Australian Government
Productivity Commission

PRODUCTIVITY COMMISSION

INQUIRY INTO THE TELECOMMUNICATIONS UNIVERSAL SERVICE OBLIGATION

MR P LINDWALL, Presiding Commissioner

TRANSCRIPT OF PROCEEDINGS

AT CAIRNS
ON THURSDAY, 2 FEBRUARY 2017 AT 9.22AM

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MR LINDWALL: We don't have - you know, I don't know if there might be other people turning up, but I have some introductory comments that I normally - well, we have to for hearings, which I'll give, and then we'll invite our first people up. This is a very informal proceeding, so transcripts are made but you'll see it's pretty informal.

So how about I start so we can get going. Are we right? Yes? Okay. Good morning. Welcome to the public hearing of the Productivity Commission inquiry into the Telecommunications Universal Service Obligation. I am Paul Lindwall and am the Presiding Commissioner for the inquiry.

I'd like to start off with a few housekeeping matters. In the event of an emergency, Rydges Esplanade Resort staff will direct and assist everyone in evacuating and moving to the assembly point, which is outside the building.

We will be breaking for morning tea around 10.30, which I think Tim has arranged for some nice tasty treats, so we should be able to enjoy that. We look like we will be concluding the hearings at around lunchtime or 1 o'clock. If you have any particular questions, or wish to present at this hearing, please see Tim, who will be able to register you. I should point out that you can comment on previous submissions or what other people have said if you don't agree with them or you do agree with them.

The inquiry started with a reference from the Australian Government in April last year that has asked us to examine "to what extent are government policies required to support universal access to a minimum level of retail telecommunications services?" This includes recommendations on the objectives for a Universal Service Obligation or equivalent, the scope of services to achieve objectives, specific user needs, and funding and transitional arrangements.

We released an issues paper in June and have received about 60 submissions since its release. We have talked to a range of organisations and individuals with interest in the area. We then released a draft report in December, and have received further submissions, which continue to flow in.

We are grateful to all of the organisations and individuals who have taken the time to meet with us, prepare submissions and appear at our public hearings.

The purpose of the public hearings is to facilitate public scrutiny of the Commission's work and to get comment and feedback on the draft report. Following this hearing, we will also have hearings in Launceston, Melbourne, Port Augusta and Perth. We will then be working towards completing a final report to be provided to the Australian Government in April. Those who have registered with us, including today, will automatically be advised of the final report's release by the government, which may be up to 25 parliamentary sitting days after completion.

We like to conduct all public hearings in a reasonably informal manner, but I remind participants that a full transcript is being taken. For this reason comments from the floor

cannot be taken, but at the end of the proceedings you will have an opportunity to come and make a statement or to question things.

Participants are not required to take an oath, but should be truthful in their remarks, and they are welcome to comment, as I mentioned, on issues raised in submissions or elsewhere.

The transcript will be made available on our website following the hearings, provided you have internet coverage, of course, which is interesting. Submissions are also available on our website. We tend to get away with a paper that we used to do, used to print.

Participants are invited to make some opening remarks. In fact, today I don't really care, you can go as long as you like, really, as long as we keep the whole thing to about 30 minutes or so each, of a brief presentation with questions included.

And I'll now welcome Andrew Pegler and Louise Martin from the Isolated Children's Parents' Association. Please, come up here. Now, these microphones do not amplify, they just record, so just speak normally, that will be fine. As long as you're loud enough so everyone can hear in this vast room.

And what usually happens is you just say your name and organisation for the record and then make a statement as you see fit.

MR PEGLER: Thank you, Commissioner. Yes - - -

MR LINDWALL: Paul. It's very informal here.

MR PEGLER: Thank you, Paul. Yes, I'm Andrew Pegler, from the Isolated Children's Parents' Association of Queensland, with Louise Martin, and the Isolated Children's Parents' Association of Queensland see this as a very, very significant issue, the future of the telecommunications and the legislation underpinning our telecommunications issues throughout Australia.

The Isolated Children's Parents' Association advocates for equitable access to quality education opportunities for children in rural and remote areas. ICPA Queensland represents 46 branches, comprising over 1,200 families throughout rural Queensland.

ICPA recognise the need for legislation underpinning a right for broadband data access for all Australians. Your support for a baseline broadband data inclusion in future communications planning is appreciated.

Inhabitants of rural and remote Australia have the greatest need for fast, reliable services for education, business, health and social needs, as they are the most isolated from other forms of service delivery.

Our organisation contends the needs of these Australians are shown very little consideration within the Commission's draft report. The assumption that the government service delivery should only occur if cost effective is open to interpretation by bureaucracy and is potentially discriminatory.

Terminating the Universal Service Obligation and customer service guarantee will threaten the lives of these people, not to mention access to education and commercial enterprise. Without the implementation of a supporting USO and CSG for mobile services, reliance on mobile phones where coverage is present is not an option. Much of the mobile network has insufficient capacity for existing demand, and the service is power-dependent. Many residences do not have the option of mains power. Indeed, this lack of available mains power is often cited by Telstra as a problem with extending mobile coverage.

In urban areas the average mobile user may be within the footprint of several mobile towers and not solely dependent on a single tower. When a rural tower fails, all mobile service in the area fails. Much of the mobile voice network is delivered by 3G. While 4GX has a similar range to 3G, at present 4GX is only a data service. Virtually all other new technologies being publicly discussed will be extremely limited in areas of coverage, owing to limited transmission range from a tower.

Is there any assurance that existing coverage will be maintained after retirement of the 3G network? Providing voice services via NBN Sky Muster satellites should never be considered as an option. Latency from a satellite service to a fixed line is an issue, but latency when calling from a satellite to a mobile or satellite to another satellite service is a major impediment. Such latency would prevent many group activities, such as music for schools with distance education students.

While the draft report lists reliability of 99.7 per cent for the satellite, in the real world this is totally unachievable. For instance, on Sunday and Monday 29 and 30 January there were 15 of the Sky Muster spot beams not functioning due to rain at the ground station in Geraldton, Western Australia. These spot beams covered areas of Queensland, New South Wales, South Australia, Western Australia and the Northern Territory.

NBN advised ICPA's 2015 state conference they expected outages or severe degradation of the Sky Muster service of about 10 days a year for users in tropical areas due to atmospheric moisture from rain events at the consumer's end.

Extended power outages on rural electricity services or property with non-continuous power will also create service problems. In our area, power outages of several days at a time are not uncommon. At present, Sky Muster services are not demonstrating a very high standard of robustness or reliability. While this may be influenced by the adequacy of the retail service provider networks, the end result is often chaotic. Fault reporting systems become choked, resulting in short-term outages going unreported.

NBN's 2014 review of satellite services, along with the regional telecommunications review, both highlight the inadequacy of the Sky Muster satellites to meet projected needs. With present data use, congestion is assured with 400,000 end users. Your recommendation to discontinue the copper continuity obligation and phase out ADSL networks would degrade service to many users, and further congest a stretched system.

If more than 5,400 users are uploading or downloading simultaneously, congestion will occur. That's the maximum capacity of the satellite. Add voice calls to this mix, and the system will be further compromised. If the standard telephone systems are not maintained in rural and remote areas, people will die through lack of communication.

Pedal radio communication with the Royal Flying Doctor Service is long since passed. These days you use a telephone. The USO needs overhaul. We believe data should be included, but also greater emphasis should be placed on reliability and quality of the existing service.

Much of the existing fixed phone technology currently in use, such as the high capacity radio concentrator, or HCRC systems, are virtually obsolete. Unavailability of parts should not be an acceptable reason for outages of weeks in duration.

A focus on upgrading current systems with a reliable, high quality alternative is essential. Satellite technologies should not be considered a solution, as outlined in our original submission and the aforementioned reasons. The Australian Government, as network owners, may be fiddling while Rome burns.

Thank you, Paul, for the opportunity - - -

MR LINDWALL: A pleasure. Thank you.

MR PEGLER: - - - to make those points.

MR LINDWALL: Perfect. You didn't also want to make - no? Could I ask, to start with, could you perhaps give us examples of how technology has allowed improvements in isolated children's education over the past, you know, 20 or 30 years or whatever, and give good examples of the types of improvements in education they might get?

MR PEGLER: Technology has been absolutely wonderful. I was a correspondence school student myself. In my day, the papers came from the Brisbane Correspondence School, and it was all - absolutely paper based. We - I was one of the early students on School Of The Air. My mother actually incidentally designed the badge for the charter School Of The Air.

But in those days, the School Of The Air system was not at all the length of your education essence as such. It was more of a social outlet. It looked at things like music and poetry and - - -

MR LINDWALL: This was using CB radio or HF radio?

MR PEGLER: It was HF radio based.

MR LINDWALL: Yes.

MR PEGLER: Since then, distance education in Australia has come a long way. Distance education in Queensland has come an exceptionally long way, and I think Queensland is one of the lead states in distance education delivery.

We have seven schools for distance education throughout Australia.

MS MARTIN: Queensland.

MR PEGLER: Throughout Queensland, sorry. Of those seven schools, three schools have an enrolment of predominantly isolated students. There's a very large number, for instance, of medical enrolments on schools of distance education.

The current schools of distance education classrooms, there's a lot of what they call direct teaching, where maybe your complete math lesson for that student, or maybe the maths curriculum for that student, may be delivered via a teacher or complete English or whatever. There's some key subject areas at a minimum that all schools deliver, and deliver in the entirety.

They utilise a telebridge, an audio telebridge, which is great. The kids can hear each other, it's real time, it's normally great communication, providing you've got a working phone, and inter - at the same time, they have interactive whiteboards, they have communication technologies. Depending on where they are, what their internet delivery is, we have had major problems in recent years with lack of capacity on satellite systems.

Satellite systems in rural Australia, in my experience, have been long in promise and very, very short on delivery. The NBN's interim satellite service got extremely badly choked. The then Minister for Communications, our current Prime Minister, came to a visit to my own small community of Yaraka in Western Queensland, and we organised a distance education classroom visit and a visit to the school of distance education.

In those days, when that - the interim satellite service was really struggling, when he attended the classroom in Longridge at the school, there was two students could connect. The rest did not have the internet speeds to connect for their daily lesson, and that was the reality of a congested system.

We have had major step forwards from the data side with a dedicated service on the NBN Sky Muster satellite that was - and I think the government and the current Prime Minister and a lot of other people have worked very hard to put that in place, and it is a great initiative.

However, it is still a Sky Muster system, and that's - the head of the satellite and wireless side of NBN has assured us that that system will be a lot more robust, because

it's what they call on the public interest program, or their PIP program, which means that it basically shares a service with the health facilities, and as such is a priority service.

That's great for education. But at the end of the day, it's great while it works. Satellite still has the same problems of so many other - of - that so many other services do not, in that it's very weather related, and we have problems in those areas when it comes back to anything that is real time.

It's great for interactive whiteboards. It's great for the data transfer while it works. The NBN Sky Muster service at the moment - and I've got a Sky Muster service. Virtually everyone out there has a Sky Muster service. It's quite unreliable. When you have a short-term outage you cannot report it. You can wait for ours on the fault line and, depending on who you're with, some of the retail service provider fault lines, after you wait a certain length of time they terminate your call anyway. Some of them say, "Press a button, we'll call you back, we'll place you in a queue." I have never, ever had a returned call. This is pretty standard.

To date, Sky Muster satellite is showing about as much suitability as a robust and reliable service as most of our previous satellite communication that needs two-way communication. The whole area of education and delivering the need for these kids needs good communication. We have less and less availability to face to face service delivery for things like tele-health, speech language pathology, people like that.

