Submission to the 2021 Regional Telecommunications Review

Date: 30th September 2021

Earlier RTIRC reviews

During my 2021 RTIRC online meeting (North Coast NSW - 26th August 10.00am) a number of issues participant reverberated:

- No landline and/or lengthy downtimes
- Poor mobile coverage
- Poor nbn network reliability leading to abandonment of service
- Time taken to report and fix anything

Intriguingly the 2018 review neither identified nor provided solutions to these primary regional troubles.

It remains nigh on impossible to report an nbn or Telstra fault. If and when a tech finally arrives; if it's too hard; the fault 'withers and dies'. No one takes responsibility and no one is accountable, least of all nbn.

The TIO is completely inappropriate for fault situations where nbn is at fault. As a wholesaler nbn is beyond the reach of the TIO.

Poor *digital literacy* is cited fifteen times in the 2018 review, but poor regional digital literacy is NOT the cause nor is it the solution.

Regional folk aren't dumb. Thus; poor digital literacy is a simple and convenient political cop out! Blame the customer!

Digital inclusion **is** the only solution.

Our Background

We are primary producers (grazing property), backed into the foothills (Eastern fall) of the Great Dividing Range.

A copper fixed line service (direct ploughed from the exchange) provides our primary voice service. This Telstra service costs $35 per month.

nbn Sky Muster Plus provides reliable internet. Our SM Plus 25G + 25G plan with provider SkyMesh costs $50 per month.

There is no mobile service apart from several high points on the property. A future mobile service is unlikely due to the terrain and scattered farming properties serviced by back roads. There are many similar properties in the district beyond the reach of terrestrial mobile services.

We maintain two prepaid mobile services, one with Telstra and one with Boost (a Telstra subsidiary) at a cost of $50 per month for the two. VoWIFI mostly works but SMS messaging is unreliable.

Our total communication cost is **$135 per month**; which may seem cheap to some, but it significant for many regional residents.

A working home mobile service is most often assumed to be ubiquitous in Australia. It is not.

This submission reports our current telecommunication experiences and that of others in our circle of knowledge.

Nineteen recommendations are suggested.

Contents

1   nbn Reliability, Fault Reporting and Repair

The nbn wholesale/ retail model creates unnecessary complexity. It is difficult for customers and RSPs to negotiate when faults arise. This is particularly so for regional customers as regional connectivity technology and options are very different to that of urban Australia.

1.1 Regional Australia Access Technologies

Regional Australia uses entirely different access technologies to that of Metro Australia.

Regional customers consigned to nbn Fixed Wireless, nbn Sky Muster, WISP connections and mobile data services (for some 3G is the only option), are very different to metro services and markedly poorer by definition.

Metro Australia has access to fixed line technologies whilst regional Australia largely relies on wireless and satellite technology solutions.

In the regions there is less choice, higher plan cost, less qualified and fewer support staff, poorer reliability, lower connection speeds and lower data quotas.

1.2 The 121 POI model

nbn is responsible for the connection from the customer premise to the POI (Point of Interconnect) while RSP's provide the connection from the POI to their metro located data centres. Metro customers connect to metro POIs, regional customers connect to regional POIs.
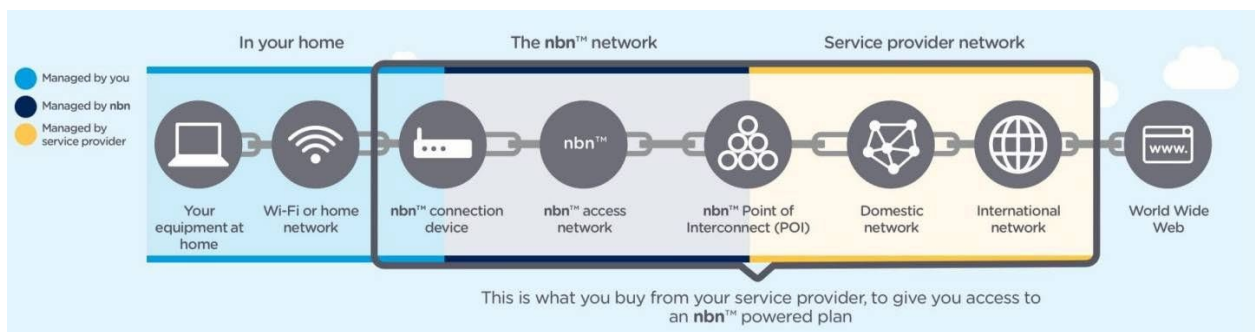
Why does this matter?

