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25 November 2025

Senate Standing Committees on Environment and Communications
Parliament House
Canberra ACT 2600
Australia

Subject: Submission to the 'Triple Zero service outage' Inquiry,

To the Senate Standing Committee on Environment and Communications,

My name is James Parker, I live in the electorate of Lilley in Brisbane and I have a background in IT and Networking including a Diploma in IT & Networking.

Thank you for establishing an Inquiry into the recent Triple Zero Failures, this is an issue I have been deeply concerned about for quite some time.

Background

Last year on 23 July 2024 I was a witness at the Senate Inquiry into the Shutdown of the 3G Mobile Network (Submission #32).

Prior to being a witness at that Inquiry, I also wrote a submission to the Optus Outage Senate Inquiry in November 2023. (Submission #34)

Within that 2023 submission I warned about the impending impacts with the 3G Shutdown including 4G phones being unable to make calls or emergency calls on 4G post shutdown.

Additionally I am quoted in both the Optus Outage Senate Inquiry Report from September 2024 and the 3G Shutdown Senate Inquiry Interim Report from August 2024.

APH - 3G Shutdown Senate Inquiry Interim Report - 1 August 2024
https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Rural_and_Regional_Affairs_and_Transport/3GNetworkShutdown/Interim_Report/Chapter_1_-_Interim_Report

APH - Optus Network Outage Senate Inquiry Report - Additional Comments - September 2024
https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/OptusNetworkOutage/Report/Coalition_Senators_Additional_Comments

With the 3G Shutdown Senate Inquiry last year, I spoke at length to the Rural & Regional Affairs and Transport Committee about the major compatibility & standardisation issues that exist with 4G VoLTE Calling & Emergency Calling, and how that would impact safety and access to emergency services.

Senate Inquiry - Shutdown of the 3G mobile network | 23/07/2024 - 2hrs 10m - James Parker
https://www.youtube.com/live/Tlofv0UfoI0?t=7833s

APH - RRAT Committee - 23/07/2024 - Shutdown of the 3G mobile network Hansard – James Parker
https://www.aph.gov.au/Parliamentary_Business/Hansard/Hansard_Display?bid=committees%2Fcommsen%2F28167%2F&sid=0004

I also provided to that Senate Committee two formal public submissions totalling over 38 pages detailing the significant technical issues that exist with different devices and networks.

Those submissions went into great detail about how the implications of shutting down 3G were not just limited to those with older devices or those in regional communities, as was widely assumed.

This Submission

Other Mentions & Media Coverage

In 2024 I was also mentioned by name in the following news articles about the implications of switching off the 3G Network, including the significant impacts to calls and emergency calls on 4G/5G devices.

ABC - More than a million older mobile phones at risk of being blocked from making triple-0 calls – 2024-04-08
https://www.abc.net.au/news/2024-04-08/million-iphone-android-devices-caught-out-3g-shutdown/10367386410

ABC - Customers suddenly find their new phones can't make calls or send texts – 2024-11-03
https://www.abc.net.au/news/2024-11-03/brand-new-phones-unable-to-make-calls-3g-shutdown/104541440

The Australian - Australia should follow Europe, UK and postpone 3G shutdowns, inquiry told – 2024-07-24
https://www.theaustralian.com.au/business/technology/australia-should-follow-europe-uk-and-postpone-3g-shutdowns-inquiry-told/news-story/85dc508f40bf7df4467c782e0c644530

The Australian - Why the Telstra, Optus 3G shutdown is also a 5G problem in an emergency – 2024-10-27
https://www.theaustralian.com.au/business/technology/why-the-telstra-optus-3g-shutdown-is-also-a-5g-problem-in-an-emergency/news-story/80b54522ac8b6963aa32003f3d260b84

And more recently I was quoted in the below ABC Article regarding the recent death related to a Samsung phone on the TPG/Vodafone Network.

ABC - Industry experts say TPG Telecom should have done more to address Triple Zero issue – 2025-11-19
https://www.abc.net.au/news/2025-11-19/tpg-telecom-contact-customers-triple-zero-death/106022250

Unfortunately many of the same issues I wrote and warned about in 2023 (and last year at the Inquiry) have now occurred. With the extent of the technical issues and causes of these failures not at all well-known or understood by the public.

This Submission

I will say I do have some reservations with making this submission.

As I have concerns that the core safety & consumer issues at play may not be resolved, and that people will be unfairly impacted whilst the telcos continue to face no consequences for their actions, both for actions to date and into the future.

Given my involvement on this issue to date, I also feel I have a responsibility to report on what I know, even if that might come at some personal expense and impact the work I've done over the past year in trying to help with these issues being addressed.

With the experience I've had over the past two and a half years (since June 2023) trying to raise awareness of issues related to Emergency Calling and calling compatibility issues on 4G, it unfortunately seems to be a case that real action isn't taken until something goes terribly wrong.

Repeated and clear warnings of systemic issues with standards and (adherence of those standards) by carriers & industry have been otherwise minimised or disregarded.

This includes by carriers, and for quite some time regulators as well.

Despite these problems being entirely foreseeable and known about for many years, including by the carriers and the broader telecom sector.

As I'm quoted as saying in one of the above ABC articles.

> "There are failures across the board here that have been obvious for a very, very long time, but sufficient action has not been taken by anybody,"

ABC - Industry experts say TPG Telecom should have done more to address Triple Zero issue – 2025-11-19
https://www.abc.net.au/news/2025-11-19/tpg-telecom-contact-customers-triple-zero-death/106022250

This Submission

Ultimately I have written this submission because I believe in transparency.

There are a number of very serious and important issues that the Australian public has the right to know and should be on the public record.

These issues are (and can be) technically complex in nature, but the underlying causes are clear to understand which I hope to be able to show and explain in this submission.

I earnestly apologise in advance for the length of both this submission and (included) attachments.

I've tried to include enough relevant information and sufficient detail to ensure the issues we now face with Emergency Calling compatibility and fair access to vital telecommunications services can be thoroughly examined.

It's important this information is on the public record, along with the important technical issues that aren't well known about by the general public.

There is much more to this issue that I haven't included in this submission.

I would also be more than happy to answer any questions the Committee may have about this submission and the attached content, as I have done previously for the 3G Shutdown Senate Inquiry.

Like everyone, I hope to see all of the issues with Triple Zero resolved.
Though given the track record with the telcos that remains to be seen.

This Inquiry is a very important step in achieving that outcome.

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Recent Problems with Triple Zero

The issues with calling 000 that have been reported in the media in recent weeks, and following on from the 18 September Triple Zero failure, are a direct result of what was by all accounts a premature and mismanaged 3G network shutdown and transition.

ABC - Industry experts say TPG Telecom should have done more to address Triple Zero issue – 2025-11-19
https://www.abc.net.au/news/2025-11-19/tpg-telecom-contact-customers-triple-zero-death/106022250

ABC - Calls for system overhaul after more people say they were unable to call triple-0 – 2025-10-30
https://www.abc.net.au/news/2025-10-30/triple-0-failure-optus-network-robbery-emergency/105938218

ABC - Vodafone gave mixed messaging over service issues with triple-0, customer says – 2025-10-24
https://www.abc.net.au/news/2025-10-24/vodafone-customer-service-samsung-triple-0/105922288

ABC - Telstra testing reveals some Samsung mobile phones unable to make triple-0 calls – 2025-10-22
https://www.abc.net.au/news/2025-10-22/samsung-mobile-devices-triple-0-telstra-network/105920816

ABC - More Optus triple-0 call failures on new dates, customers reveal – 2025-10-06
https://www.abc.net.au/news/2025-10-06/more-optus-triple-zero-fails-outside-of-confirmed-times/105856172

ABC 7.30 - Optus customers left angry after more failed triple-0 calls – 2025-10-06
https://www.youtube.com/watch?v=4qRKwnmr2eA

One instigated by the telcos & industry with insufficient oversight by Government and the Regulators.