Those are services that if we had decent internet, there are some great tele-health programs that can assist and aid and fill the gaps with what is available, but we need that technology.

MR LINDWALL: Some of the hearings and submissions, I get an impression, and it's hard for me to distinguish so I'd appreciate your comments, Andrew, is about what part of the Sky Muster service outages you're talking about are due to teething problems for a new service versus those that are weather-related and in other words will be long-standing? In other words, are we getting less service at the moment because of temporary problems, teething problems for want of a better term?

MR PEGLER: I think we are getting more outages because we're getting more people connected. I think the service is starting to get loaded up a little bit and we're seeing more problems. It could also be that we're coming to the summer months and the Sky Muster satellite utilises a frequency they've never trialled in Australia before.

In North America it averages 10 days a year outage because of atmospheric moisture. When the - and I think that a lot of it as we come into the summer months - and we've been very, very fortunate this year. We've had quite a bit of moisture around in western areas, in some western areas. In the drought years it probably would have been a lot more effective, but we need a service for every year.

MR LINDWALL: Have you - and could you say that some of these are due to the retail service provider, or is it - - -

MR PEGLER: I don't have the skill to say that. However, it doesn't appear to matter which retail service provider you're on. Everyone seems to have problem with outages. There's very, very few people that know. But some footprints are a lot worse than others.

MR LINDWALL: Okay.

MR PEGLER: Anyone connected to the Ceduna Earth Station and the - there's 101 spot beams, and there's an average of about 15 spot beams to an earth station, but those spot beams will be scattered all over Australia. Anyone connected to the Ceduna Earth Station has probably seen a lot more downtime since the installation than anyone else.

MR LINDWALL: In speaking about the retailers, and I understand there's about 12 retailers that offer NBN - - -

MR PEGLER: I think there's not quite that many anymore.

MR LINDWALL: Okay. All right. Well, let's talk about the retailers that may be there in general, rather than specifically. Are they providing the types of information - you've said that it's hard to get through. Well, that's not very good. Are they providing - before you sign up, do you get good information about the services that might be available, and the packages that are available, and the speeds that you might reasonably expect?

MR PEGLER: You get a lot of promises from retail service providers, and this has always been an issue. I run a business where I - I sell water infrastructure, pumps and water gear. If I made the sort of promises for my product that retail service providers have been allowed to make and not been held accountable for, I think I would have been - well, I certainly wouldn't be in business. I think the only thing that sticks to them is that they're all probably making the same sort of promises.

And everyone in the industry seems to be able to assume that they can make promises they know they cannot deliver, and it's fine, it's the industry. NBN do the same. They talk about 25 meg speed for Sky Muster. Gavin Williams, the head of the NBN satellite service, told the 2015 Broadband For The Bush conference in Darwin they expected real time output speeds of about half that.

Now, if you expect the speed of half that, why are you touting it as a 25 meg service? And I've yet to see anyone at any hour of the day get a 25 meg download speed from Sky Muster. It's - when I talk to other people that are technically a lot more savvy than me in the industry, they say, "Look, you only ever expect 70 per cent of the claimed speed at best," but if it's only going to be 70 per cent at best, that's a bit like me selling - going to buy a Prime Mover, and I want a road train rated Prime Mover that's got 600 horsepower and can pull three trailers, and I take it out of the dealership I find that, sorry, it's only got 300 horsepower and it's only legal to take one trailer, but that's sad, you paid for it.

Well, at the end of the day, you should be entitled to get what you're paying for.

MR LINDWALL: So what do you suggest? I mean, what are the alternatives to the satellite service? I mean, I've heard some positive stories about Sky Muster too, and if it's entirely negative we wouldn't want to go to the solution that it should be stopped altogether, I guess.

MR PEGLER: I think there's a few things. One is there's a lot of small communities throughout Queensland that have a very, very good ADSL service, copper wire service. They're getting their 22, 24 meg speeds. It's a good, reliable robust service. Some of these communities also are struggling because those services could do with a little bit more investment, a few more lines available, because some of the - or that sort of thing.

But in general it is, for a lot of these small communities, it is a very good service. Why not leave those people on those services? Why not maintain those services why they are a viable alternative? Why take a backwards step and go to satellite?

The other thing is I think that satellite limitations need to be recognised and there's a lot of glossy sell. We hear the Sky Muster referred to as a broadband service. If broadband definition is 25 megs and it's not delivering it, it's not a broadband service. We need to get the language right about what we're getting. We need to get the expectations right.

And having a system that if 1 in 80 is uploading or downloading at once it becomes congested, and the service will slow up, that in itself, we really need to look at the adequacy of these services and whether we really want to try and put 400,000 people on these services.

The people in rural and remote Australia have the greatest need for adequate internet and they also have the greatest need for a good telephone. To my mind, the data side is half the story. The other half the story is what is going to replace our ageing phone systems? What is the future planning for our phone systems? Voice telecommunication is absolutely critical. We have got 70 per cent of Australia with no mobile coverage. The 499 sites of the Mobile Black Spot Program increased the mobile footprint in Australia by less than 1 per cent. Now, when you look at that figure we have got a long, long and slow way to go to get the rest done.

We need to have a focus on probably more mobile coverage as part of the answer, but we also need to be looking at what we can do to modernise and build a robust phone service into the future that's not going to come out - have an outage if there's a cyclone coming so you can't talk to anyone or - - -

MR LINDWALL: I mean, some of the people that - you're right about ADSL, but a large number of the 400,000 premises that are in the satellite have never had ADSL at all.

MR PEGLER: Absolutely.

MR LINDWALL: So they are getting a service on broadband which they have never had in the past. Surely that's better than not having it?

MR PEGLER: The service is better while it works.

MR LINDWALL: But I still can't - no one's said a practical way of having the reach out to the remote areas other than satellite. What alternative is there?

MR PEGLER: I don't think - I'm not a technical person, but for data delivery I do not think we have much other than satellite. However, I do think that for our voice communications, there are solutions other than satellite. We've got them now. They've just been let get obsolete. There's been very, very little investment in - - -

MR LINDWALL: These are the HCRC for example - - -

MR PEGLER: Yes.

MR LINDWALL: - - - which I think is quite antiquated technology.

MR PEGLER: And there's 21,000 of them in Queensland.

MR LINDWALL: Is there? 21,000?

MR PEGLER: 25,000 in - well, there's 25,000 connections outside the copper wire network, predominantly HCRC, in Australia, of which 21,000 are in Queensland.

MR LINDWALL: I didn't know that. Yes. And how reliable have your members been, speaking of the HCRC, as well as copper? Because I mean, I give that example of my mother, who lives in a farm an hour's drive from Canberra, has no mobile coverage, has had her local - she relies entirely on her phone, and it's been out for more than a month on two occasions - three occasions, actually, each time.

So I haven't seen a system that's entirely reliable. And that's less reliable than the satellite here, in fact, if you look at two months out in 12.

MR PEGLER: Was that system more reliable in years past? Is it a lack of investment, lack of maintenance?

MR LINDWALL: I don't know. I mean, it's gone out at various times in the past. I mean, they've been in that farm since 1982 and I lived out there for a long periods, and there would be long periods where it's been out. So maybe our expectations are higher than they used to.

MR PEGLER: Now, I've lived with copper wire services and HCRC services. I've currently got an HCRC service. They've both been generally good services. The HCRC is probably not as reliable as it used to be because I don't believe Telstra have the proactive maintenance programs they used to have.

In years past, occasionally Telstra would ring you up and say, "There's a fault on your phone, we're coming out to service it," and you'd say, "Hang on, I don't think there is, I'm talking to you on it," and they'd say, "Oh, yes, but it's only giving 70 per cent output or whatever and it will degrade so we'll go and fix it first." That doesn't happen anymore.

I think that those sort of technologies have fulfilled the needs of people in those areas very well. They've been a very robust, very reliable system. The problem we are having now is that we'll get someone that does have a fault in the system, and they say, "Oh, we haven't got any parts and there's no parts made for them anymore, we'll have to get something made," or we'll have to - "We've got to scrap another system to get parts to keep yours going."

And the - and that in itself, we get occasionally people that are out for weeks. But in general, the existing HCRC system and the existing copper wire systems have been very, very robust. I think that the copper wire systems in a lot of areas probably haven't seen the scale of investment to equally equate with the scale of demand, and I think that there's areas where certainly more investment in those technologies would have made them a lot more - not - they would have probably fulfilled the expectation of the community a lot better.

But I think that comes back to an investment decision, and I don't think - I think for quite some years the question of what's going to happen with the future rural telecommunications has been put in the too hard basket and no-one's been making any more than minimal expenditure on that sort of gear because they're not sure what's round the corner and they don't want to waste money.

Well, at the end of the day, you're not going to replace 21,000 HCRC systems overnight. You're not going to replace a lot of ageing copper infrastructure overnight. It needs to be an ongoing long-term program of renewal and planning for the future.

MR LINDWALL: But not necessarily copper, because - - -

MR PEGLER: Not necessarily copper.

MR LINDWALL: - - - it might be fibre-optic.

MR PEGLER: It may be fibre-optic, it may - it may be a lot of other options. But it needs to be robust and reliable.

MS MARTIN: I think it's absolutely critical that not all of our eggs should be in the one basket. Absolutely. There needs to be - to consider putting our voice communications over the same satellite as our data is fraught with peril and danger, because once one's out it's all out. I think that is absolutely critical, whatever decision is made, our eggs should not be in the same basket.

MR LINDWALL: But you're talking about a redundancy, about mobile, I guess. Because in practice, if you look at people who live in urban areas or towns which have fixed wireless, or they have fixed line services, they don't anymore have a straight-out voice service. They may or may not have mobile service. So some people who are in the area that are covered by fixed wireless, for example, have very good voice service through that, and may not have mobile coverage. Some do. But they've all lost their traditional copper line, because after a year of the NBN being rolled out into those areas the Telstra service drops out.

MR PEGLER: Those people will also be nowhere near as isolated from - - -

MR LINDWALL: Of course.

MS MARTIN: Can I just give an example? I had a backpacker who fell off the motorbike the other day and broke his collar bone. We're out a long way from anywhere. And if we - to have all your communication in one place, and should that service be done, which happens, we are in a lot of trouble.

MR LINDWALL: But wouldn't you also sensibly have a satellite phone in that circumstance for emergency use?

MS MARTIN: Not necessarily. That's - - -

MR LINDWALL: They did have - like, the sleeves on the mobile phone.

MS MARTIN: Huge, huge expense.

MR LINDWALL: Well, for an emergency purpose it might be worth it.

MS MARTIN: For emergency purposes. I just find, why should rural and remote people always have to spend more money on something else to be safe? The extra expense we already pay above and beyond for our limited data usage. Why should we have to have an emergency satellite phone because the government can't provide us with adequate services in the first place? I just think we're always getting the raw end of the deal.

MR LINDWALL: Because a lot of people in rural - yes, I agree, but a lot of people in remote areas are very self-reliant and they've been self-reliant by default since - - -

MS MARTIN: Well, we are very self-reliant and we continue to be self-reliant, but I don't think we should always have to - - -

MR LINDWALL: I agree. You want multiple redundancies, but on the other side, wouldn't it be a reasonable argument that government's got a fixed amount of money and it has to allocate it efficiently, and some solutions might be extremely - well, prohibitively costly.

