Submission to the Senate Select Committee on the National Broadband Network

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This submission shows that for many Australians, the reality of their broadband does not match the information on the Government's MyBroadband website. Through a survey and graphing the results, we have shown the frustration experienced by people around the country that they do not have access to reliable and affordable high-speed internet. We are also concerned that many of our survey respondents struggled to understand the technical issues related to broadband and internet related matters.

We present the following nine recommendations for the Committee's consideration:

1. The Committee includes the impact of weather and region specific environmental factors during any discussion about broadband.

2. The Committee considers broadband as critical infrastructure, in a similar fashion to other essential services like electricity and water, during any discussion about broadband.

3. The Committee ensures the broadband network can grow in speed and bandwidth alongside Australia's broader economy.

4. The Committee includes the productivity and security risks inherent in the existing copper legacy network in any broadband discussion.

5. The Committee ensures the publication of an accurate map of existing broadband infrastructure including realistic equitable options to inform the electorate.

6. The Committee includes a realistic cost of ongoing legacy network maintenance or replacement in any discussion about broadband.

7. The Committee includes a productivity impact of network congestion, particularly in light of growing population and future home devices in discussions about broadband.

8. The Committee includes consideration of equity of internet access in any discussion about broadband.

9. The Committee includes regular community feedback in any discussion about broadband.

Who are #MyBroadbandvReality?

Noely Neate, Paul Davis and Pascal Grosvenor are the three people putting this submission together, although it is in reality on behalf of the over 800 interested **people** on social media, predominantly Twitter, who replied to the survey. Many interest groups, industry stakeholders and lobby groups have a say in these Senate Select Committees, while **people**, common average everyday **people,** who are using the Internet on a daily basis, seem to be left out of the discussion.

We would like to change that.We would like to give 'average' people, who will be the end user of what is implemented, an actual say in what they are receiving, what they need and the problems they are having in their own voices.

Why #MyBroadbandvReality?

The Minister's announcement of the My Broadband site had many people visit to see what was on offer. We experienced a site which provides the same information we've been hearing for years from our Internet Service Providers (ISPs), which seemed to be (yet again) disconnected from our reality. We read the FAQ assumptions and saw statements like **"possible speeds achievable over that infrastructure as the measure of quality"**[1] and thought - how can we have an evidence-based policy making decisions such as which areas to prioritise for high speed rollout if we rely on theories, not evidence? Important decisions will be made based on the information from the MyBroadband site. We wanted to inform the debate, to let the decision makers know what's happening out there, in the real world, so **#MyBroadbandvReality** idea was born.

What did #MyBroadbandvReality Survey find?

For starters, we found from our 800 recipients that the REALITY of what they were experiencing was not what the My Broadband site was telling them, even taking into account ISP and geographical intricacies.

The **#MyBroadbandvReality** survey only asked people to compare the information they were getting on the My Broadband site with what they were actually getting in reality *(using publicly available tools, intentionally avoiding asking people to find out the speed reported by their modem)* with a comment area for issues. This 'comments' area was used extensively and analysis raised some concerns we would like to elaborate on :