When speaking to the Senate Inquiry Committee last year, towards the end of my testimony I said:

> *"….**it only takes one national tragedy to happen before we start realising that maybe we shouldn't have switched this network off.***
>
> *Then we'll have the providers saying, 'We couldn't have foreseen it, and we've worked on this and we've done the standardisation.' No, it's all nonsense. Respectfully, it's just nonsense."*

Senate Rural & Regional Affairs & Transport References Committee | 3G Inquiry - 23/07/2024 (Section at 3hr 13mins)
https://www.youtube.com/live/Tlofv0UfoI0?t=11610s

We now find ourselves in this situation today.

I would invite the Committee to read over my 3G Shutdown Senate Inquiry Submissions in detail, which I have submitted as a separate attachment alongside this submission (it contains additional information).

APH - Shutdown of the 3G mobile network – Public Submissions - #32 Mr James Parker
https://www.aph.gov.au/DocumentStore.ashx?id=be380de4-1cdf-405a-be68-59f8183a64bd&subId=757441

As well as listen to (or read through) my testimony from the Inquiry hearing last year.

Senate Rural & Regional Affairs & Transport References Committee | 3G Inquiry - 23/07/2024 (Section at 2hr 10mins)
https://www.youtube.com/live/Tlofv0UfoI0?t=7833s

APH - RRAT Committee - 23/07/2024 - Shutdown of the 3G mobile network Hansard – James Parker
https://www.aph.gov.au/Parliamentary_Business/Hansard/Hansard_Display?bid=committees%2Fcommsen%2F28167%2F&sid=0004

I have included some elements from those submissions below to provide additional clarity & background.

Warnings about Emergency Calling Issues & 3G Network Shutdowns

Some may wonder or ask how the recent issues with 4G/5G phones being unable to call 000 are in any way related to the 3G Network shutdown which occurred more than a year ago.

ABC - Australia's 3G network is shutting down. Here are the phones that will be impacted – 2024-10-28
https://www.abc.net.au/news/2024-10-28/3g-network-australia-shutting-down-today-explained/104525766

The problem with shutdown of the 3G Mobile network isn't about wanting to use old phones or not wanting to embrace newer faster technologies. *As I think most have assumed.*

Nor is it just about the very real concerns about regional coverage.

The shutdown of the 3G Networks has meant there is now **no longer guaranteed compatibility** for all devices to be able to reliably make calls, including emergency calls on all networks.

With 2G/3G, devices essentially have guaranteed universal compatibility on all 2G/3G networks.

This is not something that has ever occurred with previous shutdowns such as with 2G in 2017/2018 (or CDMA prior to that) where all devices with a given technology are equally impacted on all networks.

Vodafone Media Release - Vodafone to switch off 2G network in 2018 – 30 September 2016
https://www.vodafone.com.au/news/archive/switch-off-2g-network

IT News - Vodafone to kill 2G network – 30 September 2016
https://www.itnews.com.au/news/vodafone-to-kill-2g-network-438523

Optus Media Centre - Optus to close down remaining 2G network from 1 August – 25 July 2017
https://www.optus.com.au/about/media-centre/media-releases/2017/07/optus-to-complete-2g-network-turn-off

Unlike 2G/3G, 4G & 5G have no 'built-in' functionality for Calling, Emergency Calling or Roaming Calling.

4G (LTE) is essentially 'Data only' and for devices to be able to make calls (including Emergency Calls) on a carrier network they need explicit software capability and support.

2G & 3G by contrast use 'circuited switched' calling which does not require specific software in order for calls to work, it's a fundamental element of 2G/3G networks and all mobile devices ever sold.

In order to make Calls or Emergency Calls on a 4G only network, a device needs to support a software feature known as "Voice over LTE". 'VoLTE' essentially makes use of the device mobile data connection to establish calling functionality, however not all 4G devices support VoLTE, or on all networks.

Most consumers are still not aware of this, and the previous convention of being able to use any network unlocked device on any network in the world, and be able to make calls & emergency calls **simply does not exist anymore in Australia.**

This change has only undermined competition, further concentrated profits and market control to the telcos & major handset makers and heavily limited consumer choice in the market.

Along with severely impacting reliable access to emergency services.

EENA Warning

As I wrote in my 3G Shutdown Senate Inquiry Submission last year, the issues around 4G Emergency Calling compatibility & standardisation were covered in-depth at an EENA (European Emergency Number Association) Conference in 2022 by Telecoms Policy Expert Rudolf van der Berg.

The link to his presentation on the EENA YouTube page can be found below.

Mr van der Berg is from the Dutch Telecommunications Consultancy firm Stratix, he was also an Economist/Policy Analyst at the OECD and has worked for many years in the European Telecom Sector.

I would highly recommend watching the presentation in full, as everything discussed in the presentation is directly relevant to what is happening today.

Warnings about Emergency Calling Issues & 3G Network Shutdowns

EENA 2022: Access to emergency services is being impacted by the lack of VoLTE interoperability

2022-05-31

eena112

Some weeks ago, French mobile operator Free warned that calling numbers, including emergency numbers, would not function when roaming in the US.

EENA 2022 – Access to emergency services is being impacted by the lack of VoLTE interoperability:
https://www.youtube.com/watch?v=sHjyLmFt-eg

Some other written resources from the EENA are also below:

EENA Special Focus - 2G/3G Shutdown – 2022-09-22
https://eena.org/our-work/eena-special-focus/2g-3g-shutdown

EENA - The Potential Perils of 2G and 3G Switch Offs – 2022-09-12
https://eena.org/knowledge-hub/press-releases/the-potential-perils-of-2g-and-3g-switch-offs

EENA - Ensuring continuity of access to emergency services/VoLTE Standardisation Problem - 2022-09-22
https://eena.org/blog/webinars/volte-standardisation-problem

The 2022 presentation covers the issues in depth, including artificial restrictions of devices on networks, broken standards, along with the failures of adherence and implementation of standards by industry.

Along with the widespread compatibility and standardisation issues that plague the sector globally.

In his 2022 presentation he called on regulators and Governments **to stop 2G/3G network shutdowns until the 4G standards were fixed.**

Both to save lives, but also to protect consumers, competition and access to essential services.