MS MARTIN: I think the government needs to bear in mind how much a very small population is providing to the bottom line of this country and bear that in mind when they're making those decisions.

MR LINDWALL: Agreed, yes. Sorry, Andrew?

MR PEGLER: I was just going to make a point about your mobile satellite phones. I have them. I have them for a safety backup for my drivers. Excuse me. I've had - over the years I've had four different brands of mobile satellite phones. I think the only one I would have considered to be a reliable emergency use service was the original Iridium sat that lasted about 18 months and the service was turned off.

There's a lot of areas of Queensland where the satellite footprint area is not as strong as it should be.

MR LINDWALL: Strong, yes.

MR PEGLER: There's not the number of satellites for the low orbit satellites in action that there used to be. They haven't been replaced as the satellites have died. You get south of that road that runs from Wyndora to Burkeville, down that bottom end of Queensland towards the South Australian border, and see how long you wait to get a usable sat phone signal.

They are an emergency tool. If I have a driver broke down or whatever, I'm peace of mind to know he's got one. Don't count on using it straight away all the time.

MR LINDWALL: I guess what I'm saying is, though, is it's a tool, along with HF radio for that matter, which provides a backup in extreme circumstances.

MR PEGLER: They're a tool, and as duty of care that's something we have to consider. It's a bit like a spot dragger. I have a spot dragger - - -

MR LINDWALL: Yes, yes.

MR PEGLER: - - - as well, and if there's someone working by themselves or whatever. However, they are an emergency tool. They are not a day to day mode of communication.

MR LINDWALL: The - what else? Is there anything else that government could do to improve the satellite service beyond what the - I mean, they've launched a second satellite now.

MR PEGLER: The inquiries have highlighted that two satellites won't cope with the demand. I think that the - there either needs to be more satellites, more space leased on other satellites - potentially if the demand is too great for those satellites, tropical areas of Australia may be better serviced by other satellites that are running at a frequency that's not going to be nearly as affected by moisture.

MR LINDWALL: Do you know anyone who's using the USO satellite that's provided by Telstra?

MR PEGLER: Mother used to have a USO satellite. Certainly better than trying to use VOIP over a Sky Muster service.

MR LINDWALL: Because it's actually - - -

MR PEGLER: I have VOIP on my Sky Muster service as an emergency backup. It's got to be an emergency. It's - yes, it works, but that's the best you can say for it. It's a pretty ordinary service. It's - the - Telstra's USO sat, if you have no alternative or if there's something down for a certain period of time and they provide some sort of service as an interim, it's probably something that can be used as a Band-Aid measure. I do not believe it's a suitable service to be considered as a voice communication for large areas, long-term.

MR LINDWALL: So where should the - now, going back to the original premise of this inquiry, which is about the USO, which is about fixed line to the home premises, voice only, and I think you'll agree that data's, as you said in your submission - - -

MR PEGLER: I think data is extremely important.

MR LINDWALL: - - - extremely important. HCRC doesn't give you data, as far as I understand.

MR PEGLER: HCRC was never designed as a data service.

MR LINDWALL: So where else should the government be looking apart from - well, of course there's always the scope to extend the fixed wireless at the margin, which would take some of the load off the satellite.

MR PEGLER: Fixed wireless, because it's such short range from the tower, is probably going to be an option that will take some load off, but I think they need to look at other wireless technologies other than fixed wireless to take load off satellite.

I think that the - for instance, the 4GX networks, where they are, appear to be a very, very good service. Potentially that sort of thing could be something that could be considered as an option and really expanded in the rollout. 4GX, from my experience, is one of the best things to happen to the bush, as far as data, that I can remember.

MR LINDWALL: I also urge you, if you like - because one thing that came out from yesterday's hearings seemed quite clear to me, anyway, and we're not talking about here remote areas where there are individual families which are highly remote, but talking about small communities, hamlets, if you like. They've had some leadership where they have been able to build some towers - I think it was the Optus, David Epstein might have said this yesterday - at much lower price than the NBN wireless satellite and - fixed

wireless, sorry. And in that hamlet being able to bring pretty much broadband at - quite reliable broadband at much lower price, and they've been able to, as a community, work together and get that type of service built.

MR PEGLER: I think that's a great initiative in some areas, but you need the backhaul capability, and so many of these areas we need the investment in the backhaul capability before that can proceed. They also need to look at spectrum price. The cost for the licencing for these cheaper alternatives, when you're only covering a small number of people, that's a major inhibitor.

MR LINDWALL: Well, the Vodafone representative yesterday said that - well, he made the point that spectrum is highly intensely used in cities, less intensely used in regional areas, and hardly used at all in remote areas, and they were quite happy, because they had Australia-wide spectrum, to sub-let it at quite a low price to - for that type of purpose.

MR PEGLER: Hopefully we'll see more of that. I know that Vodafone, Optus and Telstra all express a willingness to share resources, co-locate, et cetera.

MR LINDWALL: Yes.

MR PEGLER: The head of the regulatory side of Telstra told me - told a meeting that I was at that they'd had, I think, 3,700 approximate applications for sharing of Telstra resources and over 3,600 had been approved by Telstra.

So certainly there seems to be a willingness there in the industry, and I think that the industry probably understand the problem better than, in a lot of ways, the government does. I think that the biggest problem is lack of future planning over the last few years, and the lack of an ongoing - everyone's looked at the NBN to be the saviour. NBN is probably great in a lot of areas, but NBN on its own is not the saviour.

MR LINDWALL: It has to be supplemented by more targeted solutions.

MR PEGLER: There has to be other programs running in conjunction with NBN.

MR LINDWALL: Okay. Any final points you'd like to make, Andrew or Louise?

MR PEGLER: The only point I would make is that I think that there needs to be some form of tidy up in the relationship between NBN and the RSPs from the consumer's end. At the moment it's very easy for NBN to say, "Oh, the RSPs are letting the side down." The RSPs say the NBN system is not working, it's not robust.

It's too easy for buck passing. I think that the NBN's name is on the scheme, on the program. I think NBN need to take ownership of that. I'm not saying they need to own the RSPs, but I believe they need the fault reporting, that side of it. I believe NBN need to be a lot more visible in that space, a lot more across what's happening, and a lot less blaming each other.

MR LINDWALL: So a bit more like, you would say, if you were to use an analogy that was used the other day, the car manufacturers, Ford, Holden or whatever, are the wholesaler and then your dealers are your retailer, that type of relationship would be better than what you see at the moment?

MR PEGLER: I'm not sure exactly how the relationship needs to be. However, I do think that with the fault reporting and the customer interaction there should be a focal point that - and I believe it needs to be NBN focal point, because at the end of the day it's the NBN name that's on this. That's the NBN service that needs to be delivered to the customer at a suitable and reliable means.

I think that there needs to be more of a presence there. NBN are a wholesaler, I can understand that, but at the end of the day it's their product that's being sold, it's their product that needs to be delivered in a way that's reliable, that's usable, and it's in everyone's interests not to have everyone thinking that NBN are peddling something that's rubbish. And if it's not NBN's fault that it's rubbish then NBN need to be there to be seen to be taking some sort of proactive measure to make sure that if their RSPs aren't doing the investment to - and they're choking the system because their backhaul or whatever is not up to speed, then NBN need to be saying, "Sorry, if you're selling our product you need to be making investment."

MR LINDWALL: Well, thank you very much then, Andrew and Louise. Now, I believe we now have Rod Harris from Telebiz. Good morning. Paul.

MR HARRIS: Paul, good morning.

MR LINDWALL: If you'd just say your name and talk about your business and give a bit of an introduction, that would be perfect, and then we'll just follow like that with the informal questions.

MR HARRIS: Okay. Good morning, everybody. Sound test okay?

MR LINDWALL: It doesn't amplify, it only just records.

MR HARRIS: Okay. My name's Rod Harris. I'm the managing director of company called Telebiz. I have over 30 years' experience in telecommunications, predominantly providing retail solutions. I've had branch offices from Brisbane through to Darwin, and over the years I've been a Telstra dealer, an Optus dealer, a Vodafone dealer.

We deal a lot these days with migrating businesses onto the NBN. We could deal with consumers, but we're busy enough with the businesses, but we understand some of the issues there, and we're also a regional market leader for satellite phones and satellite communications.

So the purpose of me being here this morning is there's just been a few ongoing issues, and I thought, well, I could come along and help contribute to the review of the USO for telco. I have presented a document to the Commissioner.

MR LINDWALL: Thank you, yes.

MR HARRIS: Which I presume you've got a copy there?

MR LINDWALL: Yes, I do.

MR HARRIS: Yes? I can go to some of those issues, or - - -

MR LINDWALL: Please, for the - it's quite good for everyone here to hear, yes.

MR HARRIS: Okay, okay. What I've done - well, I've only had a couple of days' notice, so I've just gone through some of the issues, but I concede there's many, many more. So I'm happy to take questions, even in reference to some of those satellite conversations with the previous presenter.

My overall view in terms of operating with Universal Service Obligations are that I believe it's crucial that the Australia Federal Government has total control of reviewing, managing, governing the telecommunications USO in Australia. My second point there is I believe it's crucial the TIO remains in place with powers to issue orders, and I am sure the TIO works closely with the Productivity Commissioner, as with the ACCC. And my third point, out of three, is that I believe it's crucial NBN Co remains 100 per cent owned by the Australian Federal Government.

Okay. Now, here are just a selection of some of the issues. I've highlighted an issue, an effect, and a suggestion, and I've got one, two, three, four, five.

The first issue I have is to do with NBN migration rules, and that is the inadvertent - the issue with inadvertent disconnection of telco service numbers under NBN migration rules. So the way it stands at the moment, when the NBN rolls out into an area you have a person in that area with telephone numbers has 18 months to migrate those services to be NBN compatible. If they're not migrated by the 18th month, they are disconnected, and when they are disconnected it is extremely difficult to get them reconnected.

Sometimes if we're lucky we might well get them put on a diversion to a temporary number, if we're very, very lucky. In some instances it's taken as - we had a recent one where a legal firm had their three main numbers disconnected. Collectively, three of the senior people in my office, it took us 80 hours to get one number reconnected. That was a huge cost to us. The other number, we are now, over six months down the track, we think we can get it connected by, believe it or not, adding it to someone else's account and then transferring it back to the customer. That's how ridiculous it is. And the third number, we've just given up.

This particular law firm, I know for a fact he has lost at least $50,000 off his bottom line, and I think - and that was several months ago. It's probably close to $100,000.

We have people contacting our office weekly. In one day we had three business owners in my office at our boardroom table in tears. They had lost their phone numbers, they didn't know how to get them back. Now, you might notice I said the word up-front, "inadvertent disconnection of telco services". It's not just a matter of the services being disconnected after 18 months, it's a case of Telstra wholesale or whoever the powers that be, NBN, whoever's involved, we find often phone numbers are disconnected prematurely, and other people - other businesses in particular might have bought another business that's had a phone number on diversion from a particular exchange for years and they haven't realised that, and those numbers have been disconnected, in an area that might be outside of where the end user is actually located.

So that's the issue. Inadvertent disconnections of telco service numbers under NBN migration rules, and the effect is that it's very difficult to reconnect and very, very expensive and costly and frustrating for the end user, and it places a lot of pressure on the retail service providers like my company.