When the POI is regional, the RSP is responsible for the lengthy and vulnerable backhaul connection. RSP's either lease back-haul capacity or use a backhaul aggregator at the regional POI.

If POIs were in metro locations, nbn would be required to maintain the connection all the way to the customer. Economies of scale, a one stop shop and secure network redundancy would ensure reliability for all nbn customers, no matter their location.
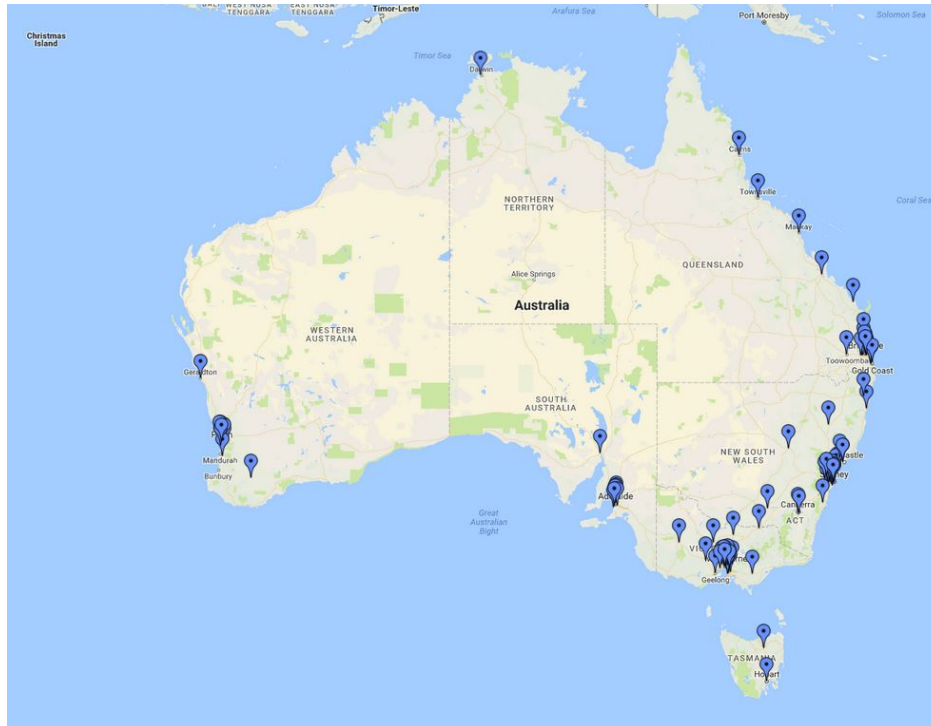
Nbn's 121 POI locations

nbn Sky Muster is a pertinent example of a metro POI located regional service. It is frequently cited as a remarkably reliable service.

A fundamental reason is that the nbn POI for all Sky Muster Services is located at Eastern Creek in Sydney.

1.3   Inferior nbn Fixed Wireless and Sky Muster connections have expanded

The original nbn plan envisaged that 7% of regional and remote service would be connected by Fixed wireless (4%) and Sky Muster (3%).

As at 9th September 2021, 9.6% of regional and remote services are identified as Ready to Connect to Fixed Wireless (3.7%) and Sky Muster (5.6%).

This represents a growth of 33%.

Rather than expanding the fixed line footprint into regional areas over time; an increased number of nbn regional connections are now offered by inferior technologies.

See https://www.nbnco.com.au/content/dam/nbnco2/2019/documents/weekly-progress-report/Public_Progress_data%20-%20090921.pdf

1.4   Regional Service Contention and Upload speed

All of the regional non-fixed line technologies are highly contended. This equates to many reporting poor performances in peak times and universally low upload speeds.

Note: Upload speed (bandwidth) is critically important for cloud-based and other data rich activities.

1.5   Sky Muster Latency and Data Quotas

The high latency and low quotas of the nbn Sky Muster service severely restricts and dampens the customer experience.

## 1.6   Voice services on Sky Muster

nbn Sky Muster Voice services (VoIP) is deemed by many to be unsatisfactory. The current AVST trials will almost certainly confirm these anecdotal reports. It's not a case that the nbn Sky Muster technology is 'not up to the job'; rather that the complexity of these services, the multiple parties involved, the high contention and the demand that everything must be right all of the time, creates a very fragile service offering.