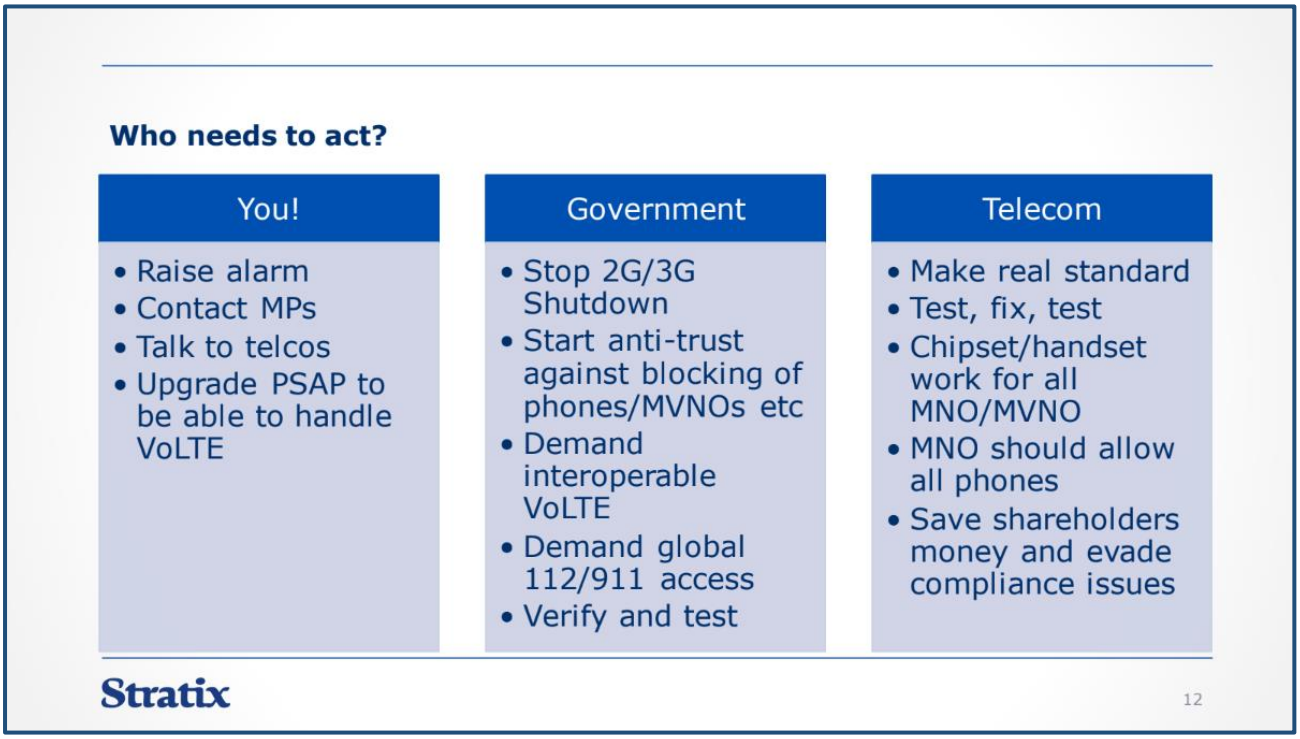


Figure 1 – 'Should we stop the shutdown of 2G/3G to save lives??' - Slide 14 - Rudolf van der Berg – Stratix – EENA 2022
https://drive.google.com/file/d/1WC16k8C1gpeFRJif23yDIuLSRg1OJOnZ/view

Warnings about Emergency Calling Issues & 3G Network Shutdowns

Awareness of Issues

These issues aren't well known (and are still not well known) to the general public however in his EENA presentation in 2022 he said these issues are ***"Common Knowledge"*** in the industry and that ***"..there is nobody who feels responsible to fix this"***. *(16:45)*

In relation to stopping 2G/3G Shutdowns, a slide from his presentation said ***'telecom sector will deny*** *[there's a problem]****, be angry over 5G investment and bargain for half baked measures..'***

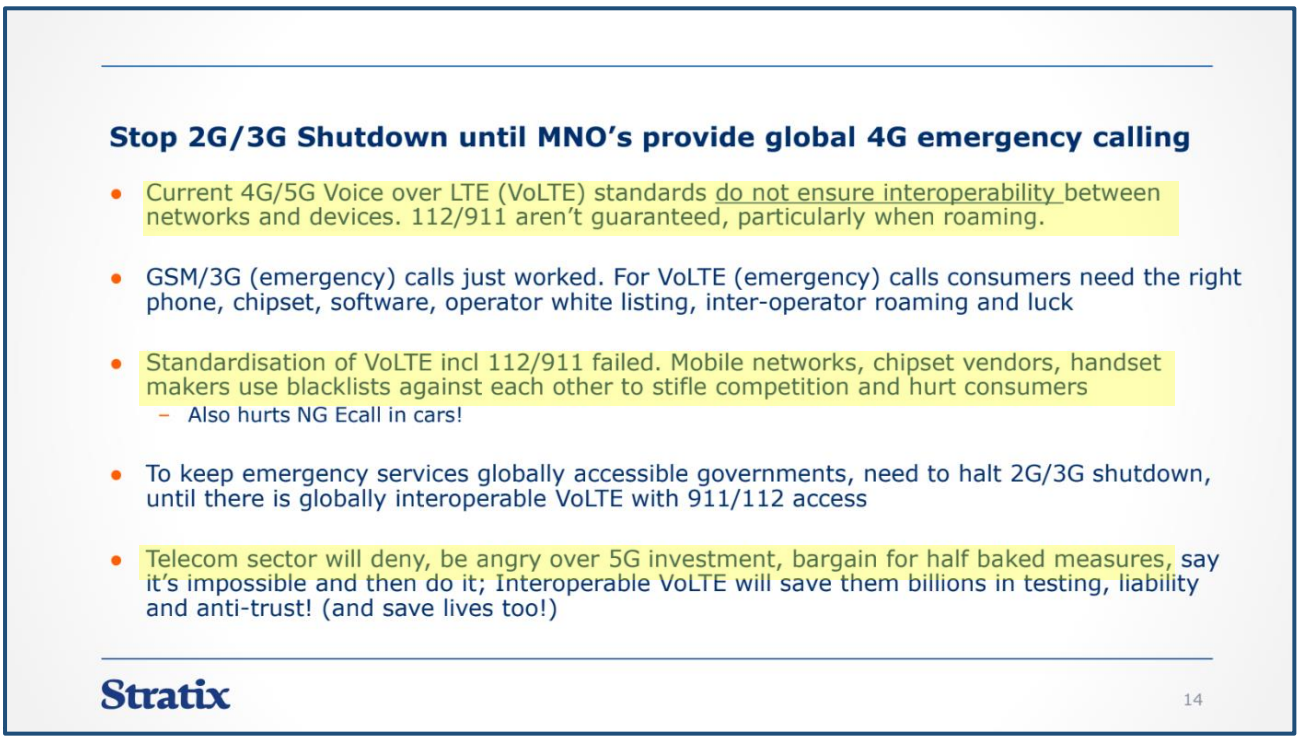


Figure 2 – 'Should we stop the shutdown of 2G/3G to save lives??' - Slide 14 - Rudolf van der Berg – Stratix – EENA 2022
https://drive.google.com/file/d/1WC16k8C1gpeFRJif23yDIuLSRg1OJOnZ/view

Warnings about Emergency Calling Issues & 3G Network Shutdowns

A further slide goes on to say,
"Sector should be ashamed; Putting lives at stake while wasting shareholder resources"