I know my Cairns office is probably over $100,000 net profit off the bottom line from the last 12 months just trying to reconnect customers who have been inadvertently disconnected. My suggestion, under - and this is what I like to see happen under the Universal Service Obligation, is that all customers who have lost their service number because of an inadvertent disconnection should be able to apply to a central government department that could be managed by ACMA, Australian Communications Media Authority. They should be able to apply to the central government and have their phone number reconnected within seven days with a telco service provider of their choice, and pay a maximum of $300 plus GST to cover the administration fee of the department that's managing it.

Now, from my experience over the years, I don't think that's too difficult. When numbers are disconnected, there seems to be a grey area as to where they go, whether they go back into the reservoir of the carrier that the number was allocated to, or it goes back into quarantine with ACMA. I'm not quite too sure yet, different stories.

But that needs to be addressed, and urgently. Any questions on that?

MR LINDWALL: What happens where - well, I understand that in a lot of cases where the NBN has been rolled out and that people have been disconnected - well, firstly I've heard that the NBN goes out of its way to advertise that it's coming and you've got 18 months. Well, I mean, they would say that, I suppose, but - and then secondly, don't the copper lines often get removed entirely? So how do you reconnect then, when it's just an NBN service there?

MR HARRIS: Yes, okay, well, two replies to that one. First one, NBN's doing a lousy job of letting people know what's going on, and I might come back to that, in the following issue, so we'll put a hold on that one. The second one, a lot of these numbers -

well, these numbers that are being disconnected are PSTN numbers, and when an area is being rolled out with NBN you cannot apply to have a PSTN number connected.

So if their PSTN number is disconnected, the carrier, Telstra, Optus, whoever, they simply cannot reconnect it as a PSTN number. Now, in the case of the law firm, for instance, eventually we managed to work our way up through the hierarchy of a little tiny back room in Optus, and they said that, look, we can reconnect it as a basic, as a VOIP number, but the customer had to sign up to another two year NBN plan which he didn't need. He already had two NBN services. But for $220 a month of whatever it was, it was a good idea to get the number put on, which I guess solved his problem to a certain extent, but having to pay those extra fees is ridiculous.

MR LINDWALL: Okay. Yes, please.

MR HARRIS: The USO, regarding the inability to reconnect the PSTN number, I think that should be reviewed.

MR LINDWALL: I thought you could, when you sign up with the NBN - well, I've signed up with the NBN. I've got fibre to the node at my place, and talk about reliability of that, that's another issue, but I had an option of taking the service as what I would call a naked service, without a dedicated - it's not voice - it is VOIP in a way, but it's a more dedicated deal with its own phone number which people could use. That would cost me a little bit extra, or I could say no, I didn't want that, and in my sense I didn't need it so I relied on a mobile phone, as we have down there. So that was sufficient, and so I could use VOIP on the NBN service if I wanted to anyway, so isn't that what it is? So you do have an option if you want to, through an RSP, subscribe to a service such as that?

MR HARRIS: Well, you can. What we've got to remember is PSTN is basically an analogue line.

MR LINDWALL: Yes.

MR HARRIS: The world is going digital. It's a bit like back in the days of old mobile phones, the first Motorola bricks, they were an analogue signalling device, and of course you couldn't do much with it. You couldn't access the internet, send photos, messages. I don't even think you could text, from memory. I should know, but I can't remember. So - - -

MR LINDWALL: I don't think so either.

MR HARRIS: That was part of the reason for going to digital, and for those of us that are old enough, you might recall that transition period when we went from analogue to CDMA to GSM to where we are today, and there was a lot of teething problems.

So unfortunately when you migrate the masses across to new technology, there are issues, but I think a lot of the issues that we're experiencing today across the board could be handled a lot better.

MR LINDWALL: Yes, thanks. Good point. All right, shall we go on to your second issue?

MR HARRIS: Okay. Issue number two, anyone can sell NBN plans without any prior training or qualifications. That's the issue. To highlight that, my company, we're a bit different than other, I guess, retail providers. We are a regional service provider, so we actually buy air time off the hierarchy of NBN layer 3 and other voice and data suppliers, and then we bill our customers, so the customers are actually getting a phone bill from us. They pay us, and we pay our upstream providers.

But being an independent means that we are dealing with many, many different types of upstream providers. Telstra, Optus, Vocus, TPG, iiNet, and the list goes on.

MR LINDWALL: 140 or something, I think.

MR HARRIS: Look, there's a lot of them, and I mean, as an example, my business can offer over 100 different types of NBN plans just for business alone. So consequently we are touching those upline providers every day. We are talking to them every day, and across the board, across the board, the amount of knowledge that those people have, whether that be in the sales, service, even the contractors that install the NBN services, but today let's walk on the sales and service side, they are so devoid of essential information, it is absolutely appalling.

NBN has no knowledge centre. People in our industry can't tap into any learning. But I just want to go back to the fact that the people that are selling it - so what happens? The issue is that people don't know what they need to know to sell the products, and the effect of that is customers are being sold the wrong plans, that customers are being given wrong information, that customers are not given the right expectations, and it is creating a huge amount of angst, and it is costing businesses a lot of money.

If I had to put a figure on what it's - if I had to average it out on what we've come across in the - Cairns and across the Tablelands, I would say for every business that's migrating onto the NBN it's probably costing them $5,000 to $10,000 net in bundles. Bundles from NBN actually providing the service, because people through the whole channels don't know what they're doing, and then we have customers that have been sold the wrong - and I'm referring more to business - been sold the wrong solutions, and it's costing them like, for a small business, over $10,000.

We are - my company is pulling out other NBN service providers' solutions on a weekly basis. So that's the effect. Not good. My suggestion for that is there needs to be a mandatory accreditation program for everyone wishing to market, sell or service NBN solutions.

It needs to be managed by either a government department or maybe NBN Co, and - - -

MR LINDWALL: Surely it's more an NBN Co, in this, than a government department?

MR HARRIS: Well - - -

MR LINDWALL: Do we really want more government regulation in this space?

MR HARRIS: Well, what I'd like to see is I would like to see everyone that's involved in selling and servicing NBN to have studied and passed some exams. Doesn't need to be hard. It's not that hard to learn about it, when you have all the information in front of you. Have a registration ID.

The NBN is changing almost on a weekly basis. Those people with those IDs probably need to spend about an hour a week on a teleconference, probably with NBN. I'll tell you why NBN as opposed to their layer 3 provider. And to keep their registration ID current.

So if any member of the public or business is approached by an NBN sales person, the NBN sales person can say, "Here's my ID," and that person can go onto a website and look and see if their ID is current. It has to be current from week to week, because it is changing. The way the NBN is rolling out, it is changing week to week.

Now, we can't leave it to the layer 3 providers to provide that training, because quite frankly they don't know, and it is the people that are working within the layer 3 providers that have said to me, "Right" - we were Telstra, for instance. "We can't go along and admit that we don't know what the hell we're doing." And same with Optus and everybody else. But they say, "You, you're one of the very rare independents in Australia that touch everybody, so you can speak on behalf of all of us."

And I'll tell you how much the independent telcos are keeping that as a secret. There's an organisation called the Communications Alliance, which I presume you've heard of. When I raised some of these issues with the Communications Alliance - and by the way, when you ring up the Department of Communications or NBN Co they say, "Well, have you reported it to the Communications Alliance?" and they go well, you know, "I've got to pay $1,000 a year to belong to that and educate them, well, someone better start paying me."

Because when I ring up the Communications Alliance, they know nothing about the issues. So their own members are not telling them, because the Communications Alliance is made up of some pretty powerful representatives of each telco group. Well, they're not going to put their hand up in the front of all their peers and say, "Sorry, we haven't got a clue what you're talking about."

MR LINDWALL: Well, isn't the issue here that it's really an NBN problem? I mean, if a retailer is selling a bad NBN product, a wrong one, the NBN's get the bad reputation. It's a bit like the car manufacturer who has the shoddy dealer. So isn't there a strong incentive to the NBN to make sure its retailers are operating reasonably?

And perhaps what you really need is like Uber, where Uber has all these drivers, and you as a customer - you know, you use Uber and then you rate them from one to five, and if someone gets rated less than four a few times, then they get cut out of the system altogether.

MR HARRIS: Yes. Well, I agree with that. The - and I'm working on a separate report that's going to the Minister of Communications regarding NBN providing a knowledge centre, and the management of that. So first and foremost, I think that it should be an NBN responsibility.

At the moment they're throwing it back on the layer 3 providers, and that, for the sake of the audience here, goes NBN then layer 3 and then down to your service providers to your retailers to the customer. So NBN's saying, "Well, we give adequate information to the layer 3 providers like Telstra, Optus, Vocus, TPG, whatever, it's up to them to train their staff." But the reality is that I don't think the information's coming - the essential information's coming from the NBN.

So first and foremost, it should be managed by NBN, and there's a lot of ways that they could do things a lot better to not only provide that training to the industry people that are selling the service and the product, but - and then the public. That's another whole recommendation as well, that basically the public don't get anywhere near the information they require to make a decision on that.

MR LINDWALL: Could I ask, because I don't want to get too far overtime, but on that point, people sign up for various packages. They might have 12 megabits a second download and, you know, two upload, and then 20 and then 25 and then 50 and 100, usually, and they may be only finding, you know, 12 - they might get 100 megabit a second and only getting to 12 to 16.

Should retailers say that the minimum you'll get or the minimum I'll guarantee on average is X, and on average you should expect Y, or something like that?

MR HARRIS: Absolutely, absolutely. I can't believe it's gone on this long, that it hasn't. Every advertisement should mention the maximum speeds they're going to get for the pricing. I just can't believe. It's disgraceful. I mean, 12 over 1 NBN is basically half the speed of ADSL 2, but people don't know that.

MR LINDWALL: Okay. Well, could I suggest we move on, because I think - - -

MR HARRIS: Yes, okay, all right.

MR LINDWALL: - - - I hear you on that, so - - -

MR HARRIS: Okay. The - issue number 3, NBN commence billing the day - at present, the NBN commences billing a service on the day that it goes live as far as they're concerned. The issue with that is that it often takes days and weeks for the end user to either rectify the NBN faults, because their installations more often don't work than work,

and it can often take days or weeks for the end user for - particularly in the case of a business, for their IT&T techs to configure the services on the NBN.

So my suggestion there is that the NBN, once a service goes live, they should not commence charging until 30 days after that date. Straightforward.

MR LINDWALL: Okay.

MR HARRIS: Issue number 4, the end user of NBN who moves addresses is heavily penalised for breaking an agreement. Now, previously if you were with - had normal ADSL or phone lines with a carrier, whether it be Telstra, Optus, whatever, and you moved address, that carrier would often make it a little bit easier if you were having new services at another address.

However, because NBN owns the network, there's no facility there, or seems to be no facility, where there's a flat rate if a person - if they have to move, what flat rate can they pay to get out of the program? Now, we've had customers that had to pay the full 24 months they've signed up on. We've had some customers - I can tell you at the wholesale level, it's down below a couple of hundred dollars for us to break contracts. There's no set amount there.

MR LINDWALL: Whereas if you had a contract with the electricity and you had to leave early, you wouldn't pay the full two years or whatever you'd signed up?

MR HARRIS: No. No. And sometimes when they're moving, they're moving to an area whereby there's no NBN available, so there should be a set rate, an industry set rate. Issue number 4 - sorry, it was number 4, wasn't it? Issue number 5.

MR LINDWALL: Yes. Yes, 5.

MR HARRIS: We're jumping onto the mobile phone network here. Inability for all mobile phone users to access coverage of government-funded mobile phone towers. Now, the effect there is you're forcing taxpayers to contribute towards the profiteering of non-aligned telco service providers with no benefit to the non-aligned mobile phone end user, or EU, who as a taxpayer is paying for the other provider's transmitter.

