Introduction:

This submission is based on the effects of removing my landline and forcing me to use VoIP as my sole means of voice communication.

I strongly feel I would be severely discriminated against if this was to happen.

There would be many in the same situation and much worse.

Abbreviations used in this document:

ADSL	Asymmetric Digital Subscriber Line
ISS	Interim Satellite Service
PABX	Private Automated Branch Exchange
NBN	National Broadband Network
POI	Point of interconnection
VoIP	Voice over Internet Protocol

About me:

I have been in the telecommunications industry for 39 years.

Started working for Standard Telephones & Cables (in PABX and later in Data Systems) through to now working at OurIpTel (a very small VoIP company) for the last 7 years, designing and maintaining their, and their customer's, networks.

My current situation:

I have no mobile phone reception, my only reliable means of voice communication is landline.

I have no television reception, so any video entertainment must come from other means as the SkyMuster bandwidth is too low for any reasonable amount of video streaming.

I have no ADSL, too far from exchange apparently, even though ADSL was in use before I purchased the property.

I had qualified for ISS due to there being no other alternative for broadband.

My current broadband needs are, whilst not satisfactory, supplied by SkyMuster.

I am off-grid, no mains electrical supply, all power is provided by solar/generator.

I run my business from home using the above infrastructure as all my work involves remote access to the company’s servers and to customer’s equipment via the Internet.

My current observations:

SkyMuster, including the equipment need for VoIP, uses a fair bit of power when running, anything between 47 to 56 watts continuously.
This equates to 1.1kW to 1.3kW per day.
My usage, before SkyMuster, was approximately 1.5kW per day in the winter, and 2kW per day in summer.
Running SkyMuster doubles my power usage per day, in fact it uses more power than my refrigerator, which is less than 1kW per day.
At night, running only on batteries, this is too much for my current system which would need battery replacement (cannot mix old and new batteries), more solar panels, and larger solar controller.

SkyMuster's turn on time is too slow if I need it for emergency when it's turned off for the night.
Currently turn on is approximately 4 minutes (3 minutes 58.5 seconds by stopwatch) at my installation without updates, any updates are sent overnight, when my SkyMuster system would be off, and are applied at turn on, thereby increasing the turn on time.
The VoIP system took approximately 1 minute more (56.5 seconds).
Total time to taken to start to make a call is approximately 5 minutes.

SkyMuster does not always work in rain/bad weather and heavy cloud cover, unlike ISS with which I never noticed.
Since I am in South East Queensland it would be even more of an issue in North Queensland.
Also add to this the ground station I am connected to is also may be effected by rain, giving twice the possibility of a non-working SkyMuster system.

SkyMuster's reliability does not approach landline reliability, and SkyMuster does not approach ISS reliability even in data, since my connection to SkyMuster on 01/06/16.
Of course, running VoIP through ISS was next to useless and bandwidth was so much lower, but it worked everyday, all day, rain, hail and shine.
These reliability issues, for me, were not present in ISS.
For me, reliability is more important than speed, which is a small concern on satellite where latency is the bigger problem of real time interaction.
Currently I have Internet drop outs every single day.
These have been reported 6 months ago to my ISP, no fix yet.

SkyMuster updates are done at night, these are frequent, and Internet may not be available during updates.
Approximately 33 updates for my Internet service since 01/06/16, some of these updates may take place at any time during off-peak service (1am to 7am) over the course of a few days, so any planning of using off-peak data must be made with this in consideration.

Actually using VoIP over SkyMuster, not just looking at technical specifications:

I currently use Voice over Internet Protocol (VoIP) via SkyMuster for business and personal calls with failover back to the landline if VoIP is not available.

SkyMuster's latency currently averaging at 726mS (0.726 seconds) for a return trip here.

This is to my company’s VoIP servers located the NextDC data centre in Brisbane, and backup servers located in NetSIP’s data centre in Brisbane.

Latency has to be measured to the servers as that’s where the VoIP is going, just testing the latency to an optimised server is not the same thing.

On calls using VoIP, via SkyMuster, to fix lines is usable as the added latency of fixed lines is low.
Most calling/called parties notice the delay but quickly adapt to it with little complaint once they understand.

On calls using VoIP, via SkyMuster, to mobile calls the lag is more noticeable with either party starting to talk over the top of the other as the latency of the mobile network is added.

I have not had a call using VoIP via SkyMuster to another VoIP via SkyMuster call yet, but the increased latency would make the call nearly to be like talking on a two way radio, but with no obvious way of one party knowing the other party has stopped talking with the result of frustration as each party talks over the top of the other.

One other point is that with the common practice of telemarketing campaigns using smart software to detect a human to minimise their operator lost time on calling unattended phones (answering machines, voice mail services), is that these calls, when answered, do not immediately “speak” and are commonly hung up on.
This also happens when making some calls via VoIP, as the latency is perceived as a telemarketer, therefore wasting time on making another call on what should be a simple phone call.

My thoughts:

If the landline phone is removed then an equivalent technology must replace it.

SkyMuster is not an equivalent technology in voice communications, it was designed primarily for data.

All NBN satellite services are supplied from a single POI located in Sydney, no redundancy for failure.

Thank you for letting me have input on this.

Ian Johnson.

19/01/2017