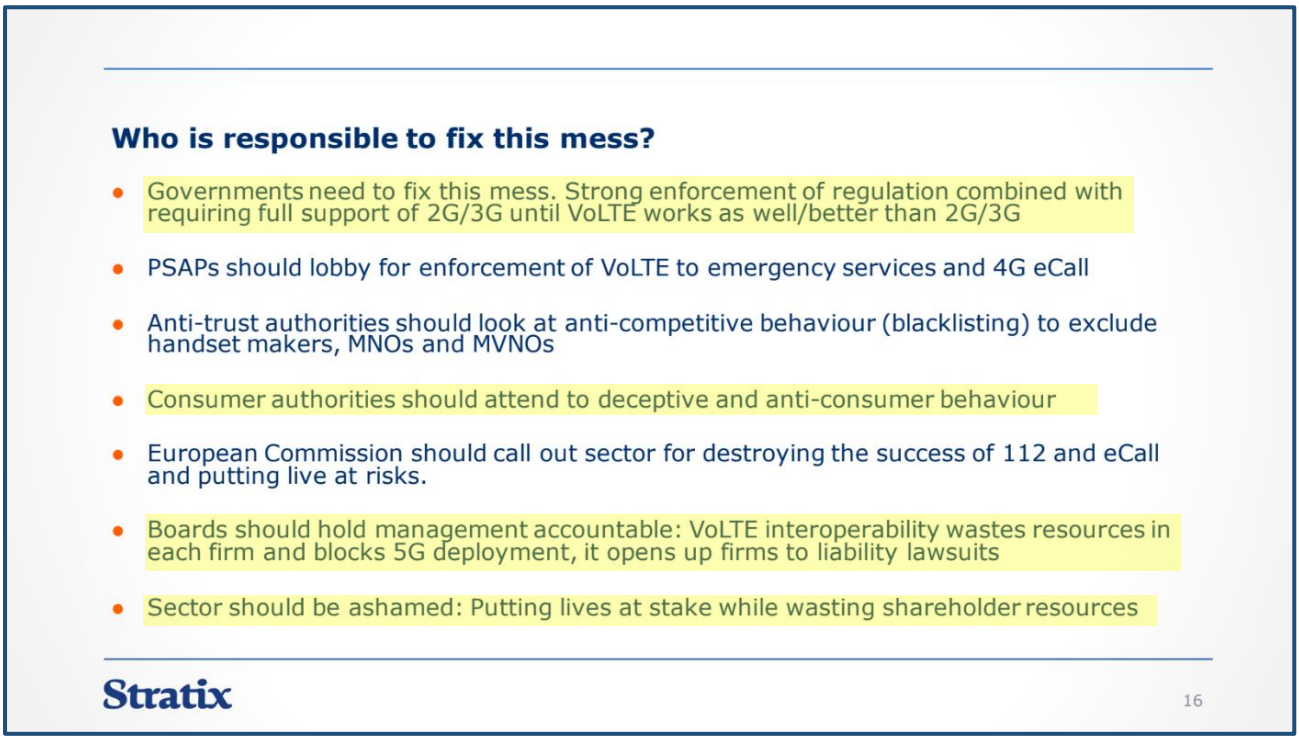
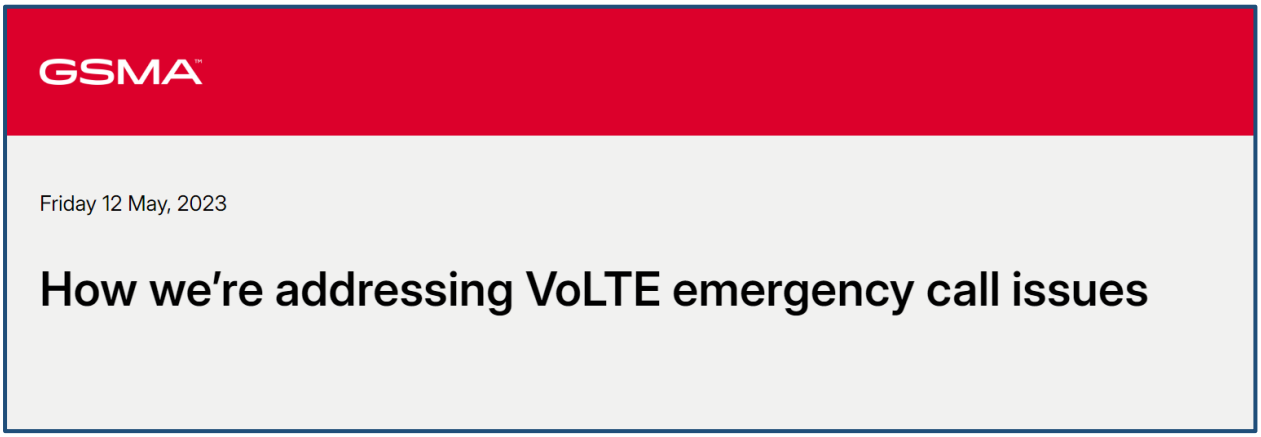


Figure 3 – 'Should we stop the shutdown of 2G/3G to save lives??' - Slide 16 - Rudolf van der Berg – Stratix – EENA 2022
https://drive.google.com/file/d/1WC16k8C1gpeFRJif23yDIuLSRg1OJOnZ/view

Response from Industry Groups

In response to that 2022 EENA presentation, the GSMA (the world's industry group for the Telecom Sector and a key industry organisation behind some of the 4G VoLTE Calling Standards and testing) established a taskforce to try and address these issues.



GSMA – 'How we're addressing VoLTE emergency call issues' - 2023-05-12
https://www.gsma.com/services/blog/how-were-addressing-volte-emergency-call-issues

Additional GSMA Information & Resources

About the GSMA - Represents the interests of mobile operators worldwide
https://www.gsma.com/about-us

IREG Documentation - VoLTE GSMA Permanent Reference Documents (PRDs)
https://www.gsma.com/solutions-and-impact/technologies/networks/volte-2-2/ireg-documentation

GSMA Newsroom - IR.92 IMS Profile for Voice and SMS v22.0
https://www.gsma.com/newsroom/gsma_resources/ir-92-ims-profile-for-voice-and-sms-20-0

The GSMA directly referenced the EENA video in a presentation about this problem to industry in June 2023, a link to the slide deck from that presentation is below.

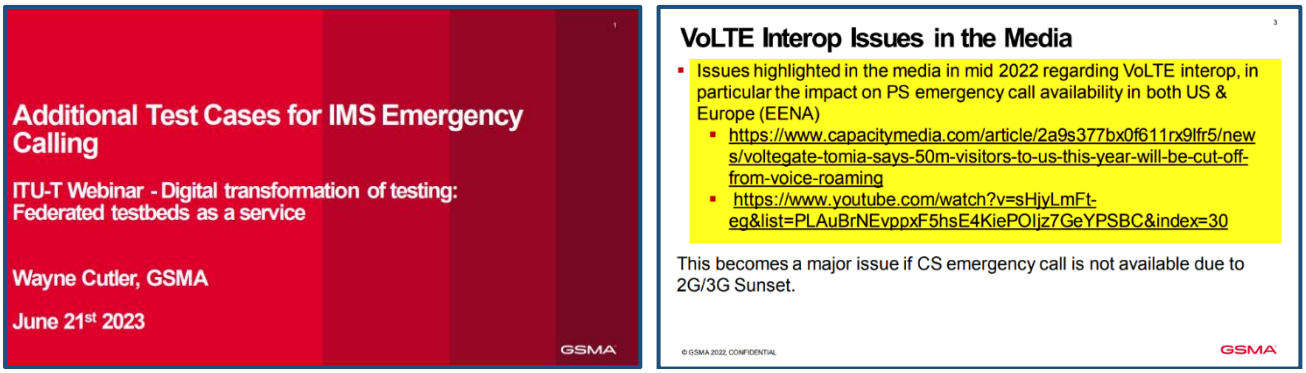


Figure 4 - GSMA – 'Additional Test Cases for IMS Emergency Calling' - ITU-T Webinar - Wayne Cutler - 2023-06-21
https://www.itu.int/cities/wp-content/uploads/2023/06/3_Wayne-Cuttler.pdf

The aim of the GSMA's taskforce is to improve the standards and advocate for device manufacturers, carriers and GSMA member organisations to align their devices and networks with a unified standard.