So what I'm suggesting is the government funded mobile phone towers should provide either (a) equal access to all mobile phone users, irrespective of whatever carrier they are aligned to - - -

MR LINDWALL: Which would be called full roaming, as far as I know.

MR HARRIS: Correct. Or (b) offer equal access to all mobile phone users, but with a price loading upon non-aligned end users. Thank you. That's my - - -

MR LINDWALL: That's very helpful, and I understand that, and if you listen to - if you read some of the transcripts when they get up from yesterday and the day before in

Sydney you'll see divergent views on that from obviously Telstra versus Vodafone in particular.

Telstra would argue that - and I'm not arguing it, I'm just telling you what they argue, that if you have full roaming that would reduce the incentive for them to expand their network further. Vodafone say that having full roaming would benefit consumers and it wouldn't reduce the rollout of the mobile phone network under the Black Spot Program. That's - as you see, you get both claims, yes.

MR HARRIS: I have an opinion on that, yes. I do have an opinion on that, and if a company like Telstra is going to invest a lot of money for a large rollout, well, I can understand why they're upset at being forced to allow other users onto it. However, if you give the non-aligned users the opportunity to tap into - for instance, an Optus or Vodafone customer to tap into a Telstra tower, I think that should be available. However, they do need to pay a premium to use that service.

MR LINDWALL: Okay, that's good.

MR HARRIS: And that premium should go back to the tower operator. And that will solve the problem. I don't know why they haven't figured that one out before.

MR LINDWALL: Yes. Now, could I - maybe you could - who knows. Could I ask you, Rod, while I've got you here, and before we go to morning tea - - -

MR HARRIS: Yes.

MR LINDWALL: - - - about the NBN's service on the satellite, the Sky Muster, which we've heard of earlier and I've heard a lot about - - -

MR HARRIS: Yes.

MR LINDWALL: - - - about its reliability, what can be done to improve it? Do you think that the issues, as you're in this industry, are temporary in nature, or are they long-standing?

MR HARRIS: Well, for interest, listen to the previous speaker. The bottom line is that there's no alternative other than go to satellite if we want to have excellent data services. We are halfway through a transition. The second satellite's gone up there. I'm hoping that with the deployment of the second satellite, which takes several months to position them in orbit, I'm hoping that will improve the amount of gig allowance that customers can have. They really need to have up to a terabyte, 1,000 gig per end user, because that's what students can use in a month. At the moment I think it's 180, which is ridiculous, and half of that's night-time daytime, at night-time, off peak.

In terms of the reliability, yes, look, satellite is susceptible to weather conditions. There are - Iridium is just launching a new network at the moment. I think the first satellite went up a couple of weeks ago. They're putting 70 new satellites into space. It's

going to come into effect late this year, probably early 2018. I'm hoping that someone in our government is talking to them about redundancy, because they are low-earth orbiting and are - being new technology, I think that could be a very good redundant opportunity for our Australian Sky Muster system.

MR LINDWALL: For voice services, that would be, I guess?

MR HARRIS: Yes, for voice services and data.

MR LINDWALL: Yes.

MR HARRIS: But the reality is, is that the PS10 has to go, which is currently what people use out bush. I think at the moment they can still retain a PS10 with their satellite, but ultimately it's going to go because it's so limiting. It's an analogue signal.

So we need to get the satellite right, and I got back to the one of the issues I was saying there before, the people supplying it and selling it and servicing it are not - I don't think they even - they understand, so they're not giving the customers the right expectations.

And I do concur that the ability to get support on their phone lines is shocking. Same boat. We are ringing them up, leave a message, never hear back from them. So there should be some changes in their mandatory service obligations. Yes, so I think with the satellite it's - we're in a transition period, and it's going to be nice to see what the second Sky Muster satellite will do for us.

MR LINDWALL: And - - -

MR HARRIS: And sorry, one other thing, Commissioner.

MR LINDWALL: Yes?

MR HARRIS: There are a lot of alternatives to hand-held satellite technology now, and I'll just cite one example. We have satellite phones now for under $1,000 and they're a $15 a month plan with a mobile phone number. They are very, very cheap to use, and the coverage is excellent for far north Queensland, Northern Territory and WA. So in terms of having a hand-held satellite phone for redundancy, very, very popular and you can get the sat sleeve, so you can get the data.

There's a lot of cheaper alternatives coming out for redundancy on the land for - for terrestrial redundancy.

MR LINDWALL: What's your experience in using the NBN satellite in terms of latency? I understand that if you call someone on a mobile phone or you call someone on a fixed line then the latency is not really detectable.

MR HARRIS: Yes.

MR LINDWALL: It's only when you're calling to another satellite service that it's noticeable.

MR HARRIS: Even though we're a regional service provider for a wide field of telecommunications, we actually stayed out of the satellite one, for two reasons. One, there's not one cent profit in it for us. But we do communicate with the people that are installing it and the end users.

Our understanding is the latency is not too bad, but we are - I'm referring to our business customers, and of course they are having outages. There was a big one out at Cape Tribulation about a week or so ago, and they were off air for several days.

So yes, I'm probably not the best person to ask about that, but I have heard the latency's fairly good. Fairly good. We expected it to be worse than what it is, but it's fairly good.

MR LINDWALL: Would you say that if you had an NBN - because obviously redundancy is the important thing, that - - -

MR HARRIS: Yes.

MR LINDWALL: - - - no service is ever 100 per cent guaranteed, but if you have multiple redundancy you increase the likelihood you'll get some service.

MR HARRIS: Yes.

MR LINDWALL: That having the low earth satellite solution such as Iridium - - -

MR HARRIS: Yes.

MR LINDWALL: - - - -plus the NBN satellite would give you a pretty reliable service?

MR HARRIS: I think it probably would. We find with our general satellite comms, they tend to work very well these days in adverse weather, and we've done our own trials in storms and things like that, and we've been quite surprised. But then you can have a beautiful clear day without a cloud in the sky, don't know what's going on up there in the ionosphere, we might get a little bit of a problem with signalling.

I go back to that - with the Sky Muster, with the latency. It is our opinion to date that customers should be able to port their PSTN phone to VOIP and it will work okay on the Sky Muster system. I think we've just got to make sure that the Sky Muster system is operating perfectly well.

Now, we haven't put one of our VOIP lines on it yet. We're about to trial that for some businesses, and it'll be an interesting exercise.

MR LINDWALL: One final question, and then we'll have morning tea, and I'll give you an opportunity if you've got any final comments. Yesterday we had a presentation by Mr Ben Livson of BAL Consulting Pty Ltd, who was speaking of a solution that involves tethered balloons, and he said that about 200 of them could cover the 100 per cent geographic area of Australia and they'd be about $2.5 million each, and I said - you can look at the record later on, but it was that - it sounded a fascinating technology, and I like technology, but I'm a natural sceptic when it comes to claims like that. Have you heard of these types of technology?

MR HARRIS: I have. I've seen articles about it and I think, look, I think in theory it sounds pretty good actually. It could be an economical way of doing it, but I don't know, you'd have to have solar panels on top of the balloons, I suppose, and a link to the ground. You've got weather conditions.

MR LINDWALL: Yes, he did say that they would have solar panels.

MR HARRIS: I don't know if that would be viable for our part of the world with our various climate, but you've got to keep looking at all these opportunities.

MR LINDWALL: Yes, yes.

MR HARRIS: And options - I know for instance like - if you're looking at mobile phone coverage, the price for a mobile phone tower, well, you know, we're talking a lot of money. I think, you know, they seem to vary between $500,000 to $5 million depending where it's located, so it's not cheap to put it up there, but if you've already got a satellite up there, and then supposedly it's got good coverage, well, it's probably the easier way to go about it.

MR LINDWALL: Now, Rod, did you have any final points you'd like to make?

MR HARRIS: No, but I'm happy to take questions if anybody wants to talk to me afterwards.

MR LINDWALL: Yes, well, if you wish to.

MR HARRIS: I've got plenty of issues I could have brought up, but I thought I'd just stick to these few.

MR LINDWALL: Okay. Well, if you want to put any more submissions in, that's - you're most welcome to. Let's have morning tea, thank you, and we can have a chat there over that, off the record, obviously.

MR HARRIS: Thank you.

MR LINDWALL: Thank you. So we'll - until what, just after 11 I think we can - - -

ADJOURNED **[10.40 am]**

RESUMED **[11.02 am]**

MR LINDWALL: Philip, if you just say your name and organisation and give a bit of a presentation today, that would be perfect.

MR DUTCHAK: Okay. All right, thank you for your time. I'm Philip Dutchak. I'm the managing director of Cape York Digital Network Pty Ltd. It's an Indigenous ICT company registered under the ACNC Charity Register operating as not-for-profit.

CYDN started in 1999 under the Regional Telecommunication Infrastructure Fund *(error in recording)* networking the nation. CYDN in ICT terms built and then networked and then supported 16 internet tenderers in Cape York communities for our operations centre in Cairns. So we're an Indigenous company working in remote Australia, yes?

We provided community people with reliable internet connection or IP for video conferencing, thin client or Citrix, web browsing, emails, and, particular to this forum, each of the centres were affected with Wi-Fi for the community. That is remoting from an external antenna broadcasting into the community.

Each centre had computers that were networked and supported remotely with virus protection web filtering. CYDN employed a full-time community person to be the respective centre's managers, who could assist or show people how to use the system, so there is employment and training was an aspect of the roles.

We supported the centres with CYDN technical staff in Cairns. *(error in recording)* in Cairns. Worked to make the centres and their ICT systems secure and as a place where people like to come to, and CYDN's goal - we started in 1999 - was to be sustainable and - as a business, and we're still here.

CYDN started as a unit under the Bulk And Cape York Development Corp. CYDN became *(error in recording)* in 2010 and we have made a number of submissions to the USO and other government bodies. That's the brief introduction.

MR LINDWALL: Okay, thank you. In some of our inquiries with the Broadband For The Bush Alliance, for example, they were saying that the programs that the Prime Minister and Cabinet's Department have for some Indigenous communities like the type you just mentioned, I think, are superior to the traditional payphone. Would you agree with that?

MR DUTCHAK: Yes. I mean, I've been doing this since 1998, always in remote comms. I mean, there are other people might know regional better, but I know remote

pretty well, and I know it across the country. And years ago, Telstra tried to get the government not to push payphones, back about eight or nine years ago, so yes.

But I mean, it varies. Indigenous communities, particularly in the Cape, are quite large, and they're on the coast. But in the Northern Territory and Western Australia some of them can be terribly isolated, and in some cases payphones are actually the only means of communications, so there is a community in Utopia in the centre of the Northern Territory near Tennant Creek. It's Campbell Camp, it's got three people. They have a payphone. You wouldn't have anything, else, yes? It's the only thing that makes sense.

MR LINDWALL: Or you could have, perhaps, a Wi-Fi distribution point there, I suppose.

MR DUTCHAK: Yes.

MR LINDWALL: One of the questions we asked in our draft report was about the types of services provided to Indigenous communities, and whether it was better to have programs such as the ones PM&C Department have targeted directly to Indigenous communities in remote areas, or whether more generalised ones would be better, and do you have an opinion on that?

MR DUTCHAK: I would think remote Australians in general need specific attention.

MR LINDWALL: Okay.