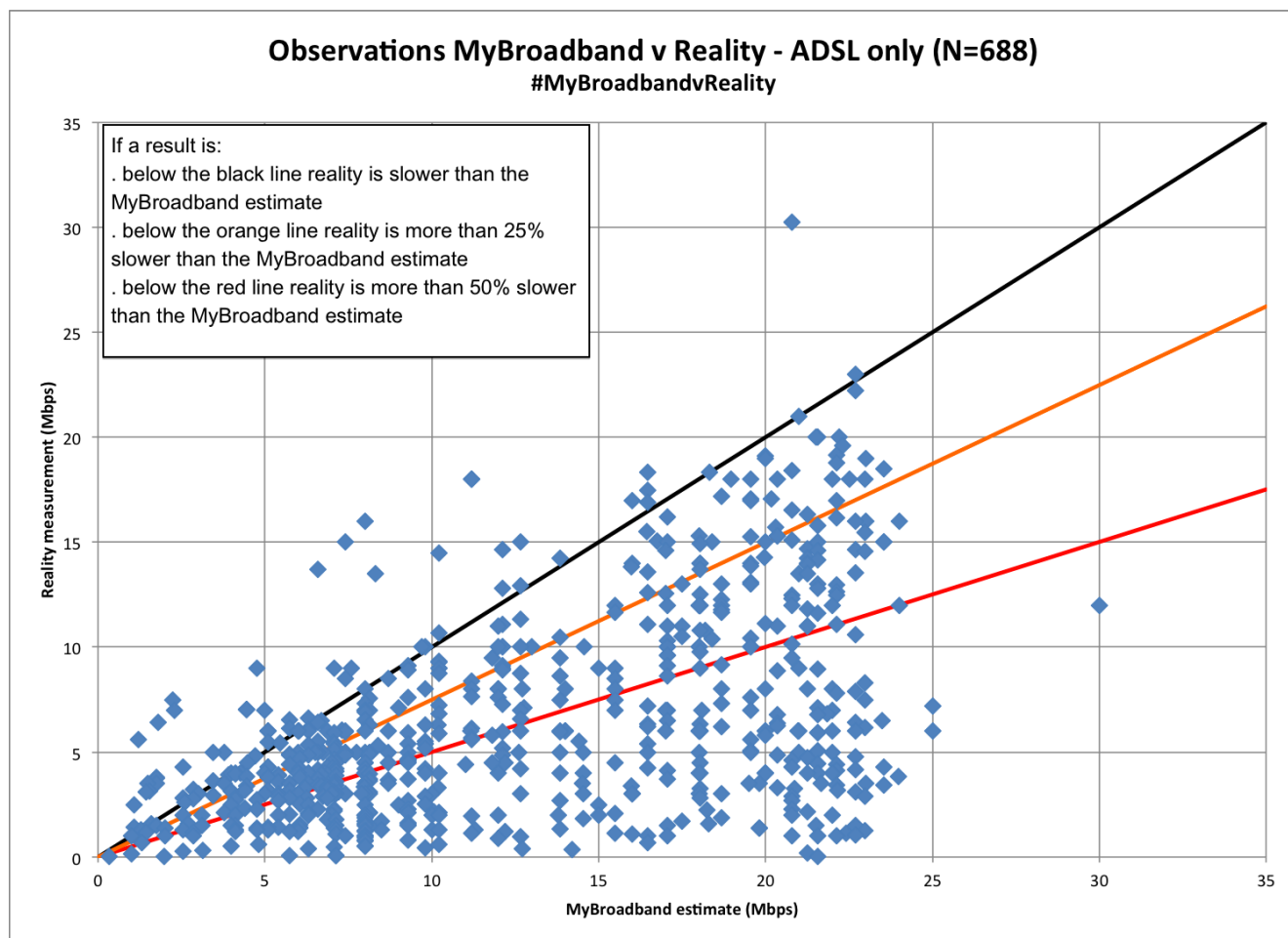|	
♪ **It's raining it's pouring and nothings bloody working** ♪	**Weather**
Oops! I dropped out again	**Drop Outs**
Phar Lap has left the building	**Speed**
Same as my daddy and his daddy before	**Copper**
We can haz Interwebz???	**Broadband Access**
Telstra said… Oh Wait	**Maintenance**
Crowded House	**Congestion**
Extra: Broadband Lotto	**The Lucky Few**

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[1] Contained within the "What is Broadband Quality?" section of the My Broadband FAQ

It's not that families don't care - it is that they don't understand and no-one is asking them

Mr Turnbull inferred in his press conference[2] on February 20, when MyBroadband was launched, that it was only the ALP or technical types that cared about or "*drink from the Fibre to Premises KoolAid*". As you can imagine, 'technical types' went running to the new site to see what they should be getting, results varied greatly with the majority being lower or considerably lower than the median speeds quoted on the new Government site.   Many non-technical people on Twitter then asked how they could find out as well. Out of concern that this would be the only source broadband blackspot data[3], and to support non-technical types, YaThink.com.au (an Australian personal and topical blog) wrote an article[4] to help people and created a survey to learn how much of a gap there was between the MyBroadband estimates and reality. Over 800 people participated in the survey, surpassing our expectations. In this process we learned 'average' people do care, they just sometimes they don't understand and it seems no-one is asking them!