Telstra, Optus and TPG/Vodafone **are all members of the GSMA**, so they have no excuse for not knowing about these very serious issues prior to the shutdown and the minimal progress made to fix the problem.

Yet they all proceeded with the shutdowns regardless.

GSMA – Our Members
http://gsma.com/get-involved/gsma-membership/our-members

Samsung and the major device manufacturers are also members.

This work is still ongoing and it's still very much not solved. Major compatibility issues remain with many networks, device chipsets, older handset models, device software and different calling systems.

Many existing 4G (& some 5G) devices are completely unable to make interoperable calls (across carriers) or emergency calls on all 4G/5G Networks in the world.

Many devices rely on 2G/3G for either calls or Emergency Calls (aka 'Circuit Switched Fallback' - CSFB).

In my 2024 3G Inquiry Submission and 2023 Optus Outage Inquiry Submission I wrote that:

"…it's clear that the shutdown of our 3G networks needs to be delayed to at least the end of 2025.

But realistically it will take longer than that to fix the damage caused by the broken 4G calling standards that have been rolled out to networks and devices across the globe. "

Though the issues are *largely* resolved with newer 4G/5G devices with the latest chipsets and software.

The historical issues and standardisation problems still exist, including with networks and devices. *Some issues remain unresolved and some still remain completely undetected.*

As outlined in the presentation, Governments and regulators needed to intervene **stop the shutdown of 2G/3G Networks** until the 4G Calling Standards and compatibility issues were fixed.

Handset vendors and network operators have minimal (if any incentive) to fix existing products and to support customers with the devices they already own. Many commonly push to sell new devices instead.

I warned in my 3G Shutdown Senate Inquiry Submission that:

> The planned switch-offs are entirely set to serve the commercial and business interests of the network providers, partnered handset makers and associated industry.
>
> The broader community and public impacts have been disregarded, and recent sector outages and service disruptions underscore the industry's inability to ensure systems actually function as intended.

APH - Shutdown of the 3G mobile network – Public Submissions - #32 Mr James Parker
https://www.aph.gov.au/DocumentStore.ashx?id=be380de4-1cdf-405a-be68-59f8183a64bd&subId=757441

I also wrote,

> ...the 3G network switch-offs must be permanently postponed.
>
> Failing to do so prioritises commercial interests over the public interest, risks lives, harms competition, and undermines essential communication.

All of that has since occurred.

Prior to the Shutdown

In the lead up to the shutdown there continued to be mixed messaging to consumers about what devices would and wouldn't work. Along with an 'SMS Tool' that was supposed to provide accurate answers.

ABC - Telstra delays 3G network shutdown until August amid concerns about access to emergency calls – 2024-05-06
https://www.abc.net.au/news/2024-05-06/telstra-to-extend-3g-network-shutdown/103808110

Numbers of impacted devices would fluctuate and the network carriers, keen to shutdown, were heavily pushing new device options onto consumers.

ABC - Telcos are giving away free phones and gift vouchers, in last-minute bid to shift customers off 3G – 2024-07-24
https://www.abc.net.au/news/2024-07-24/telstra-optus-offer-free-phones-with-3g-shutdown-looming/104136004

Though many still with widespread concerns about coverage post shutdown.

ABC - As the 3G shutdown looms, anxiety is growing over regional phone coverage – 2024-09-04
https://www.abc.net.au/news/2024-09-04/3g-shutdown-regional-residents-mobile-phone-coverage/104276254

The Amendment to the Emergency Call Service Determination

Last year on 1 August 2024, the 3G Inquiry Committee released their interim report.

APH – RRAT Committee - 3G Shutdown Senate Inquiry Interim Report - 1 August 2024
https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Rural_and_Regional_Affairs_and_Transport/3GNetworkShutdown/Interim_Report

Within that report they recommended that the shutdown date was extended and that a broader audit was undertaken to better identify impacted devices and contact affected consumers.

ABC - Senate committee recommends delay to 3G shutdown as mobile users fear loss of coverage – 2024-08-02
https://www.abc.net.au/news/2024-08-02/senate-committee-urges-3g-mobile-coverage-shutdown-delay/104176024

The report noted numbers from the Inquiry stating *'there were nearly 900,000 3G devices (both mobile and non-mobile) that are currently active and would be affected by the shutdown of the 3G network'*

"Of these, nearly 380,000 are mobile devices that are either 3G only, or 4G non-VoLTE (that is, use 4G for data, but rely on 3G for voice calls) and 4G VoLTE (that is, rely on the 3G network to make an emergency call)."

3G Shutdown Senate Inquiry Interim Report - 1 August 2024 – 'Impacts on non-mobile devices' (1.41)

In response, the telcos said they would stick to their existing shutdown timeline, which for Telstra was (the already extended) 31 August 2024 and for Optus from 1 September 2024.

However, exactly two weeks after the release of the Committee's interim report, on 14 August 2024 Telstra and Optus announced a joint delay until 28 October 2024.

ABC - Telstra, Optus to delay 3G network closure amid public safety concerns – 2024-08-14
https://www.abc.net.au/news/2024-08-14/telstra-optus-delay-3g-shutdown/104222598

Seven days later (on 21 August 2024), (then) Communications Minister Michelle Rowland, issued the ACMA with a 'Ministerial direction' to draft an amendment to the 'Emergency Calling rules' that would require the network carriers to block phones if the carrier has determined that phone cannot call 000, and for the carriers to do so by **1 November 2024**.

This was a change to the 'Emergency Call Service Determination'.

That direction also included other requirements that carriers would be required to adhere to, including network testing by 30 April 2025 and network wilting during outages by 1 November 2025.

> Subsection 6(2) directs ACMA to include requirements for providers to identify mobile phones unable to access Triple Zero, notify the user, provide assistance if necessary to access an alternative mobile phone, and cease providing service to the affected device. Providers will also be required to not provide service to a prospective customer seeking service with an affected mobile phone. This requirement makes clear the responsibility providers have to ensure mobile networks provide access to the emergency call service.
>
> The amendments to the Determination to be made under section 6(1) are to be determined by 30 April 2025 and commence in full by 1 November 2025 at the latest.
>
> The amendments to the Determination to be made under section 6(2) are to be determined and commence in full by 1 November 2024.

Direction to the ACMA by Minister Rowland - (Emergency Call Service Determination) Direction 2024 – 21 August 2024
https://www.legislation.gov.au/F2024L01103/asmade/text

With those separate requirements to undergo their own consultation processes with industry in 2025.