MR DUTCHAK: I mean, sure, Indigenous - there's an awful lot of Indigenous people who don't live in remote Australia, but remote Australians in general. I mean, CYDN is a company, and sure, we concentrate on Indigenous people. Some of our clients have included, you know, government departments, mining companies, anyone who works in remote, yes?

MR LINDWALL: The USO, of course, is a premises-based system, and a lot of communities in remote areas may not stay in the one premises and they are more mobile, so how - what types of solutions are best for those communities?

MR DUTCHAK: Well, in the Cape - the situation in the Cape is that fibre came to the Cape quite early, and fibre in the Northern Territory came very late, so you have the introduction of mobile phones in the Cape York quite a long time ago, while mobile phones has only been introduced in the Northern Territory in the last two or three years, yes?

And so in the Cape - well, when we first started, we put computers in the centres, and that's what people wanted. Now it's smart phones. Now it's smart phones because they want to be mobile, because - I mean, I believe there's a line going out there, that data needs to be mobile, and Indigenous people are mobile, and a phone sort of suits them a great deal.

MR LINDWALL: Yes.

MR DUTCHAK: But it changes, yes? I mean, there are certain conditions - certain geographical conditions particular to remote Australians everywhere, yes?

MR LINDWALL: Yes. And in terms of using the mobile devices, it's all very well to have the towers, but are there - which provide the free Wi-Fi for example, and ACOSS have told us of - you know this - issues about what they call the poverty premium, where people have, you know, pay as you go type contracts rather - or pre-paid contracts rather than contracts which are post-paid, and the latter tend to be at lower cost. Is that something that's an issue for - - -

MR DUTCHAK: The issue really is the credit management. So I mean, years ago Telstra used to put stuff in for Indigenous people. For whatever reason, some of these Indigenous people did pay, some of these people didn't, and so then Telstra came up with the pre-paid. That got around the credit issue, yes?

And indeed, it's used by an awful lot of people and things like that. But you know, remote Australians in general, it's a tough life, yes? I mean, whether you're, as they would say, green, blue or brindle, yes?

MR LINDWALL: Yes. Yes, yes. And there's a bit of a sharing of the services, which means that I've heard of very large bills being run up. Maybe those are less problematic now with the types of contracts that are available?

MR DUTCHAK: Yes, there's a real problem, actually. When the telecommunication world sort of said that contracts, you know, agreed to over the phone became binding, that has created an awful lot of problems for - I'll use an example, because I know this - an elderly lady in Mosman gets talked to by a nice person who sort of says, "Do you want to buy this, that?" "Oh, this is very nice," and she buys it, and if you have an Indigenous person up in a community, someone gets on the phone and says, "I'm going to give you this." I mean, CYDN has had to step in a number of times when a service provider - and there's heaps of them - call up a number cold and they sort of say, "Well, listen, we're going to give you a mobile phone, it's all going to be free," and in some cases that carrier doesn't even provide a service in remote Australia. So it's an issue across the board.

MR LINDWALL: Yes, yes. So what's the best way of addressing that type of issue?

MR DUTCHAK: Well, I would think that the - there needs to be an awful lot more regulation going on, or an awful lot more safeguards, you know? An awful lot of people don't understand that after 24 hours - I mean, a contract is still un-valid after 24 hours, yes? So you can go in and cancel it.

MR LINDWALL: Yes.

MR DUTCHAK: But not many people know that. Now, that's part of what CYDN does, in trying to - - -

MR LINDWALL: Communicate the message - - -

MR DUTCHAK: And, you know, get that going for people. I have a couple of points I'd like to raise.

MR LINDWALL: Please, please, I - - -

MR DUTCHAK: Yes. The points I'd like to raise with the Commissioners are first - well, Commissioner.

MR LINDWALL: Paul.

MR DUTCHAK: Paul. Paul. Paul. In the Cape, there is optic fibre into a number of Cape York communities, and this is not necessarily unique to remote indigenous communities in Cape York. There is fibre into the communities in the Dampier Peninsula - that's north of Broome - and into the NT communities mostly in the Top End.

While many remote Indigenous communities, out stations, farms, isolated dwellings do use or will need satellite NBN, in regards to the USO the Productivity Commission's draft report has noted the technical limitations on satellite, so as a baseline USO, whatever that may be determined to be, the USO would be better delivered by the transport - using the telecommunications term - of optic fibre where available in remote communities.

I'm not too sure in terms of reading the report whether the Commission understands how much fibre there is out there, and how much fibre is actually being built.

MR LINDWALL: There's a lot more fibre out there than people realise.

MR DUTCHAK: Yes.

MR LINDWALL: There's a lot of what they call dark fibre that hasn't been properly accounted for, as far as I know, going to mining communities and crossing all sorts of locations for other purposes, which I won't name here, so yes, and there's never been a proper audit, as far as I can see. That may be a good idea, is to audit what's already there.

MR DUTCHAK: Because it's our understanding from reading the government - the government's made a policy decision if you're in remote Australia you're going to get satellite. And if there's fibre optic going into the community - and indeed, in a number of communities where the mobile base station is, it's being fed by fibre optic, that strikes me as almost double - a double use of government money, yes?

MR LINDWALL: Yes.

MR DUTCHAK: The second point I'd like to raise in regards to Wi-Fi, when CYDN deployed Wi-Fi out to the communities it was a valued add-on to our then core equipment

and services install and package we deployed for a community. This success was a pleasant surprise to CYDN. There was a number of reasons for this, but one of those was that we supported it. There was, if you like, a CYDN customer service guarantee to people who used it and some people who relied on it.

Our point is that if people get a USO they want, they should know what to expect from it in terms of service, and have someone to call if it isn't working.

Our last point is, finally, as the government moves increasingly to the delivery of its services - digital delivery of its services, this will ultimately be a cost saving to the government compared with government officials having to make site visits with charter flights, four wheel drives, accommodation, travel allowances out to remote communities, or, conversely, arranging and paying for remote Indigenous clients to come into government offices.

Now, these aren't insignificant costs. They're a lot of money. Our points are, the baseline USO should include that it is reliable and adequate for the government's digital services, whatever they may be. If people cannot connect, or have to connect multiple times to a service, the speed, the bandwidth, is really secondary to what is going on.

The costs for a new USO need to be measured against the total delivery of services, and not only to how much the USO is now or not costing. And finally, the content services from the government - and this is on the government's side, so content is king - need to keep improving in its digital access, ease of access, its websites and its digital services. So it's a two-way street.

MR LINDWALL: I agree absolutely on that. We spoke to the - I think it's changed its name now, but the Digital Transformation Office, and its objective ultimately was that all government websites, at least at the federal government level and ultimately state and territory and local government levels, would be optimised so that (a) they didn't use too much bandwidth, because as you know some websites use considerably more than they need to, and that they would be able to cope with satellite services fairly readily, so the latency wouldn't be an issue.

That's a very important thing, and you're quite right about the savings from government services being delivered digitally. They have to be reliable, as you say, and that, I understand, is the objective, but how far then down the track I'm not so sure at this stage.

MR DUTCHAK: I just - I mean, I've taken a long look - well, as much as I can, at the actual cost - how they've costed all this, you know? And I mean, everyone keeps talking about the cost of remote Australia. Well, yes, it is. It costs an awful lot. If it didn't, there'd be heaps of businesses, you know, in - doing all types of business and the bonanza would continue, but it's tough going.

And the - you know, the amount of money that people have to spend to go into the communities and out of communities, if it can be supplemented - never completely

abated, but supplemented by digital services, that means they're improving remote communities.

Now, I mean, CYDN is in line with the, you know, the National Farmers' Federation. I mean, I don't have meetings with them, but an awful lot of things that we're saying are really coming from regional and remote Australia, yes?

MR LINDWALL: Yes. No, absolutely. On the point about the use of optical fibre, of course, to the extent that that's more used than it currently is, that takes some of the pressure off the satellite service, obviously, so - - -

MR DUTCHAK: Yes, absolutely. I mean, my understanding is that when Telstra - and an awful lot of fibre in the cape is Telstra fibre, yes? My understanding is that Telstra reserved maybe some - I'm not particularly up on optical fibre, but I think they have 14 threads per cable, or something. But some of those threads have been reserved, nominally reserved, for NBN. Even though they're Telstra fibre. They would have to be leased by NBN, but they're still available.

And the point I'd like to make about Wi-Fi, when we provide Wi-Fi to the community, we're using Telstra backhaul, which is - at that stage it was ISPN, that's all we could get. But the point of the matter is that Wi-Fi can be mainly an access mechanism. So the access mechanism, that's fine. But it had to go into a reliable backhaul. And if you put Wi-Fi phones - which the PMC is doing, and it connects a satellite, and satellite itself is potentially flaky, yeah? So then what happens, you've got two things in line here. You've got the Wi-Fi, and the community would not - or may not know that Wi-Fi is working fine, but the satellite's incorrect, yes?

So we're suggesting that if you're going to provide the USO, that has to be provided on the best platform, or the most stable platform and reliable platform available. Now, some places are going to have satellite, that's it. I mean, there's no other way around it. But in places where there are other means, it should be used.

MR LINDWALL: Well, it's supposed to be technologically neutral and not creating a disincentive for new innovations that might provide better services.

MR DUTCHAK: We are particularly keen about mesh Wi-Fi, so that is meshing a community.

MR LINDWALL: Yes, yes.

MR DUTCHAK: So meshed Wi-Fi is where the actual carriage across the community is actually for free, and there are certain gateways when people need to punch out to the internet. Yes, so we're very keen for that.

MR LINDWALL: Are there any issues with the public Wi-Fi in terms of control of certain content?

MR DUTCHAK: Not that I'm aware of, but I do know there's a trial going on from the PMC in Arakuen, and that is - I've heard varying stories about that. There is a trial going in the Territory, and there are varying stories about that also, yes.

MR LINDWALL: And - - -

MR DUTCHAK: I think it's using Telstra - in Arakuen I think they're trying to use Telstra Air.

MR LINDWALL: Yes, okay, yes.

MR DUTCHAK: Yes.

MR LINDWALL: And what about any issues that you might be aware of with people in remote Indigenous communities in particular with mobile phones and keeping them charged? How - - -

MR DUTCHAK: Well, power is always a problem, but they - yes, look, if they want it they'll get it to work.

MR LINDWALL: So some of these Wi-Fi centres have, like, charging points, do they?

MR DUTCHAK: Ours do, yes.

MR LINDWALL: Okay.

MR DUTCHAK: Yes. I mean, ours do, but I mean, the - what the government is rolling out and they're trialling it, yes, I'm not too sure. They're running off of solar.

MR LINDWALL: Yes.

MR DUTCHAK: I do know Ben from BAL Consulting.

MR LINDWALL: Yes, yes, yes.

MR DUTCHAK: I do know him, yes.

MR LINDWALL: What else? Sorry, I'm just checking to see if there's anything I missed. Overall, though, obviously technology is changing over time. The services that are being provided are better than the past. Your experience with the satellite service provided by NBN, have you got any particular comments on it?

MR DUTCHAK: We don't use satellite. CYDN started out - I mean, when NBN was launched under the Labor Government, I went down to the initial launch of that, and the Chief Information Officer for BHP stood up as one of the keynote speakers, and he turned to the then-minister, and he said, "We don't use satellite unless we absolutely have to.

It's something of last resort. And we run fibre, and we'll sell it back to the community or where we're working."

In some cases, satellite's the only option, and the government should be congratulated for doing that. That's terrific. But if people - people in remote Australia - farmers, whoever - they use telecommunications a lot more than people in the city. They can't go down to the shop and pick it up. They have to use it for health, education, an awful lot of things, and there is an argument, our argument, would be that the best use of telecommunications is to the people who are most needy or to the people who need it most, and that - sure, Indigenous people, farmers, you know, station owners, remote education, health.