Observations MyBroadband v Reality - ADSL only (N=688)
#MyBroadbandvReality

If a result is:
. below the black line reality is slower than the MyBroadband estimate
. below the orange line reality is more than 25% slower than the MyBroadband estimate
. below the red line reality is more than 50% slower than the MyBroadband estimate

As we worked through creating this report, we sent out a few draft charts via twitter and the direct feedback highlighted two aspects: 'yes, just as I thought' and 'yes I can understand it' . This graph is filtered to only display ADSL connections as that's how 86% of the survey participants connect to the internet[5]. The chart

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[2] MyBroadband Press Conference Launch: http://www.youtube.com/watch?v=kf0yWVNJ8wM

[3] http://www.malcolmturnbull.com.au/media/mybroadband-site-identifies-australias-broadband-blackspots

[4] http://yathink.com.au/article-display/my-broadband-vs-reality,106

[5] The latest Household Use of Information Technology report by the Australian Bureau of Statistics noted 77% of Australian households have access to a broadband internet connection http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/A0074B22E3150EEECA257C89000E3F7A?opendocument. [Accessed 25 February 2014]

shows most participants experience speeds more than 25% slower than the MyBroadband estimate. Of course these results are from a short-run survey which aimed to get a feel for what actual speeds people were experiencing. Which means of course :

1. it is likely some of the slower speed observations is due to a person's selection of internet provider plan with a cheaper plan resulting in slower speeds; and

2. there is possibly survey selection bias, a constant risk for surveys, whereby the results obtained by survey is overtly influenced by the audience selected *(and in this case voluntary input, possibly swayed by personal frustration)* to complete the survey.

We think despite this the information is valuable to the committee. This is because the survey is letting the committee know the broadband reality for over 800 people from across Australia.
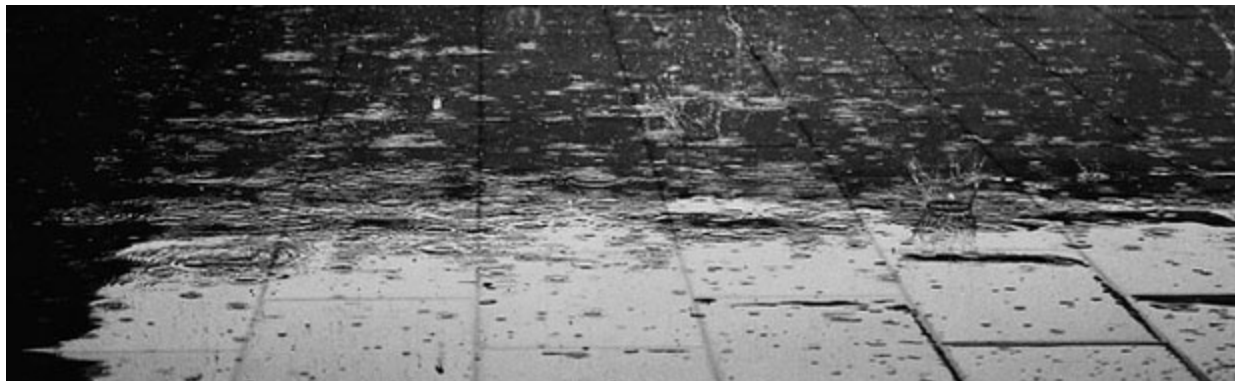
♪ It's raining it's pouring and nothings bloody working ♪
WEATHER

Rain in particular was a recurring theme in many comments. For people with ADSL, 'rain' was mentioned 63 times. Extreme heat also caused people's connections to either drop out or cease totally, requiring a call to Telstra. Considering the amount of extreme weather this country experiences (in particular drought and flooding), this should be paramount to any decision-making in regard to what infrastructure would work best for which location, as well as ensuring what is currently in use has not already been irreparably damaged. In some cases like the below, it is not just the internet but the phone line as well, making small business very difficult:

Albany Creek, Queensland stats: ADSL - MyBroadband 12.12Mbps - Reality 5.98Mbps
"*Try running a small business from home when the faulty copper wire connection keeps failing after every moderate fall of rain. Phone line quality impossible, internet experiences problems and we can never consider video for Skype. Even voice Skype connections are often poor.*"

Glenbrook, New South Wales stats: ADSL - MyBroadband 7.08Mbps - Reality 3.4Mbps
"*I have never seen speeds about 4Mbps where I live. I have excellent equipment and service with iiNet. Everytime it rains heavily my speeds get slower. When the temperature breaks 35 degrees my Internet stops working.*"

Recommendation 1: The Committee includes the impact of weather and region specific environmental factors during any discussion about broadband.