1.7   Sky Muster Plus is subtly different

SM+ (unlike SM std) is a retail service managed entirely by nbn with no RSP visibility. Fault finding for complex SM+ degradations has necessarily involved customers working directly with nbn to identify and resolve problems. The customer located ACCC funded Sam Knows router is a powerful tool that greatly assists the isolation and identification of complex network faults. Customers have provided nbn with access to the Sam Knows data to assist with investigations.

1.8   Sky Muster NTD Status

A simple nbn Sky Muster feature (which some customers can access), is the Sky Muster NTD status, which amongst other important information, identifies the ViaSat Signal to Noise Ratio (SNR) level.
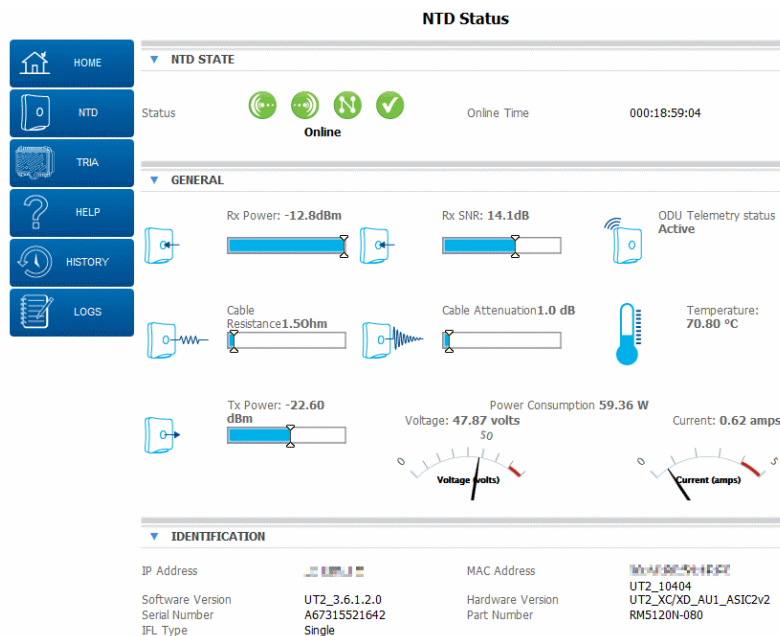
If the NTD status is available, a customer can easily determine if poor signal is a contributing factor. It is well worth noting, that anecdotally, customers with NTD access, express greater confidence in the Sky Muster service. Reliable information is the key.

Note: It is not clear why some customers have access to the Sky Muster NTD status; however, the vast majority do not.

1.9   nbn other technology NTD Status

Fixed Wireless customers have no visibility of their Fixed Wireless customer's service status or performance via their NTU and their RSPs fare no better.

nbn fixed line customer also have no visibility of their nbn HFC, FTTC or FTTP link performance. nbn FTTN customers may access good information of their service performance via their VDSL+ modem/ router.

However, nbn RSPs have some visibility of nbn fixed line services via the nbn portal.

By way of contrast, mobile phone customers have a good indication of their mobile connection and likely performance via the mobile's signal level display.

1.10 Fixed Wireless Performance

A number of nbn Fixed Wireless users continue to suffer progressively degraded performance despite recent investment in the network by nbn to alleviate congestion. nbn's actions include improved tower and backhaul capacity and the limiting of upload speed to favour download capacity.

More recently nbn has undertaken action to improve fixed wireless upload bandwidth and speed for selected towers and/ or sectors. Following these actions some customers report up to 15Mb/s upload speeds whilst most see no better than 5Mb/s. Many users continue to report congested evening speeds of around 5Mb/s down and 1 Mb/s up.

Fixed wireless performance remains a regional lottery.

As a consequence, many nbn Fixed Wireless users abandon their service citing the reliability and cost; reverting to mobile and mobile hot spot alternatives where available.

The introduction of a Fixed Wireless Fair Use Policy in Q2 2022 may further restrict FW services in busy time for some users. It is acknowledged that this action is a fundamental tool for a highly contended service and should have been implemented at the outset by nbn, as it was for the Sky Muster service. It is a case of too little too late and can only result in further customer disaffection with the service. Placing a restriction on a service after implementation is unsound; largely impacting regional users.

RMID0719 - nbnTM Fixed Wireless - Fair Use Policy Management
This project is to consult and build the capability to apply the Fixed Wireless Fair Use Policy to address usage by Fixed Wireless Heavy Users of specific Intensive Application Types during busy periods where there is a risk that their usage is adversely affecting the quality of other users on the nbnTM Ethernet (Wireless) network. See https://www.nbnco.com.au/content/dam/nbn/documents/sell/products/roadmap/nbn-integrated-product-roadmap-august-2021.pdf *P. 5*

Suffice to say that nbn Fixed Wireless can never offer a fixed line equivalent service such as that enjoyed in metro locations.