Further Background *(Continued Reading)*

In mid-September (2024) I became aware of this new policy after reading an online consumer discussion board. (Whirlpool Forums)

For reference, the 21 August 2024 determination direction by the Minister was only uploaded to the legislation.gov.au website on the 4th of September 2024, and was tabled in the house and Senate on the 9th of September 2024.

There was no direct media release about the Government's intention to have phones artificially blocked.

On 3 September 2024, the day prior to the publishing of that direction on the Legislation website, Optus announced a new 'device blocking policy' that was to take place from mid-September 2024.

Optus - An Important Update on Mobile Handset Safety - 3 September 2024
https://www.optus.com.au/content/dam/optus/documents/for-you/support/mobiles-tablets-wearables/important-changes-3g/0830_an_important_update_on_mobile_handset_safety_legalv1_03.09.24.pdf

The messaging from Optus prior to that was 'the device may lose access to calling' post shutdown.

Even having spoken to the head of the mobiles branch of the ACCC back on 29 August 2024 this impending blocking wasn't either known about by the ACCC or it was, but wasn't raised in that meeting.

On 16 September 2024 I contacted multiple Senators on the 3G Inquiry Committee to raise the alarm.

On 19 September I wrote to Minister Rowland through the office of a Senator that was on the 3G Shutdown Inquiry Committee, (then Senator Rennick). (He offered to send the letter through his office).

I provided the letter through his office to ensure it would be seen by the Minister and Department. (My previous correspondence from June 2023 took several months to get a response.)

James Parker
[redacted]
Brisbane, QLD Australia

19 September 2024

Subject: 3G Network Shutdown 2024 & Changes to the 'Emergency Call Services Determination'

To the Communications Minister Hon Michelle Rowland MP,

I note your efforts made with the planned Shutdown of the 3G Mobile Network and the involvement of the Government & Department to date to ensure a smooth transition.

Unfortunately this process has proven unnecessarily difficult, challenging and costly for many. A number of the unintended consequences I anticipated in June and November of last year have unfortunately come to fruition, and many of the impacts are yet to occur in full.

I am writing to you again to raise urgent and very serious concerns regarding the recent changes made by the ACMA to the Emergency Call Service Determination (ECSD), set to take effect on 1 Nov 2024.

On Friday the 20 September 2024 that letter was sent by his Office to the Minister.
However it wouldn't be until the day after the shutdown on 29 October 2025 would I receive a response.

Online Petition

In late September 2024 I created a Change.org Petition regarding the proposed network blocking of perfectly working 4G & 5G devices, it now has more than **10,000 signatures**, 90% are from Australia.

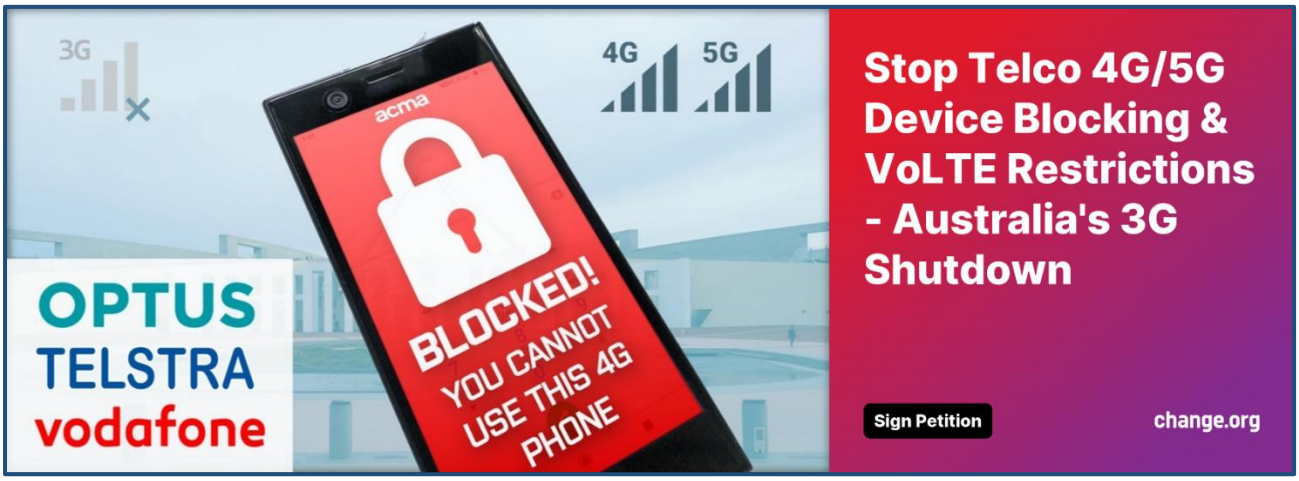
Prior to the blocking taking place on 28 October 2024 the petition had over 6,500 signatures and by 30 November 2024 had **more than 8,900 signatures.**

The core issue at the focus of the petition isn't 4G phones that require 3G for 000 being blocked. That is (in part) understandable, but rather perfectly capable phones that can make 4G Emergency Calls but deemed 'incompatible' by the telcos and being artificially blocked.

Prior to the shutdown customers with phones that support Voice over LTE (including Emergency Calls) were being informed by SMS to upgrade. Even if their device was 5G, had the latest Android Software and adhered to global telecom industry standards for Emergency Calling on 4G/5G.

Many devices that were impacted could have received automatic over-the-air updates to fix the problem, or even updated by the user with the correct software. Yet those devices would be blocked as well.

Many did update their device software prior to the shutdown and were able to make VoLTE Calls and Emergency Calls, yet the SMS checkers continued to advise their phone was 3G only for all calls.



Stop Telco 4G/5G Device Blocking & VoLTE Restrictions - Australia's 3G Shutdown
https://change.org/StopTelcoDeviceBlocking

The blocking of perfectly working devices has been a very unpopular move and I would invite the Committee to read some of the comments online and on the petition page to see the overall sentiment.

The petition also coincided with a video by Australia Tech and Device Repair YouTuber Hugh Jeffreys.

Australia To Block Internationally Purchased 4G/5G Phones As Part of 3G Shutdown - Starting 1st Nov
2024-09-29
Hugh Jeffreys
If your provider is unable to verify VoLTE support for your device, it may be blocked from Australian networks from the 1st of November 2024.
4K

'Australia To Block Internationally Purchased 4G/5G Phones As Part of 3G Shutdown' - Hugh Jeffreys
https://www.youtube.com/watch?v=RPITz-3estM

*That September 2024 video now **has over 386,000 Views** and at the time the blocking commenced on 28 October 2024, **that video had amassed 342,000 Views** and thousands of comments.*

The 'Public Consultation'

On the Tuesday the 24th of September, (2 business days after my letter was sent to the Minister), the ACMA released a draft of the proposed changes to the 'Emergency Call Service Determination', along with an Open Consultation Feedback Submissions page.

ACMA - Proposal to amend the ECS Determination 2024 – Opened 24 September 2024
https://www.acma.gov.au/consultations/2024-09/proposal-amend-ecs-determination

However that public consultation was **only due to run for 2 weeks until the 8th of October 2024.**

Most public consultations with the ACMA run from anywhere to 4-6 weeks depending on the topic and stakeholders involved.