MY BROADBAND METHODOLOGY

It is rather concerning that as we were working on this submission we saw the following tweet from Josh Taylor, Senior Journalist for ZDNet tweeting during Senate Estimates (Tuesday morning, 25 Feb 2014) :

Josh Taylor @joshgnosis · 5h
"Rain was not an element we considered as part of our analysis" of broadband quality in Australia. #estimates

We sincerely hoped this was not the case. Our survey results point to weather impacting on people's use broadband. Could they really have ignored the effect of weather in their analysis?

Considering the purpose of the MyBroadband site is to get a realistic picture of the current network and give priority to the communities most in need. It would stand to reason that weather extremes, which affect the whole nation, should be taken into account when planning a National Broadband Network. So we looked at the MyBroadband FAQ's and found this in the methodology section:

"Other factors that impact on an end user's experience and perception of quality, such as reliability, price, value-added components to the service, weather events and mobility are also not considered in the analysis."
So the methodology underpinning the review is excluding the impact of weather events? Weren't there major floods in QLD not that long ago?

In many cases, as we have found from the survey comments, weather may not even need to be extreme. A few drops of rain are enough to stop phones and the internet. This has ramifications for both homes and small businesses with the likes of EFTPOS machines, online bookings, or kids doing homework all needing reliable broadband. In fact, to have something so important stop working for so many people, due to a much needed drop of rain, is a serious issue.
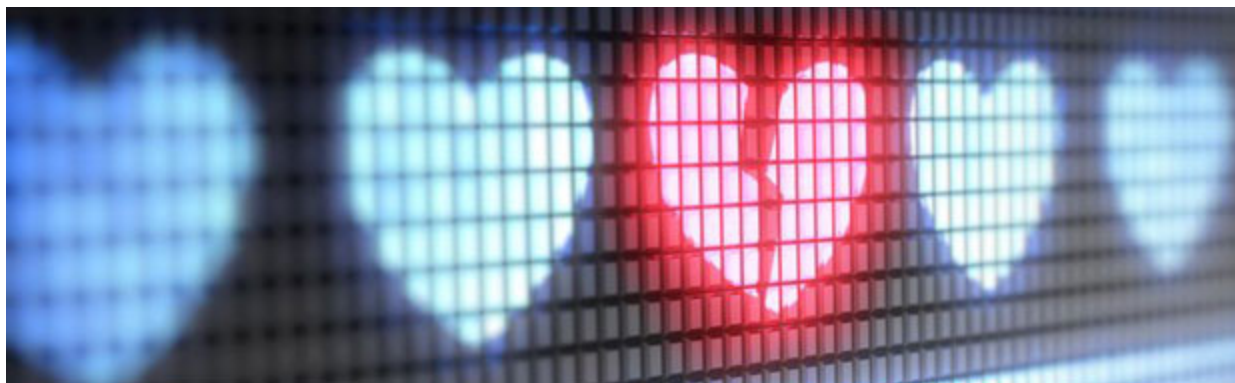
OOPS! I dropped out again

DROP OUTS

Drop outs can happen for a variety of reasons, it could be unstable lines and a weather event that pushes them over the edge. It could be that the exchange is over-loaded and all the kids come home from school, more evident in high wireless usage neighbourhoods given the scientific limitations of wireless. Sometimes it's just because the line and service is just too slow and you opened too many web browser tabs - too many pages trying to load too many graphics. Techs argue about the reasons why, though for those in our survey, the vast majority being non-technical, all they know is that they lose service a lot. Sometimes they can connect the dots like the comment below, more often than not they can't.

Tailem Bend, South Australia stats: ADSL - MyBroadband 18.4Mbps - Reality 15Mbps

"*outages are a pretty common occurrence especially in summer … Our copper doesn't like the heat at-least twice per summer a tech has to be sent out to fix something.*"

In this modern day and age we should at least be able to run more than one device in a home without losing the connection.