I mean, there's a real chance, you know, that the digital divide will get worse for Indigenous people, and you're moving - I mean, sure, things have gotten better, but the entire framework has moved. I mean, 20 years ago if you - or 20 or 30 years ago, if you introduced a technology, like ATM machines, five, 10 years it would take, or 15 years it would take before it was accepted in the community.

Now technology is moving so fast, and people can see other things happening in the big cities, they want it. You know, they want it here. There's - I mean, I'm not saying that every single service available in the city should be available in the country, but I'm saying that people in remote Australia or regional Australia basically need better than they're getting, and the fact that people - I keep reading articles of other people trying new systems away from what the government is offering and suggesting to me that there's a gap. There's still a gap.

MR LINDWALL: So you wouldn't be surprised, I guess, that - it surprises me to some extent, but it may not surprise you, that there were - when the NBN was first considered or broadband around generally, that is, that the estimates they made of usage were on the basis that, you know, people in remote areas had not had the internet and therefore their usage would, on average, be less than in the cities. That didn't seem credible to me, because if you haven't got it doesn't mean that you're not going to use it heavily once you do have it.

MR DUTCHAK: Correct. I mean, Indigenous people are quick adapters. They may not understand the technology, but they sure understand Facebook and Twitter and all those type of things, yes, I agree with that.

MR LINDWALL: Yes, okay. Philip, did you have any final comments before you go today?

MR DUTCHAK: Can I thank the Commission for the report? I thought it was very good. I thought it was very inclusive and - I mean, you know, I'm involved in my business, I've kept my head down, so I've learnt an awful lot of things, so thank you very much for that.

MR LINDWALL: Our pleasure.

MR DUTCHAK: Thank you for the time.

MR LINDWALL: Thank you. Well, now we may as well move to Graeme Bruhns, Errol Watson and Malcolm Haskard from Bruman Rigging and Recovery Pty Ltd. And after this we'll offer anyone else who wants to say something more or who wants to comment on previous presentations - anywhere. Just the two of you?

MR BRUHNS: Mal is going to be doing most of the talking.

MR LINDWALL: Well, if you can just say your names for the record and then give a bit of an introduction, that would be perfect.

MR BRUHNS: Right. Graeme Bruhns, managing director of Bruman Rigging. We actually fix most of this stuff, occasionally, so - well, we try to. We've been to Yaraka a few times recently. Very nice pub there. It's hospitable. But yes, we go into the Northern Territory and North Queensland and do a lot of the actual fixing of this stuff, and I'm just surprised there are not a few of my opposition here to try and find out more about exactly how this is going to work. And Mal's got - he's the technical side of the company, so he's got a few notes just on how the nuts and bolts of how this actually works.

MR HASKARD: Yes, Malcolm Haskard from Bruman Rigging and Recovery in Townsville. We came in a little bit late into this, but I've got a few things I'd like to speak on and perhaps introduce to a few people regarding a lot of different things, particularly with regard to the NBN USO. I've been involved in communications for approaching 45 years, and the last 20 years have been servicing what's referred to in the report as the other 3 per cent of the people.

That's what I've been doing for a long time with Telstra in all its different formats, starting in the PMG, and five years overseas on secondment as well.

Just - some of this might be a little bit disjointed, but we'll go for it. The previous gentleman commented on the fact that they seem to be going straight to the satellite when fibre's already there. I've been a bit concerned about that for some years now. For example, at Julia Creek there's spare dark fibres in the exchange there that could be utilised by NBN. NBN tells the people in town, "You're going to be satellite customers." What on Earth are they going to be satellite customers for? It's just ridiculous.

With regard to - - -

MR LINDWALL: I'll let you just go, and then I'll ask questions after, if that's all right.

MR HASKARD: Yes, no worries. With regard to the NBN satellite, originally they weren't designed for voice. So I don't know if everybody's aware of it, but we've got a couple of technologies called VOIP, which is voice over internet protocol, and another one a bit more recently called VOLTE, and not as in volts for electricity but voice over

LTE. LTE is generally referred to as 4G for the radio. It's been used by NBN for the local wireless, and it's quite good but the range is a little bit limited.

So that's a couple of terminologies. But they don't work all that well. If you have to use VOIP, with the noise, yes, that's right, I'm sorry, but when you were speaking I was having a hard time restraining myself from saying people would never use it. They don't know what they're on about, right?

It's not a primary form of voice communication for reliability, and I get a bit concerned when I think about School Of The Air, for example. The USO - I've done quite a few of those for Telstra. 20 solar panels, massively power hungry, and if they've got School Of The Air we'll give them another battery bank, each battery bank big enough to run your house, and we'll give them 24 panels to do School Of The Air. It works really well - pretty slow on data, but for voice, fantastic. Far away better than, from what I've seen, from the Sky Muster.

There's also the power to run the NBN satellite. I've only seen one Sky Muster installation and I'm hoping the guy was having a bad day, because it was extremely poor. I've never seen such a bad installation. Telstra's installation things were very good, perhaps sometimes considered a bit too high a standard by some people, but at any rate, the other thing is with these satellites, it was brought up in the report there, in the draft, about the life span of them. This thing doesn't go up there and stay up there forever and a day. They've got to be replaced. They've got a use by date.

Just going back probably eight years ago, one of Telstra's - we've got about - at that time, about 750 USO satellite customers, and the satellite was replaced, and I'm one of the crew who went round and physically repositioned the dish for those 750 people.

Now, you don't always have to do that, because the satellite can be moved in front and behind and all this sort of thing, but on this occasion it couldn't be done, and that's only 750. We're talking tens of thousands.

MR LINDWALL: And that was realigning the dish?

MR HASKARD: Yes. I mean, it's obviously totally ludicrous to suggest going to replace - I beg your pardon, to repoint them later on. Sorry, the term is repointing the satellite dish. So that's just one thing that doesn't seem to be being brought up very much.

Moving along, the USO sats on the cattle stations, under the old system if a cattle station had a USO sat at the main homestead and 100 kilometres away they've got another house, Telstra and the USO would say, "Sorry, you can't have it," so you had to go down and get the head ringer to apply for the phone and then he could have a USO sat phone down the other end of the property, right? I mean, that's the realistic implications, and that's how it was solved.

What else have we got there? The power. A bit like NBN in your house. Two AA batteries in there. When they run out and the power's off, too bad, unless you've paid extra for the larger battery installation.

MR LINDWALL: Yes.

MR HASKARD: All of the HCRC and the USO sats that I've done - almost all - have been solar powered, and it's the answer. The cattle stations provide their own power, and this is a large percentage of them. The solar power has solved your problem. There's no connection with the station, and it works, and if there's a problem it belongs to the carrier.

But the new NBN one, the power problem is yours. So you know, somebody's got to look after it, and it's all very well to say, "Well, the station generator is running, we'll get a UPS and we'll run it that way." Somebody's got to look after it. Somebody's got to pay for it. Somebody's got to tell the people that they've got to do it.

What else have we got here? I was interested to see that Andrew, I think it is, has retained his HCRC. I was told three years ago when I started enquiring about all these things that, "Well, once we get the satellite up for Sky Muster, you can turn your HCRC off." Sorry, HCRC is the same as a swing or DRCS, or digital radio concentrator system. The theory was you could turn it off so you didn't have to pay twice.

When I started bringing them up - you know, those NBN caravans and Telstra caravans, I stopped at every one and asked them. They don't have a clue. So at any rate - but the reality of it is most people are going to settle to keep their swing system going because they know it's reasonably reliable. Yes, it's getting a bit older, we're changing launchers in the grid pattern - sorry, the antennae and parts of them on an ongoing basis, but some of them have been in for a very long time.

You're right about the maintenance angle. There's less and less Telstra technicians. We've got our new breed of fly-in fly-out technicians who have been trained to some degree. It's not their fault. They need more experience and more training, some of them. The people who are still there from what I'd call the old school from Telstra are doing a really good job, and most of them are overworked.

Richmond, Hewenden, Julia Creek, Georgetown, all those people, Karumba, Normantown, those blokes out there, it's ridiculous what's going on, the amount of work they're doing and expected to do.

Mobile phone base stations, yes. Solar power ones have been tried. We've done two of them. Half of the solar panels that are installed at those are to run the air conditioning, because we've got so much, and made the base stations so small, the problem is they still get just as hot, so you've got to get rid of the hot air. There's another one just going in at Camooweal - sorry, between Mount Isa and Camooweal that we had a look at the other day, it's not one of ours, and it will be interesting to see how it goes, because there's a lot of spare towers between there and the three ways in the Northern Territory that could be utilised if it's a goer.

The ones that are in are okay, but there was a lot of work done on them. They couldn't be rolled out like that, it's too expensive, but the new ones - there's actually a base - the base station is in a cabinet on the ground instead of in a building, and when you open the door, the air conditioning unit is built into the door, and it's a 48 volt unit that's solar powered.

So they're there. They're being given a bit of a trial run, and hopefully - - -

MR LINDWALL: So they're a lot less expensive?

MR HASKARD: A lot cheaper. No building, and you're only air conditioning a thing the size of - call it two fridges.

MR LINDWALL: Yes.

MR HASKARD: So it's probably going to be a winner. But anyway, just another thing. There's all these things that are going on - sorry, just refer to my little list here. I know it's a little bit disjointed, but - that's probably most of it. But there was one very interesting reply to the draft submission by a fellow called Malcolm Moore.

MR LINDWALL: Yes.

MR HASKARD: When I read that, I thought, "This bloke knows what he's talking about," and I hope that you and the Commission will take on board what he said in there, because when I read it, I thought, "This is really good," and he's spent a lot of time getting that together. I mean, I know the gentleman, even though it appears we probably work for the same employers most of the time, but what he had to say in there I was very impressed with, and I'd like to think that some of it will get taken on board. But anything else you can think of?

MR BRUHNS: No, that's about it, I think.

MR HASKARD: Yes, well, if anybody's got anything like - to be installed - like - - -

MR LINDWALL: I might ask - sorry, please - - -

MR HASKARD: I might just elaborate a bit. With the HCRC, the swing and the USO, I have worked in different areas, like including going out on radio survey work to find out first of all where the place is and what sort of technology might work, how high do we have to make the tower, will it work at all. No? We've got to go to USO sat.

I've been involved with that, and then going and building whatever technology it is in all of those and maintaining them, and still maintaining them. But, you know, it's just there's a lot of things in that draft submission there that I found quite interesting, but I can't understand why they're saying, "Yep, all these people need to go on USO," and quite frankly I think someone - - -

MR LINDWALL: You mean the NBN satellite?

MR HASKARD: Sorry, I beg your pardon, you're correct, yes, the NBN Sky Muster satellites, because there seem to be a huge number of people there compared to my knowledge of the number of satellite customers that we've got, and the number of - - -

MR LINDWALL: There's 400,000 premises, according to the NBN.

MR HASKARD: Yes. Well, I read that too, and I thought that was a bit over the top, but it may be correct. But the other thing was, there's no reference in here to what happens to the people that have got an existing USO satellite which gives pretty good voice, when we're talking about the latency and that. It works all the time. Yes, the rain may affect it - - -

MR LINDWALL: But not to the same extent?