In total there were 40 submissions to the ACMA, including 11 directly from Industry.
(Including Industry Groups, MNOs, MVNOs etc)

I along with other members of the public made submissions to the ACMA with very serious concerns regarding the Minister's Direction and the Draft put forward by the ACMA.

Even the Telcos raised some serious concerns about the technical feasibility of blocking devices expressing a preference for only disabling call service (Voice over LTE/IMS Registration) on 'incompatible' devices.

That way post shutdown calls wouldn't work and users wouldn't be able to use the device as a phone.
Customers could also be advised by SMS what they needed to do and get basic support.

If entirely blocked customers would be completely uncontactable via mobile services.

The Consultation closed on 8 October 2024, then on Thursday 24 October, 4 days before the shutdown, the finalised Amendment to the Emergency Call Service Determination was published on the Legilsation.gov.au website.

Emergency Call Service Amendment Determination 2024
https://www.legislation.gov.au/F2024L01353/asmade/text

The final legislation would require the carriers to block all services, **including Data & SMS**.

Scale of the Blocking

The ACMA in the Determination Consultation estimated the number of devices that would be impacted come the day of the shutdown.

Based on numbers from industry the ACMA expected approximately 258,000 4G mobile phones would be impacted once the shutdown began.

However that 258,000 Number is actually an estimate based on an earlier October figure.

> It is estimated that 297,000 mobile phone devices (estimation by Telstra, Optus and TPG on 9 October 2024)[2] will not be able to connect to Triple Zero services when there is no 3G network in operation at all. Of these, 39,000 are 3G-only handsets, leaving 258,000 mobile phones that will be impacted by the proposals in this impact analysis. The 258,000 mobile phones are comprised of approximately 199,000 mobile phones that use 4G VoLTE for voice calls and data but use Circuit Switched Fall Back to 3G networks to make emergency calls, and 59,000 that use 4G for data but make all voice calls over 3G networks.

Emergency Call Service Amendment Determination 2024 Explanatory statement | F2024L01353ES Pg9
https://www.legislation.gov.au/F2024L01353/asmade/text/explanatory-statement

The Amendment to the Emergency Call Service Determination

On 1 October 2024 the total number of 'affected phones' was noted as 516,875 including 3G, 4G & 5G.

Key inputs

In quantifying the costs, some key inputs are used, and these are set out in Table 3, below.

Table 3: Input values

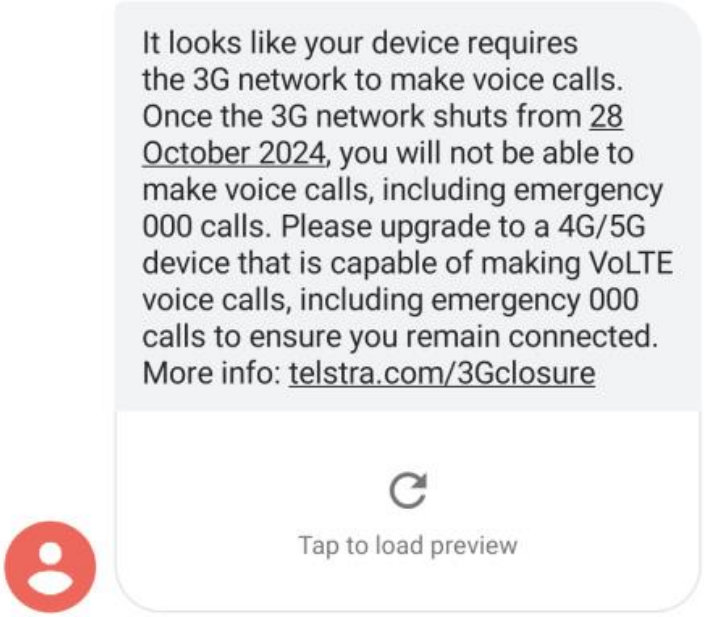
Key input	Value	Source
Total phones in Australia	30,874,000	ACMA data
Phones affected at 1/10/2024	516,875	AMTA data
Percent of phones impacted	1.7%	Calculation based on ACMA data
Number of Mobile Network Operators	3	ACMA data
Carriage Service Providers affected	350	ACMA data

The issue is that number actually includes **many thousands of 4G and new 5G phones that work for Emergency Calling** but have been determined by (some or all of) the carriers to be **'incompatible'**.

Either because they didn't sell that particular model, don't work with the handset vendor that made the phone, or have insufficient network data to determine if the phone will work or not.

Last Minute Blocking of 'Incompatible' Devices

For months up until the shutdown the messaging from the telcos had indicated that older and incompatible devices may lose access to calling as the network was shut down, but at minimum Data & SMS would remain on 4G & 5G devices.