Horsham, Victoria stats: ADSL - MyBroadband 21.56Mbps - Reality 5.91Mbps

"*I have only been able to get 8 mbps after days of negotiations and appointments with Telstra over several years. Without a fight I would be receiving between 1.7 and 3.5 mbps.*
 At that speed my internet is barely reliable. If there are 2 Apple computers running(connected to the internet), the dropouts\ which require full reboot of the modem can occur every 3 minutes on a bad day……. Its fairly stable most business days when there is only one device. For the money I pay this servive [sic] is insulting and pathetic."

Another comment that was short and sweet, though very common:

Tindal, Northern Territory stats: ADSL - MyBroadband 7.75Mbps - Reality 5Mbps

"*Rain severely impacts on the ADSL's performance.*"

> **Recommendation 2: The Committee considers broadband as critical infrastructure, in a similar fashion to other essential services like electricity and water, during any discussion about broadband.**

Phar Lap has left the building

SPEED

Speed was overwhelmingly the biggest complaint. Sadly, measuring this is like asking how long is a piece of string. The speed 'hurting' your day to day workings, is relevant to what you actually did in the home, how large your family is, for example. Fact is though, unlike the many naysayers who don't think we need decent speeds, our survey recipients would beg to differ. Try running a home business (which is an ever increasing area of productivity in this country) on an unstable slow line.

Devonport, Tasmania stats: ADSL - MyBroadband 2.85Mbps - Reality 1.0Mbps

"*If it rains internet and phones drops out for the whole suburb. Accountant insisted we upgrade to MYOB Live. The system constantly crashed and was so slow an invoice took 10 minutes instead of 30 seconds to input. Even changing a date took ages for the internet to upload and be ready for the next input data. We wasted our money and went back to a non internet based MYOB..*"

Personally, it can be very hard as well, obviously we live in a world of smartphones, even fridges are being connected to the internet and this will only increase. For the average family home to have many devices connected, they need to have both bandwidth and speed to work effectively.

West End, Queensland stats: ADSL - MyBroadband 8.0Mbps - Reality 1.25Mbps

"*Because I'm 4km from the nearest exchange in one of the older infrastructure parts of town my connection, for the ADSL2 I'm supposed to have, is woefully inadequate. I have about 7 devices I can connect to my wi-fi. If I use more than two devices at a time, for example streaming to my smart tv and surfing the net, well, **let's just say I can only do one thing at a time**".*

Speed and bandwidth is imperative for future type technology, which many are trying to use now, like cloud technologies:

Stanmore, New South Wales stats: ADSL - MyBroadband 15.01Mbps - Reality 2.5Mbps down, 0.25Mbps up

"*I work in technology; a maximum upload speed of 32KB/sec is untenable for my purposes. Also find it impossible to meaningfully use my cloud storage. This is the slowest "broadband" connection I've had in over a decade. I live six kilometres from the Sydney CBD, yet my download speed is less than that of a 2x CD-ROM drive from literally twenty years ago.*".

Recommendation 3: The Committee ensures the broadband network can grow in speed and bandwidth alongside Australia's broader economy.

Same as my daddy and his daddy before

COPPER

Copper is a very serious issue, or maybe we should say the state of the copper. For many survey respondents, being average people, not techs, they were not even aware that this was an issue until they called Telstra. As we can see from the comments below, even if you are close to the exchange, which means your speed should be above the median on the MyBroadband site, there is no guarantee if the copper is in disrepair:

Hurstville, New South Wales stats: ADSL - MyBroadband 21.25Mbps - Reality 14Mbps
"*I could literally hit the exchange with a slingshot. It's visible from the back window. Copper degrades in wet weather. Regular dropouts. Speed can drop as low as 11 Mbps.*"

The way our copper has been laid and how it interconnects can obviously be confusing, sometimes replacing a problem area needs to be done more than once as more problem areas pop up:

Glendale, New South Wales stats: ADSL - MyBroadband 9.3Mbps - Reality 4.5Mbps
"*ADSL is really flaky at times. I am onto my 3rd copper connection.
1st kept failing.
2nd was getting cross over calls where we could hear confidential calls of a large Australian business down the road, but the Telco kept denying anything was wrong with the line until I recorded the calls and sent them a mp3, at which point the agreed something was wrong.
3rd works ok, but during busy periods, eg Friday night, my connection of 4.5 runs at about 2.5*"

Fixing the copper may not always increase the speed of the connection but at least can make it more stable as per the below:

Chelmer, Queensland stats: ADSL - MyBroadband 6.59Mbps - Reality 3.9Mbps
"*Telstra has confirmed the copper outside our house is the problem. Totally unreliable until they "fixed" it. Now reliable but slow.*"

> **Recommendation 4: The Committee includes the productivity and security risks inherent in the existing copper legacy network in any broadband discussion.**

We can haz Interwebz???

