NBN Statement

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About Me

I have worked in different capacities in the IT industry since 1986. My background prior to entering the IT industry is in electronics. Some areas I have specialised in are health, accounting, and education.

In 2011 I worked for UTAS in as a computer support officer. In the year at UTAS I assisted with the support of video conferencing and UTAS's fibre computer network that covered the state.

To quote John Parry, Head of ICT Resources, Utas:

> http://tasnbn.wikifoundry.com/page/ICT+Resource+Dept,+UTAS
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> "Currently UTAS has a high capacity optical fibre network on campuses and between major campuses. It is connected to other universities through AARnet. AARnet provides a high capacity national backbone which is continually reviewed and the technology (such as fast switching) on the ends is constantly upgraded. Bandwidth is increasing from 1GB/s to 10GB/s and will continue to increase."

Currently I provide computer support to the general public. Around 45% of my current work would involve testing repairing or diagnosing internet connections. Broadly speaking this can be as diverse as a virus or spyware that has stopped the internet operating correctly through to lodging faults with carriers due to line faults, or replacing customer equipment.

I have a contract with a national computer support company that provides IT work and limits my ability to freely disclose customer information.

Internet Industry shortcomings.

Frequently customers are found to be on obsolete plans paying far more than they need and not receiving the speed that copper should provide. A common reason for this is lack of customer understanding of the options and the industry offerings possibly due to the overwhelming amount of information and marketing available. Quite often this confusion leads to the client having no expectation of the speed or service they should be receiving. I have quite often been called out to customers who believe being shaped (Slowed down when their quota or limit is reached) to be a fault of the computer.

Anyone who uses an Internet Service Provider (ISP) other than Telstra risks a poorer level of service. I can use my own experience here when last year a car ran over my local Telstra distribution point (Pillar). My Telstra phone service was restored in three days, along with the internet service associated with it. I logged a fault for my other two connections with my ISP Internode. Telstra got the internet connections working on the 2nd and 3rd connections within a couple of weeks. There

was another fault on the 3rd connection that I noticed due to frequent drop outs and that the speed had dropped substantially compared to its prior speed and the other two connections. Another fault was logged with Internode and three months later the Telstra tech found someone when repairing the pillar had "borrowed" a pair of copper that was running to another house. When he removed the "borrowed" bridge tap the internet returned to the "normal speed"

In comparison when I first moved in to this premises and had a service from Bigpond I found that when I logged a fault over line speed and drop out issues they were fixed the next day.

Telstra will prioritise their own services over 3rd party and "naked" internet connections.

Even though the cost of providing "naked" (Unbundled Local Loop or ULL) is close to the cost of a normal phone line both the repair time and installation time are almost four times a normal adsl service. Naked services are where the internet is provided without the need to order a phone service.

For optimal ADSL operation the customer premises has to be cabled correctly. Filters need to be attached to all telephone equipment, and if the customer has an alarm then a central splitter needs to be installed. Frequently I find the filters missing or only plugged into the modem.

Internet measurement. Australia focuses on the amount of data per month, and speed down. This completely ignores upload and latency.

Upload speeds are vitally important for video conferencing. Video conferencing will play a huge part of our future as education and medical industries find their feet with this technology. In order for a video conference to work both ends of the call need to be able to "stream" (send data continuously) to the other end (Upload). If there is any interruption to the stream then the quality of the call will suffer. Such interruptions can occur if someone else on the same connection uploads a photo at the same time. This is mostly due to the very limited upload ability of ADSL. Downloading can effect the call in the same manner however this is less common as there is a much larger download ability.

Latency is the time it takes for data to travel to the destination. Even operating at the speed of light there is a delay in sending signals around the globe. In video conferencing even a 50ms delay (1000ms =1 second) is noticeable, 200ms is difficult and half a second will lead to such a poor experience its quite likely the call will be terminated.

ADSL latency suffers in a fault condition. Where there is corroded copper, or incorrect installation one of the key measurements is the latency. This will often indicate that Telstra will be required to repair the line. ADSL has inherent latency.

ADSL is a best effort service. There is no test that we can do to ensure an internet service is operational at the best speed. We can guess based on measurements what we think the speed should be, but faults can be missed quite easily. Telstra themselves are often unable to repair faults due to the fault not occurring at the time they check the line, only to come back shortly after.

Fibre offers much better latency that provides a much better experience with video conferencing, remote desktop, and other time critical software.

Fibre offers a measureable speed making it much simpler to determine a fault.

Fibre offers an even playing field for ALL Telco's.

Business is changing as more "cloud" offerings are appearing. Without reasonable Upload abilities business will be held back to keeping their servers running onsite, unable to work remotely or backup their data offsite easily. The most cost effective method of backing up data is still where you pay someone to carry a disk or tape (sneaker-net or austpost).

Microsoft's latest windows 8 requires an approx 3gb patch that takes around half a day on an average ADSL connection.

In order to upload a 3gb home movie (around 20 mins worth of raw HD video) takes around 27 hours currently.   On a 10mbit fibre upload it would take 42 mins. On a 100mbit fibre upload it would take 4 mins.

In short the IT industry is clearly moving towards a requirement where gigabyte files will be common place, and not only downloading them, but if available sharing information using upload abilities too.

Fibre Benefits.

The current NBN fibre offers the client a choice of up-to four different ISP at the same time, as well as a phone port. This can run along side existing phone and ADSL internet. Should the copper be reused then upon installation existing phone and internet will be cut until the new service can be established. As anyone in business can tell you burning bridges like this is foolish, and having no backup plan is lunacy.

Fibre is faster than copper, today and will meet the infrastructure requirements of Australia for the next century. The likelihood is copper will need to be replaced in the next ten years with fibre as the demand for internet services increases.

Not everyone requires fibre today. Most people are quite satisfied with the speed of their internet currently. Not everyone has to update their computer, or wants to share files or use tele-health and education. But just because not everyone wants to use these services shouldn't mean everyone should have no access to these services.

Lastly

I have three internet connections running to my home office to provide the UPLOAD speed I require to operate.

Telstra would love me to use wireless however my average use would cost around $1800 per month to use the 4g network, and they generally don't allow mail servers or other servers on their network. (10 x $180 Internet sticks each giving 12gb each)

I currently pay $239 per month for 450gb, although my business only uses an average of 120gb per month.

The only other option I have is a Telstra business plan that would cost around $8000 per month to provide a better service (more upload).

I have a registered company – Australian Cloud Computing Pty Ltd that is waiting on a fibre connection and assumes the majority in Australia able to access a fibre based connection. Should a lower standard (copper) network be deployed then I can't guarantee the customer experience (it will

lag and be unstable) and I will be considering alternatives such as international hosting, although it's more likely I will scrap the cloud plan and continuing to repair internet connections.

Australian Cloud Computing pty ltd is only mentioned as an example that there are uses of fibre networks that are commercially viable but will not be put into action unless a network is made available.

I know many small and medium businesses that want to work from home. While I do my best to assist them with the technology available today (the same technology available 15 years ago), the setup is difficult, the experience poor and limited in what they can do. If a better network was available this would be vastly simpler and provide a much more productive environment.

Anyone who has tried to upload a simple photo knows how poor our internet is. Cameras are steadily increasing the size of files, and most cameras offer video capabilities. A communication network should cater for TWO way communication TODAY. The internet is far more than downloading "movies and video games".