MR HASKARD: But not the same extent, you know. And you don't get that echo when you're only going to a land line from them. Most people can't tell. If you're going from one satellite USO on a cattle station to another one, as in another sat one, then yes, you do get that echo.

But on a normal one site, you wouldn't know, most people. But you know, I don't know whether people are expected to retain their USO sat for voice and then get an NBN for data, but I can see a lot of the people I deal with, that's what they're going to do, because they know their satellite is hit and miss, and these numbers in here of 99%, that's ludicrous. There's no way they can expect that sort of service.

I'm taking - I realise I said about it might be out for, you know, up to ten days a year, and they don't mean the whole day, they might mean ten minutes in the day, but I just can't see how it's going to work. And if the sheer numbers that they're quoting in there are correct, I've got my doubts about the whole show.

MR LINDWALL: Could I ask about the installation because of the NBN services? Because I have heard other people saying in other locations that it's been shoddy workmanship in some cases.

MR HASKARD: Well, I've only been - I've only seen one, because of course once they go, I've got no need to go back, either working for Bruman Rigging or when I was with Telstra, but the one that I did see, I couldn't believe that it was the final thing. It was absolutely appalling. It worked. It was absolutely appalling.

MR LINDWALL: So it was unsightly?

MR HASKARD: It looked like a temporary thing that we'd whack up to use for three days, but it was permanent, yes, and the guy - and he had to provide his own power, so he had two car batteries, and he said, "When I run the generator, I make sure I've got the

charger," and I said, "You're going to put up with this forever and a day?" He said, "Yes, it's not quite the same as yours."

What, ours had 20 solar panels on it and all the rest, and he was retaining both. He wasn't silly.

MR LINDWALL: So did he complain to his retailer to get the installation - - -

MR HASKARD: I don't think he would have known any better, except he knows what our standard of work was like. We'd done two other jobs for this gentleman, and I just - I mean, I don't - I didn't comment on it. It's not my job to comment to the man, but I sort of looked at it, and he said - he said, "It's a bit rough, isn't it?"

MR LINDWALL: Would that make it less reliable?

MR HASKARD: Absolutely.

MR LINDWALL: Yes, yes, I thought so.

MR HASKARD: The dish was too small, the cabling wasn't supported, no proper drip loops in it, no proper catenary. The batteries are just under the bench in the house.

MR LINDWALL: So it's conceivable then that problems that people have with the NBN satellite may not just be their satellite, but they might be the installations within the premises?

MR HASKARD: That's for sure, yes. Mainly power is the one I get a bit concerned about, yes. The other thing is, when we're - - -

MR BRUHNS: From our point of - well, mine as the boss, et cetera, the Universal Service Obligation, we're talking about who's going to actually pay to maintain all this in the future, but - and there's been numerous inquiries when the NBN started off on the cost that they pay people like us to actually install this, and the figure that they quote all the time is ludicrous. All these installations, whether they're optic fibre, fixed wireless, whatever, are done on scheduler rates basis that is ludicrous.

MR LINDWALL: Ludicrously low, I presume?

MR BRUHNS: The companies that actually run it, the service streams, vision streams, have a figure up here they pay the guy that actually does the work way down here. Figures where everything is basically built down to a cost, not up to a standard. And it is the cheapest person that will do it that will get that work. And to do it cheap, you do shoddy work, you cut corners, et cetera. We don't do much NBN work.

MR LINDWALL: No.

MR BRUHNS: Because there is no money in it. And there's no point.

MR LINDWALL: So Telstra, when it provided for you to do work for the USO satellite - - -

MR BRUHNS: Pay a reasonable amount and get a reasonable job.

MR LINDWALL: Can you disclose how much more they pay compared to the NBN?

MR BRUHNS: 50 per cent, at least.

MR LINDWALL: That's a big difference, isn't it? Yes.

MR BRUHNS: A $100 job with the NBN would be $800, $900 from Telstra.

MR LINDWALL: Yes. The issue of the dark fibre going past and not being used, that's been said to us before. I'm just wondering why it's the case. Why isn't it being used? Because more people using that means less strain on the satellite services.

MR HASKARD: Yes, absolutely. Initially, going back probably three years - no, four years, sorry, it would be now, they told, "Oh, less than 500 people, they're going NBN satellite. We're not going to use the fibre, not enough people," and I just thought, "That's crazy. 500 people in a" - I mean, Julia Creek's a small place, but the people out there are pretty keen. I mean, they give it a go, and they're looking to improve the situation communications-wise out there, and the NBN is saying, "Oh, you're going to be a satellite customer," and the USO sat system is pretty good, because when we're talking about the rain, you can put a bigger dish up, make it more high powered, but that means more solar panels and bigger batteries.

You can do lots of things, and they'll overcome problems up to a point, but it's all built to a price. So if we're going to put in a dish that's, I'll call it, you know, a metre in diameter versus a 2.4 metre dish or something like that, the standard's 1.8.

But the NBN ones I believe might be 1.2 metres, and that's okay, as long as the footprint's okay for it. Sorry, as you get to the outskirts of the footprint from the satellite you need a bigger dish, and it's also how we do some of the islands that - islands might be outside of the footprint. That's all right, we'll put up a four metre dish, or bigger, and you can often get enough to do it. But you know - - -

MR LINDWALL: Would that help with rain fade, if you had a larger dish?

MR HASKARD: Only if you were back in the footprint. Once you're out - if there's a footprint area here, and we've got an island out here and on a four metre dish now, the rain is going to knock it about, unless you go - we have, prior to my work with Bruman Rigging, done an eight metre dish on an island that was well outside. The signal was that low, we had to get Channel 7 after hours to bump the output of the thing so that we could find it, because this is a - experienced people, I'm talking about, could not find it, because the signal was that low.

Once they got it, it locked on and everything, and then Channel 7 put it back to normal, but that is extraordinary circumstances. That is a mine, that can afford to pay it for all its employees.

MR LINDWALL: But what I'm saying is that if - other things being equal, if you've got a satellite service within the range - - -

MR HASKARD: Yes.

MR LINDWALL: - - - and it's, say, a 1.2 metre dish, and it's affected by rain fade, would a larger dish reduce the amount?

MR HASKARD: It'll help, but yes, a lot of factors come into play, but yes. But it's just - generally, yes.

MR BRUHNS: And just going back to Julia Creek, it's not just Julia Creek. There's a lot of those towns between the NT border and Townsville, Cairns, et cetera, that have not just the Telstra fibre going through it, but they've got the next gen one as well, and neither of them are giving those towns access, and they are running right through the middle of town.

MR LINDWALL: And those communities have tried to get access, obviously?

MR BRUHNS: NBN have basically blunted said under this number we're not going to do it.

MR LINDWALL: Even - okay.

MR BRUHNS: Yes.

MR LINDWALL: On the NBN satellite and its solar-powered status - not solar-powered, I mean, is that just a cost saving measure, was that?

MR HASKARD: Yes, that's my thoughts on it. However, there is another thing that just came to light only this week, where a lot of these HCRC systems - we are led to believe that they might be superseded by - and their service will be provided by NBN satellite, and the theory is that most of them have a triad or a 20 to 30 metre mast. Take the top section off, put another couple of solar panels on, put a pole in the ground and put the satellite dish on there.

The radio equipment for the new satellite, they tell me, fits in what we call a type 3 shelter, which is a standard one at tens of thousands of these places, and that it only needs a smaller battery than what we'd normally provide, because it only uses, I'm told, 20 per cent of the power of the ones we presently use.

Okay, less power, we just said, bigger dish, smaller dish, less power, more power, but - and if that's the case and we're going to whack thousands more people on the satellite, it's going to get congested. We're going to get slower speed again. We're going to get all the things that have been outlined by other people. The system - a lot of it might be getting a little bit old now, but it's still working generally, you know.

And everybody knows how to fix it, and yes, a few systems have been taken out of service and replaced by other technologies so that Telstra could get spare parts, that's quite true, but I can't really comment a lot on the Telstra side of it because I'm not employed by them.

MR LINDWALL: Is there anything finally you'd like to both say, that we haven't already discussed?

MR BRUHNS: Not really. As Mal said, we came into this late and missed a lot of the original submissions, et cetera, but I saw this one here in Cairns, so it was - we wanted to come along more to try and find out more about it and make sure, by being at this one, that then we can involve ourselves a lot more in any future negotiations and submission, et cetera.

MR LINDWALL: Well, thank you very much, yes.

MR BRUHNS: Because all my - I'm ex-Telstra, all my staff are ex-Telstra. We're all in our 50s and 60s, and while we do our best to do these things at present, there's a limited number of people that can actually do this.

MR LINDWALL: Yes.

MR BRUHNS: And that is also going to be a problem that you have.

MR LINDWALL: Exactly, yes, yes.

MR HASKARD: With people retiring.

MR BRUHNS: Thanks for your time, and - - -

MR LINDWALL: Thank you very much.

MR HASKARD: Yes, thank you very much.

MR LINDWALL: Okay. I much appreciate you both coming.

UNIDENTIFIED SPEAKER: (indistinct)

MR LINDWALL: Sorry?

UNIDENTIFIED SPEAKER: Can we ask (indistinct).

MR LINDWALL: Do you want to ask a question?

MR HASKARD: Yes, if that's all right with you - or do you want to do it after?

UNIDENTIFIED SPEAKER: (indistinct)

MR LINDWALL: Maybe outside of the session.

UNIDENTIFIED SPEAKER: (indistinct)

MR BRUHNS: Yes, we'll hang around.

MR LINDWALL: Because (indistinct) from the floor. But I do need to invite anyone else who wants to make a presentation to come forward who has not already done so, or who wishes to say something more. Please.

MS BOISEN: Sorry, my name is May Boisen from Telstra. I'm not here to make a submission or anything, but I just sort of wanted to sort of clarify on a couple of comments that yourself and Rod have made earlier.

With regards to the fixed wireless, you asked the question whether customers then had to disconnect within that 18 month period. At this point in time, no, they don't, and what I'm finding in my region is that customers are retaining both, so they will get the fixed wireless service for their internet, but they will retain their PSTN line as well. So I just wanted to clarify on that.

MR LINDWALL: Yes, good.

MS BOISEN: Also Rod mentioned about speeds. Our CEO just recently announced that by the end of this financial year, basically when you walk into a store or call us up, we will actually provide you with a speed that you will get to your premises.

So we can - you come in, and we'll go, "Yes, at your address with this data, this is the speeds that you're going to get."

MR LINDWALL: Good.

MS BOISEN: So we're actually already doing that.

MR LINDWALL: Yes.

MS BOISEN: And also Rod mentioned about the co-location and the mobile black spot. We actually already do that, so any service provider, once we install a tower, can co-locate with us, it's just they have to pay for that co-location. Unfortunately a lot of the other service providers, that then becomes a challenge.

So I just sort of wanted to clarify a couple of those things and just have that on record.

MR LINDWALL: Is there anything else you'd like to say while you're here?

MS BOISEN: No, no, just thank you for having us here, and - - -

MR LINDWALL: Okay. A pleasure.

MS BOISEN: - - - like I said, I just wanted that on record.

MR LINDWALL: Okay, no, perfect.

MS BOISEN: Thank you. Thank you so much.

MR LINDWALL: Anyone else would like to say something? No? Well, I think that's probably it then. What do I have to say? Yes, that concludes the scheduled proceedings. I now adjourn them and the Commission will resume the hearings next week in Launceston. Thank you all for being here and much appreciated your contributions.

MATTER ADJOURNED AT 11.47 AM UNTIL
TUESDAY, 7 FEBRUARY 2017