BROADBAND ACCESS

Inaccuracies on the MyBroadband site actually enlightened many people, to a certain degree, as to what services should be available to them. Though hard to be sure of when we have comments from the likes of Jason in Bellerive Tasmania who stated: *"Site says FTTP not available here even though in reality it is available from NBN"?* Jason is a lucky man, bit of a bonus there for him. More often than not from what we seen even with the likes of the garden variety ADSL you can be told "No Ports Available".

The more common response was in regard to HFC Availability:

Northgate, Queensland stats: ADSL - MyBroadband 20Mbps - Reality 19.1Mbps
"*It says I have access to HFC. However, HFC does not exist in this suburb."*

A few could also get HFC via Foxtel, though either it was too expensive (and Foxtel was only provider) or they lived in a complex and Foxtel could not or would not connect it up.

Optus also got a mention more than once in similar circumstances to the below:

Pendle Hill, New South Wales stats: ADSL - MyBroadband 20.36Mbps - Reality 8.88Mbps
"myBroadband score does not take into account line quality. ADSL connection has dropped out 5 times in 80 minutes this morning.
Alternative is HFC: Optus requires us to switch from business account to residential to get HFC AND they will not allow us to keep existing number when doing so because they're idiots who think HFC is related to FTTP. Switching to Telstra for HFC requires us to pay more than double what we're currently paying for fixed phone and broadband with much less data allowance."

Alternatively we have the likes of the below where it seems MyBroadband is not quite as accurate as would be liked, luckily for this person, "*The MyBroadband site says that HFC is not available in my area but we've been using it for several years!*"

Mobile Broadband was another mentioned quite often, James in Victoria was a gentleman with a very descriptive turn of phrase in regard to this service being available: "*Whilst it says we have mobile broadband coverage, I'd have to stand on one leg in the front room with my arm in the air to get it*"

Recommendation 5: The Committee ensures the publication of an accurate map of existing broadband infrastructure including realistic equitable options to inform the electorate.

Telstra said… Oh Wait
MAINTENANCE

Many responses included maintenance problems, having to call out Telstra on numerous occasions, pits flooded with water, the list goes on.[6] The below is quite a common style of response:

Perth, Western Australia stats: ADSL - MyBroadband 11.18Mbps - Reality 0.95 -1.95 - 3.25Mbps
"*I am just about on a first name basis with the Telstra Techs that come and play with this Ad hoc mess. Mine along with 3 other pits on my line are the worst in the area. Today at the PC, speedcheck, is good at 5.0 Mbps but that's not normal. The copper is Stuffed, so if it needs redoing do it in Fibre.*"

There were obviously many mentions of Telstra in our survey respondent comments in regard to 'maintenance', some even trying to 'pay' to increase stability and speed to a usable standard:

Kilaben Bay, New South Wales stats: ADSL - MyBroadband 10.22Mbps - Reality 9Mbps
"*On heavy rain days internet connection speeds are heavily impacted. Phone line crackles and telephone calls / reliable internet access is hard work. Sync speed is usually reduced to 400-600kbit on heavy sustained rain days with the phone line being unusable for voice calls.*
We've had a brand new line drawn from the street to the pit along with our entire house being professionally re-wired at out own cost to get Telstra to investigate further, in the last decade and countless service calls nothing has been done except swap out our line for someone elses down the street which has the same crackling issues during weather. The Telstra technician said that nothing can be done due to the condition of the network except keep calling Telstra / service provider each time and risk the $200 odd dollar "no fault charge"; each time they inspect the problem.
Welcome to the system.... I have spent a decade trying to get permanent resolve, which slightly better than when we first moved here it still is beyond piss poor."