1.11 Poor nbn Fault Resolution

Complexity, service reliability and vast distances mean that regional fault resolution is slow.

Sophisticated nbn and RSP testing at the network level do not always identify a customer level fault or degradation.

Some of the fault isolation testing demanded of the customer by nbn and the RSP is 'outa this world' and beyond the capability of a typical customer.

Whilst a number of faults are resolved to customer equipment or configuration, many are not.

When in doubt the customer may need to engage technical support to prove that it is not their problem; before once again progressing the problem with their RSP.

That adds delay and any off-site support is expensive.

1.12 Reporting a failing nbn FW service

A continued frustration for Fixed Wireless customers is reporting poor Fixed Wireless speeds and faults.

The 'bar' to report any speed related issue is set so impossibly high by nbn; or low depending on what side of the fence you sit on. It is nigh on impossible for an RSP to report a speed related customer problem no matter how hard they work. From the nbn perspective, if your FW connection is *good** the job done and dusted.

> good* = Service parameters are confirmed by nbn/ Ericsson to meet 'standard'. When this is the case, the customer fault is closed by nbn. In the words of an onsite tech, "if the ODU heartbeat qualifies by those in the control room; no more can be done".

Here is an example of a Fixed Wireless fault on an nbn approved non-standard service, following the fires some eighteen months ago. *"The problem was eventually identified as a faulty LAN cable between the ODU and NTU; yet it took months to resolve with considerable customer input. Multiple arms of nbn seem to be a problem; the 'onerous' nbn Ericsson sub-contractor model".*

And another. *"This is what's frustrating. Telstra's tests say my service is not operating as well as it should be but it's still operating above NBN specs and so the case gets closed with nothing done. I am being asked to put up with performance well under what it's capable of (and am paying for), meanwhile Telstra are jacking up their prices".*

1.13 Known nbn Sky Muster Microsoft account problem

An ongoing problem exists for some Sky Muster customers when accessing Microsoft services such as Office 365 and the like. It is an nbn Sky Muster problem.

The current remedy requires the customer to contact their RSP who in turn contacts nbn (if the RSP comprehends the problem) and then nbn applies a per service fix.

Clumsy and inappropriate?

You betcha!

1.14 The new nbn SoE has no service targets

The latest nbn SoE focuses on the importance of NBN Co "operating commercially", but offers no comfort to long-suffering regional customers.

https://www.nbnco.com.au/content/dam/nbn/documents/about-nbn/policies/soe-shareholder-minister-letter-2021.pdf

2021 SoE customer experience objectives.

- *Promptly resolving the small number of premises in the NBN footprint without access to the network.*
- *Minimising and remediating outages, persistent faults, and other issues adversely affecting broadband service levels and continuity experienced by end users, and supporting the smooth migration of end users onto the network, including in new developments.*
- *Working with retailers to enhance and integrate systems and processes to enable timely and transparent provision of information to end users, improve service quality, efficiently and effectively resolve faults and outages and, where they do occur, proactively manage complaints.*
- *Delivering a reliable, resilient and secure network.*
- *Publicly reporting on metrics relevant to consumer experience, including outages, network availability and network performance in a timely manner.*

No accountable customer service performance targets are established.

How can anything change?

Here is a typical example of a poor nbn customer experience. A Sky Muster customer recently required urgent roof repairs. There is no mobile coverage at the location. "I reported that my dish required re-alignment to my RSP. They advised that the first available appointment was two weeks hence. No time or date of repair was available and I was advised that repair staff would be in touch. One week later I am still waiting. I manage my businesses via my Sky Muster connection. A two-week plus downtime when I have no other alternative is simply unacceptable."
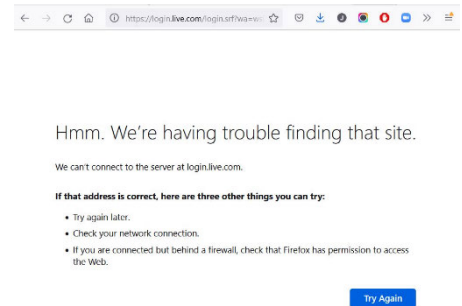
Solutions

1. That nbn provide meaningful service tools and key information that are readily accessible to the customer and RSP for **all** nbn services. This is most critical for regional services which typically connect via nbn Fixed Wireless or Sky Muster technologies and may have no other connectivity alternative. Without this foundation reference information, fault management descends into a frustrating finger pointing exercise between the customer, RSP and nbn. As a starting point, the nbn Sky Muster NTD Status screen already exists and is simply rolled out to all customers.

