovered when measuring 24 hours a day.

ISP Improvement

TrueNet's monthly reports on ToD performance began in August 2011. The results show that wide variations in speed were common prior to TrueNet publishing monthly, but from early 2012 performance gradually improved.

Chart 1: Time of Day Variation since 2011



Current typical 9pm performance is better than 90% of the speed recorded at 5am. 90% was a target published in 2012 when it was realised ISPs could achieve that measurement consistently over a long period of time.

International Comparison

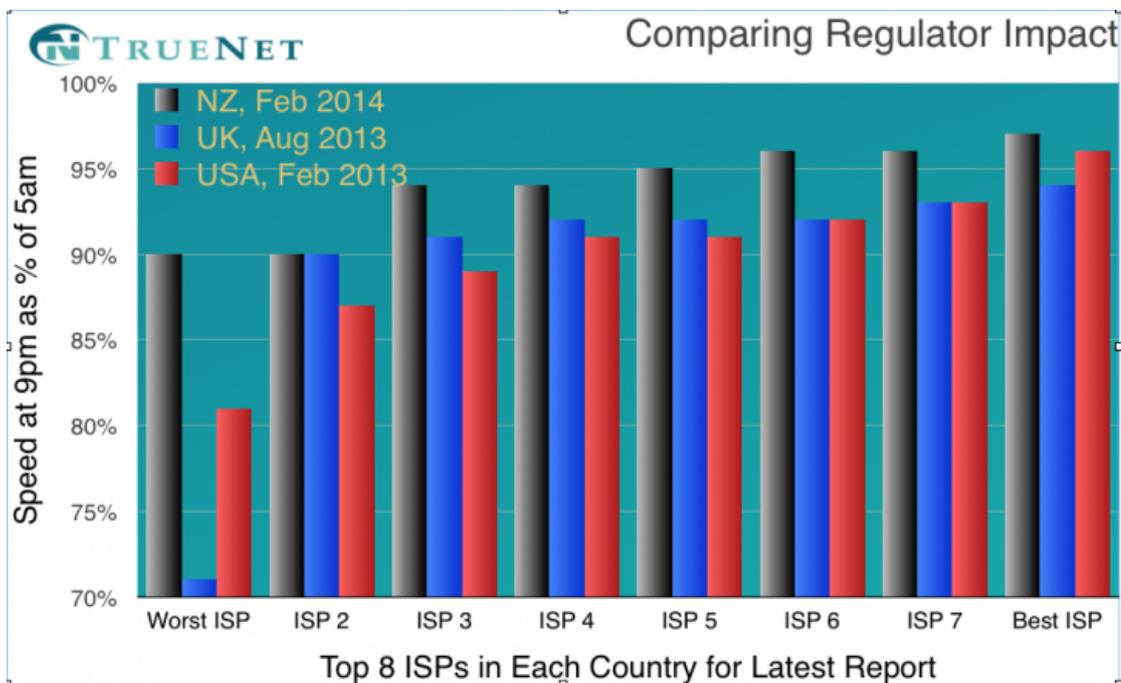
Many countries are now comparing ISPs using a panel of volunteers with probes; using a methodology similar to that of TrueNet in which performance is measured regularly. Differences in market conditions make comparisons difficult but it is possible to find similar details.

Countries where the panel concept is used include: USA, UK, Countries of the EU, Singapore and Brazil.

Only USA and UK publish ToD comparisons regularly, and then only every 6–12 months, and up to 15 months after the measurement. These publications have little impact on the market because they are too little, too late. It is impossible for an ISP to respond to such publications by showing improvement because the data is completely out of date at time of publication. In NZ we publish monthly, ISPs are able to improve performance during the next month, and so raise their ranking.

The net impact is that on a comparable basis, NZ is well ahead of both USA and the UK in ToD performance for our top 8 ISPs

Chart 2: ToD Performance for the Latest Report in each country



ALL NZ ISPs are better than the equivalent best performer in both the UK, and USA. Half of all NZ ISPs achieve better than 95%, but only 1 ISP from either the UK or USA has better than 95%.

Regular monthly reporting means ISPs have time to respond if demand starts to exceed supply; while publicity encourages competition, which in turn increases overall performance improvements in the NZ market.

Calculation Details

Details of ToD calculation – for reference;

1. We measure every hour and find the median of hourly measurements for each probe throughout the month.
2. We average the hourly measurements at 5am and 9pm for all probes connected to each ISP
3. The percentage is the 9pm average divided by the 5am average.

Details of the UK and USA sources:

1. UK, [Report](http://stakeholders.ofcom.org.uk/market-data-research/other/telecoms-research/broadband-speeds/fixed-line-broadband-perf-updates/) (<http://stakeholders.ofcom.org.uk/market-data-research/other/telecoms-research/broadband-speeds/fixed-line-broadband-perf-updates/>) & spreadsheet published [re August 2013](http://stakeholders.ofcom.org.uk/binaries/research/telecoms-research/fixed-line-broadband-perf-updates/bb-aug2013.xlsx) (<http://stakeholders.ofcom.org.uk/binaries/research/telecoms-research/fixed-line-broadband-perf-updates/bb-aug2013.xlsx>) . <http://stakeholders.ofcom.org.uk/binaries/research/telecoms-research/fixed-line-broadband-perf-updates/bb-aug2013.xlsx>
2. USA, [report](http://www.fcc.gov/page/measuring-broadband-america-open-methodology) (<http://www.fcc.gov/page/measuring-broadband-america-open-methodology>) published re February 2013. [Chart here](http://www.fcc.gov/measuring-broadband-america/charts#chart1) (<http://www.fcc.gov/measuring-broadband-america/charts#chart1>) <http://www.fcc.gov/measuring-broadband-america/charts#chart1>

These two spreadsheets provided raw data, from which we have calculated the variance between peak speed and worst speed.

The NZ data is from our regular monthly measurements and is from the the February 2014 results.