> **Recommendation 6: The Committee includes a realistic cost of ongoing legacy network maintenance or replacement in any discussion about broadband.**

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[6] Some photos of Australia's copper network
http://delimiter.com.au/2012/05/01/worst-of-the-worst-photos-of-australias-copper-network/

Crowded House
CONGESTION

Congestion, strictly speaking relates to a limited amount of bandwidth shared across the current number of users. Most evident with wireless, where the maximum bandwidth is severely limited and more users will degrade the service significantly. From a home user or small business point of view, congestion normally relates to multiple users on a single connection, not normally understanding that this congestion could be too many connections at the exchange or too many devices being used at one time in the house.

Please note the below could not work out their speeds (a regular example of the level of Internet education out in the general public):

Nicholls, Australian Capital Territory stats: Fixed Wireless - MyBroadband 0Mbps - Reality 0Mbps
"Wireless subject to users e.g. children home from school = more users, slower speed. Roof aerial works on line of site. A tree between aerial and tower = reduced or no access.."

It is not just the kids coming home from school that can cause congestion and poor speeds, in some cases it is hurting business as well as per the below:

Springfield, Queensland stats: ADSL - MyBroadband 8Mbps - Reality 1Mbps
"The site also mentions that we have very good access to FTTP. However, it is wrong in saying that as only a few surrounding suburbs have access. Ours was pulled the moment the election was won by the Liberals. I pay a premium for the only service available to me which is ADSL. I used to get speeds in the region of 4Mbps but over selling of the local network by the service provider means that I now get speeds of 1Mbps on good days yet I continue to pay a premium for a service that continues to get slower each month as more access is sold to the out of date network that can't carry the capacity of users. It's not fair to have to pay for poor service at a premium rate. As a self employed commercial photographer, I often have to send large digital files over ftp to client servers around the world. The upload time is ridiculously slow and has resulted in the loss of income from overseas based clients as we cannot upload our files fast enough to meet print deadlines of newspapers and magazine…."

Actual connections or ports are an important issue that also needs to be addressed in regard to congestion, as noted here, not much use having a service available if there are not enough ports for the local population to access? Illustrated by this person from Mt Martha in Victoria: *"I have ADSL available on my street (Telstra Wholesale equipment only) but there are not enough ports so I can't connect to it. Have been on less than adequate 3G now for 5 months with no sign of improvement."*

Recommendation 7: The Committee includes a productivity impact of network congestion, particularly in light of growing population and future home devices in discussions about broadband.

Broadband Lotto
THE LUCKY FEW

The below was not very common, but we aspire to be able to have the same experience:

Mundingburra, Queensland stats: FTTP - MyBroadband 9.30Mbps - Reality 12.56Mbps
"*Hi Noely- we are amongst the fortunate and have an NBN connection- have had for over two years now. I just ran the Speed Test- albeit wirelessly as I'm sitting at the laptop staring into the poinciana in the backyard.*
*… *detailed speed test included here...*
Prior to getting the NBN, we frequently experienced service interruptions during the wet season months. Inundation of pits and connections often meant intermittent service at best with connections dropping out or total loss of service."

And another happy camper:

Ross Creek, Victoria stats: Fixed wireless - MyBroadband 4.28Mbps - Reality 10.7Mbps
"*The 4.28 number is quoted for ADSL. No figure quoted for fixed wireless speed on the My Broadband page. I'm on a plan with a highest speed quoted at 12 Mbps. I can pay more to get 25 Mbps. I was told that because I am rural and too far from the exchange it was hopeless trying to connect to ADSL. Before NBN I was stuck with 3G wireless broadband at $40 per month\, speed at 1.5 mbps and 3Gig download. Now on NBN Fixed Wireless and pay $50 per month for 150Gig download. I've had it for 18 months and it is Fabulous !!*"

Already quite a few real estate agents are asking if there is NBN available at a property, which will obviously affect pricing. Same with rentals, it can make it very difficult if you work from home, are a Tertiary Student, or just a family with a few kids in High School that need the internet to find an affordable rental that has decent broadband. This disparity is already being felt in certain areas:

Cringila, New South Wales stats: ADSL - MyBroadband 17.05Mbps - Reality 12Mbps
"*The street away from me copper cable is so old and corroded that that cannot even get broadband (not without paying for the whole street to get rewired out of their own pocket) yet 300m down the road and across the highway there is NBN installed.*"

> **Recommendation 8: The Committee includes consideration of equity of internet access in any discussion about broadband.**

Conclusion:

We never expected to get over 800 replies to our survey, it was just being done for 'interest' sake. Watching the interest of people on Twitter, seeing some discussing their connections and actually exploring what they had and what was or was not available was a learning curve for many as well as a lot of frustration being expressed. The survey that resulted from this interest and the data ended up throwing up many common complaints, issues. We are very concerned that decisions will be based on results showing on the MyBroadband site that we have found are not quite the reality people are experiencing. We would be remiss if we did not share our data from real people with the Senate Select Committee on the National Broadband Network.