2. That nbn in conjunction with all RSPs create a simple and secure online fault management system. See '*Report and track your BT problem*' https://www.bt.com/help/report-and-track-your-bt-problem The system must transgress the RSP / nbn divide.

3. That nbn provide accurate technology information for the nbn regional services such that customers clearly understand the performance that their specific service will achieve. At this time, regional customers must rely on their neighbour's service satisfaction and performance as a benchmark. The current mix of fixed wireless *haves and have nots* is both unacceptable and unexplained. In the regions we buy a *pig in a poke* from nbn.

4. That nbn completely re-vamp their KPI reporting and relevance such that it truly reflects the customer experience.

5. That nbn extend ploughed fixed line fibre to selected current FW and Sky Muster footprints by replacing existing ploughed copper landline services with fibre. This cannot occur overnight but it can be achieved in the life time of the current Fixed Wireless and Sky Muster technologies. Note: LEO systems (Low Earth Orbit) may provide a viable solution, however like nbn Fixed Wireless and Sky Muster, LEO systems are highly contended and may suffer the same long-term bandwidth restrictions that plague nbn Fixed Wireless and Sky Muster.

6. Whilst expansion of the ACCC Sam Knows program to Sky Muster service seems unlikely, a more appropriate solution is that nbn assume this responsibility for all nbn technologies. It is recommended that nbn provides the Sam Knows technology (or similar) for a statistically significant selection of customers. nbn would be accountable for monthly reporting (see meaningful KPIs at point 4. above) and it provides an additional an invaluable fault-finding tool for nbn technical staff.

7. That nbn explore avenues to extend selected regional services to Metro POIs to increase reliability.

2 nbn is not a trusted GBE

Unlike other GBE's such as Australia Post, nbn is not a highly trusted organisation. The core reason for the lack of trust requires critical investigation and remediation.

It is all too easy to brush off the largely negative nbn aura by saying, "nbn is a wholesaler without a retail interface". How would appliance wholesalers fare if they shared the same poor level of trust?

2.1   Solutions

8. That nbn provide greater transparency. nbn transparency is the responsibility of the Federal Government. nbn is an ever increasingly secretive GBE and that rubs all of us.
9. That nbn identify and document how and why regional customer services are different. By way of example, nbn would identify those areas where contention impacts services.
10. That nbn identify practical short-term and long-term solutions for contended regional services. In the past, some 99% of Australian residences accessed a secure and reliable fixed line phone service. The long term, expansion of uncontended fixed line internet connectivity is the only acceptable solution to permanently transform Australia's regional digital divide.
11. That nbn vastly improve the prompt and successful resolution of customer faults.
12. That nbn is accountable to the TIO. I am unsure how this could be achieved. If not the TIO, then an independent body with teeth.
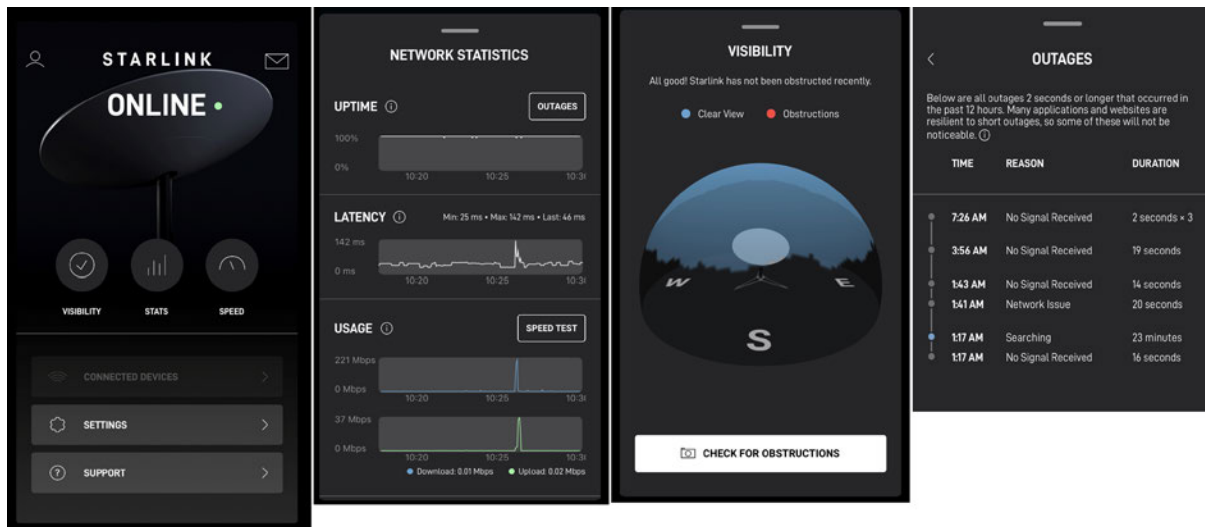
3   Starlink

