

Response To The DCBDE'S Request For
For Submissions On Regulatory Issues as
Part of the NBN Initiative

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Introduction

Worldwide, there is recognition of the benefits of "liberalizing" the telecommunications sector through the introduction of competition and the privatization of telecommunications carriers. The main objective for this reform is to increase accessibility, quality and affordability of services. This immediate objective has broader societal benefits, because the availability and affordability of modern, reliable communications services are crucial to the ability of all sectors of an economy to attract foreign investment and compete in today's global markets and thus are essential prerequisites to overall national economic development.

As a result of this, Governments and Regulatory bodies are focusing on the deployment of broadband communications networks and unbundling of the Local Loop (LLU) services as a critical issue for the communications industry and as a major stimulator of national economies.

Broadband policy frameworks typically visualize creation of infrastructure through various access technologies that can contribute to growth and can mutually coexist. Spread of infrastructure is a must for healthy competition and therefore it would be the endeavor of regulation that the telecommunication infrastructure growth in a country is not compromised in any manner.

Today, various access technologies include;

- Digital Subscriber Lines (DSL) on copper loop;
- Unbundled (LLU) Digital Subscriber Lines;
- Optical Fibre Technologies;
- Satellite Media;
- Cable TV Network;
- Terrestrial Wireless;

Any measurement solution must therefore be completely technology agnostic, in order to ensure an objective view of the performance of each technology type is obtained.

The Australian government is looking to embark on a substantial project to ensure its country's citizens and businesses have access to a world class, comprehensive broadband network (the NBN), cost estimates of which centre around the \$10bn-\$12bn mark.

Why Conduct Broadband Measurement?

There is no question that the progress, deliverables and ultimate success of a project of this scale and complexity must be measured and monitored. This should occur;

- Before the project begins, in order to ensure a definitive view of conditions prior to the implementation of the project are recorded;
- During the project; to ensure all objectives are on track for being met, dollars invested are providing a concomitant return vis-à-vis performance

improvements, and that the accuracy of project reports provided by vendors are both triangulated and accurate

- After project completion; to allow comparison across all objectives with the pre-project status, ensuring measurable and quantifiable benefits have been gained

Service Providers

Currently, there is only one company in Australia scientifically and comprehensively measuring the current levels of broadband performance of its major ISPs. EpiTiro has three laboratories dedicated to measuring the top 5 ISPs in the three largest cities in Australia, 24 x 7, across a sophisticated range of performance metrics, including, but not limited to synchronization speeds, line speed, time to connect, cached and non-cached download speeds, DNS response times, ping times, packet loss levels, and email roundtrip times.

In addition to these sites, EpiTiro has a farm of over 2000 desktop agents, running on computers all over Australia, providing it with a comprehensive data-set on performance in urban, provincial and rural areas.

EpiTiro is also working with OFCOM in the United Kingdom and the Commerce Commission in New Zealand to provide reports that allow these regulators to obtain a clear picture of industry and ISP performance. Attached with this submission is an example of such a report – produced quarterly - recently provided to the New Zealand Commerce Commission on the industry performance in that country, produced in concert with international consulting company IDC.

These reports, produced quarterly, are each based upon almost one million individual tests conducted across a range of locations, ISPs and test types. The values for the tests are averaged for over the period, indexed to allow easy manipulation and comprehension, and then graphed and analysed by EpiTiro's partner IDC. The results are then presented to the Commerce Commission, and the report made public. The Commission and decide to include and exclude data collected, as it sees fit.

The first of these reports was released by the Commission on the 16th June 2008, and received considerable coverage in the New Zealand and to a lesser extent, the Australian media. It has been seen as a scientifically-based, yet accessible document, which provides the regulator, the industry and New Zealand consumers and businesses with a sense of the country's progress towards a more advanced digital future.

Some examples of the kinds of data this report contains are also included in the Appendices of this document.

Key Benefits

Some the key areas in which EpiTiro and IDC have been able to assist the regulator in understanding, measuring and reporting in the area of broadband investment have been as follows;

1. Comparing the performances of individual ISPs
2. Comparing the performance of different geographical areas, and individual ISPs therein
3. Comparing the performance of different technologies
4. Comparing the performance of LLU v non-LLU exchanges
5. Measuring the absolute performance of 1 – 4 above
6. Providing international comparisons
7. Monitoring the performance of network components; for example, the local loop, backhaul, local peering exchanges and the offshore Internet.
8. Monitoring performance variability, over daily, weekly and monthly cycles, as required
9. Ensuring equivalence of inputs
10. Measuring traffic management policies of individual ISPs and the industry as a whole
11. Measuring the impact of (consumer premises equipment) CPE-related variables

An effective relationship between a provider of such information and the regulator will allow the provider to:

- serve as independent advisor to Government on broadband;
- seek to be a 'critical knowledgeable friend' to government;
- build a consensus view to create a coherent plan to help achieve the Government's Broadband goal;
- be open to all stakeholders to contribute to its work;
- seek to remain commercially and technologically neutral and act in what it believes is the country's best interests;

Conclusions

It is Epiteiro's belief, based upon its experience with both OFCOM and the Commerce Commission, that the DBCDE should ensure a rigorous and objective broadband measurement and benchmarking regime be in place as part of the implementation of the NBN project. This will ensure the government is well-placed to monitor the deliverables agreed with the successful bidder, and to ultimately ensure the project delivers on the government's and the country's aspirations.

Appendix 1: Commerce Commission Report; Some Graphic Examples