In fact, we continue to receive feedback after the survey has closed from people wishing they had known about it and who wanted to contribute. This leads us to our final recommendation.

> **Recommendation 9: The Committee includes regular community feedback in any discussion about broadband.**

In regard to My Broadband being used to prioritise, we think our survey adds value as it would seem that many assumptions made on the My Broadband site in their methodology area seem to be disconnected from the evidence and it would appear to us that you can't have evidence-based policy if you ignore the evidence?

We understand that you are time poor, though, if you do have the time we would urge you to look at the comments in the survey data, a separate document accompanying this submission. These are comments from real people from all over the nation and, while we could not obviously include every comment in the submission, we believe the time taken to read what they have to say (as we have done) would not be wasted. You would have a direct understanding of what the what people actually experience.

We will finish with a comment in the #MyBroadbandvReality survey from Paul in Preston, Victoria which pretty much sums up how we feel about 'real people' being left out of the loop in regard to the National Broadband Network:
*"**This is a questionnaire that should have been included on Turnbull's govt site**"*

Thanks for considering our submission
The **#MyBroadbandvReality** team

(◖_◗)

Note: The below have physically put this together, though it is on behalf of 100's of ordinary every day people who want to have a say in Canberra

Noely Neate

Small Business Owner, Community Co-ordinator of Regional portal, Amateur Blogger (partner and mother of young adult).

Paul Davis

A survivor of over 20 years in the ICT Industry who lost the technical knack years ago, a politically aware, amatuer blogger, fascinated by the interconnected nature of things.

Caitlin Mary Neate

Communications student, music lover, avid gamer, delver into languages and cultures and the dragonborn.

Pascal Grosvenor

Husband, Father of 2 young boys, Systems Administrator, IT geek and gamer, Music lover and Politics junkie.

The Internet :

Hundreds of everyday people supported this survey, gave feedback, disseminated it amongst their personal online communities, and of course the 'quiet' experts who have freely given advice for this submission.

How we did it?

What started as an idea to maybe get a hundred or so pieces of feedback grew into an survey with over 800 responses and people still keen to have their say. As indicated earlier in the report, the survey was hosted on the YaThink site, hosted by an Australian web development firm Subtle Difference.[7] The data, once collected was analysed in Microsoft Excel. Any accidental inclusion of personal information (such as addresses) was removed and extra fields added to allow graphing of numbers. Aside from the removal of personal information the data was not changed. These steps were documented on a tab within the spreadsheet. The comments were left verbatim with some comments selected for inclusion in the submission. These post-processed results will be made available via the Yathink website.

In fact this submission was collaboratively edited across three time zones, two continents, in real time: Paul's in Tokyo, Pascal's in Sydney, and Cait and Noely in QLD, with other collaborators from across Australia assisting with reviews; collaborative creation made possible by using cloud-based Google technologies. This submission is an example of productivity gains through availability of Broadband, noting Noely's broadband connection dropped numerous times during this process.

My Broadband vs Reality

Name *

Just your first name or nickname is fine

Location *

Only need Suburb, though you will need to put in full address on the My Broadband site for accuracy

State or Territory *

What type of Broadband connection do you have *

If possible please use one of the below

What median speed does the My Broadband site give you *

please ensure you use the little yellow figure in Mbps AND put in 0 if you have no access

What speed do you get in reality *

again please put in a 0 if no access or put in Mbps if you do

What Mobile Broadband does the My Broadband site say you get? *

What Mobile Broadband service do you get in reality? *

Comments

You can ignore this box though if you have extra info you would like to supply like copper status or the like please feel free to

Submit

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[7] Subtle Difference: http://www.subtledifference.com.au/