Many in regional Australia look to StarLink as the solution for their connectivity woes.

Following connection to StarLink, customers appear unanimously enthusiastic about the service performance and become loyal advocates.

Whilst StarLink remains secretive about its technology, StarLink provides customers with sound real time service tools.

Unlike anything that nbn provides (it provides nothing), these tools allow an intuitive prediction of likely service performance at the customers location and once connection is achieved, various screens provide detailed information of the service performance.

Typical StarLink customer information and support screens

3.1   Solutions

> 13. That nbn investigates the StarLink business model and identifies translatable
>   opportunities.
> 14. That nbn investigates the adaption of Starlink or a similar LEO system by nbn to
>   service remote and regional Australia ie the potential for the replacement of some
>   nbn Fixed Wireless and the universal replacement of Sky Muster unreachable by fixed
>   line connections

4   The Mobile Blackspot Program

The mobile blackspot program is a political expedient. It is a political 'pork barreling' gnats bite solution, where, rather than building infrastructure that any mobile carrier or MVNO may access, it creates network assets for selected mobile carriers.

As an example of the ever expanding requirements for mobile coverage, the NSW Rural Fire Service increasingly relies on member communication via the mobile network rather than the pager network. Station call-outs are notified and managed via a mobile APP, which is great, if you have mobile coverage. It does work over WIFI calling and our station has recently installed nbn Sky Muster (funded by the generosity of a local resident). Sky Muster has provided reliable communications at the station and is an invaluable training tool.

However, unless you are in range of your home WIFI, the call-out is missed.

4.1   Solutions

> 15. That the panel review the mobile blackspot funding grant process and make recommendations that require greater emphasis on providing mobile cover for safety of life and emergency calls.
> 16. That the panel recommend increase the program funding fourfold.
> 17. That the panel recommends a review the program such that it supports all mobile carriers and MVNOs at a declared blackspot location.

5   Covid-19 and Telehealth

Covid-19 has created a vastly increased reliance on Telehealth for patient medical service support.

Unfortunately; in regional areas, the vast majority of Telehealth consultations are conducted via voice alone. This is the consequence of multiple factors including poor regional internet connectivity and the wide variety and perceived complexity of Telehealth audio video applications.

The value of visual contact between patient and practitioner is immense.

5.1   Solutions

> 18. We have all become expert at QR code APPs to access venues. This is a brand-new skill that few had, or even knew about pre Covid-19. It is recommended that the panel instigate a process whereby State Health authorities investigate and if appropriate, develop and promote a standard Telehealth audio visual application; that over time becomes as familiar as a QR code login.

6   The Telstra fixed line nightmare

Our Telstra copper fixed line phone service is our 000 lifeline. If it fails, the fallback is a tenuous WIFI calling connection via Sky Muster.

Reporting Telstra fixed phone faults is a nightmare.

Until recently one could quickly report a failed service online; or a neighbour or family member could take this action. The process was secure quick and easy. The local repair team was quickly notified and repairs occurred within a couple of days.

Report a Fault Webform (Home Phone Only)
https://service.telstra.com.au/general/home-phone-fault/form

The online process has been removed and a fault report now requires either a phone or a text connection to the Telstra call centre. And that is where the nightmare begins. One must work with the call centre through a lengthy process, which in my case ends in a Catch 22 as the local exchange does not support remote testing. Without this test the fault centre cannot progress the fault. I spent half a day politely texting away to no avail. What a waste of time and resources.

6.1   Solutions

19. That Telstra urgently reinstate the on line fault reporting for all Telstra technologies. Check out how BT does it. See 'Report and track your BT problem' https://www.bt.com/help/report-and-track-your-bt-problem