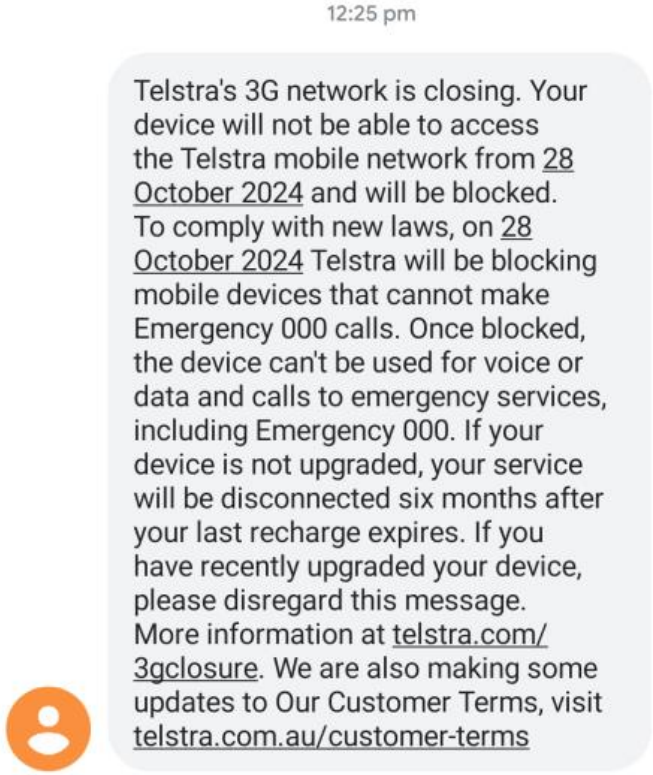


Telstra SMS 3498 System Message

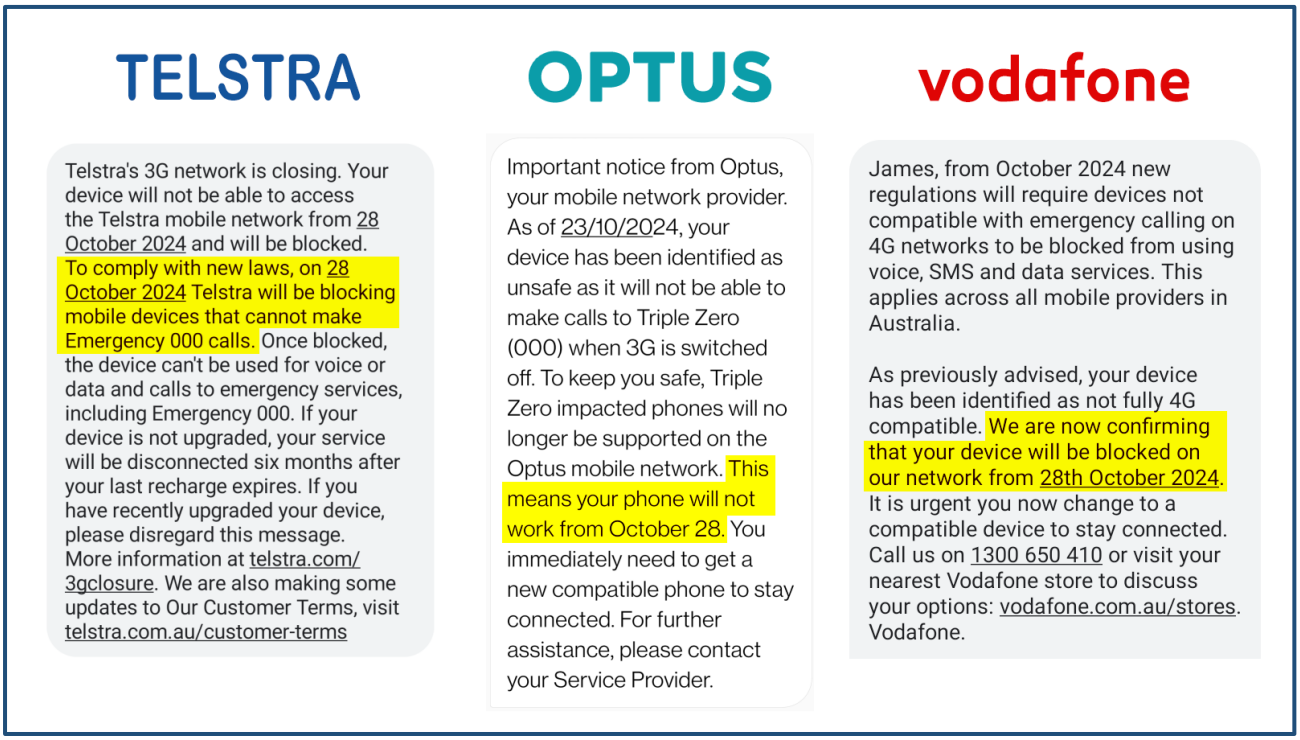
This was true with Telstra in particular, including right up until the shutdown (and even during the ECS Consultation process). *It seems Telstra was assuming the ACMA would accept their suggestion of only disabling call service, which was compatible with the previous messaging.*

The Amendment to the Emergency Call Service Determination

However from **Midday Friday the 25th of October 2024**, Telstra customers were instead told via SMS their 4G/5G device would be artificially blocked from all services, including Data & SMS.



Text Message Sent to Telstra Customers Midday (AEST) Friday 25 October 2024



SMS Messages to Customers prior to the Blocking

Optus with their messaging actually neglected to use the word ‘block’ and instead said used words like your device ‘would stop working’ or ‘would no longer work’, as if it’s 3G Only.

The messages from the providers also said (both in SMS & outbound call messages) *‘to disregard the message if you have recently upgraded your device’.* Many people who had new phones did just that.

The Amendment to the Emergency Call Service Determination

Blocking Phones Used By Tourists

The direction from the Minister also included a requirement that the telcos would exempt tourists from the blocking for a limited period of time provided they were notified about Emergency Calling potentially being unavailable.

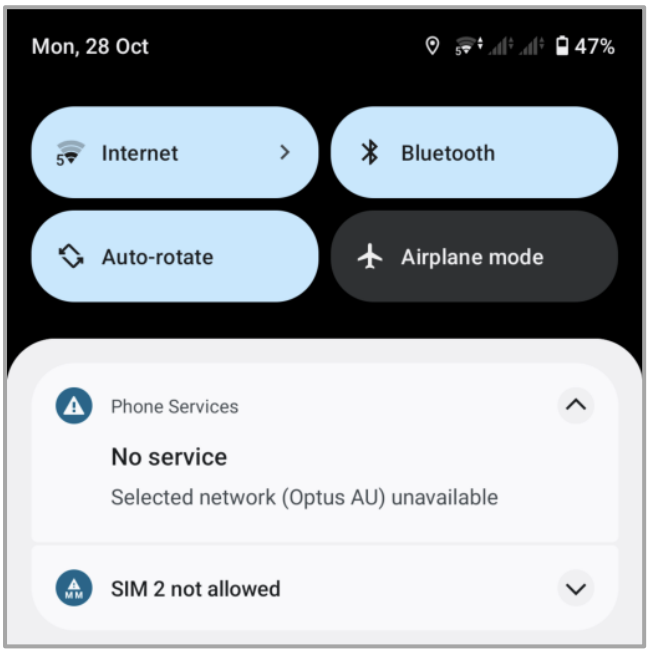
> An exception to some of the obligations is provided for foreign travellers in Australia who intend to remain in Australia for a period of no longer than 90 days. The exception will apply if a CSP sends a notification to the foreign traveller's mobile phone notifying the traveller that the mobile phone is not configured to be able to access the ECS.

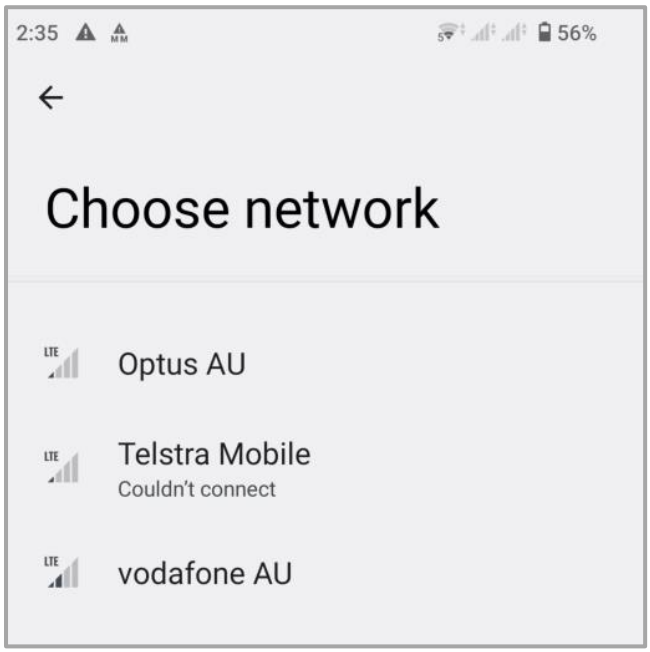
Otherwise many tourists would get off the plane and be unable to call or text anyone would then have to buy a new phone.

What people may not be aware of is that many devices used by International Tourists and Roamers **were also entirely kicked off the networks** of Telstra & Optus on Monday 28 October 2024.

Even though the Direction from the Minister and Legislation by the ACMA stated that Travellers should be exempt for **up to 90 days**.

ACMA (Emergency Call Service Determination) Direction 2024 — Explanatory Statement | Page 2
https://www.legislation.gov.au/F2024L01103/asmade/text/explanatory-statement





Xperia 1 II 5G - XQ-AT52 – 3UK Roaming Sim - Phone Services – 'Sim not allowed'

Many confused tourists have posted online to ask why their 4G/5G phone isn't working anymore.

Even Customers Roaming from the US with 5G phones that support VoLTE Calling & VoLTE Roaming.

Vodafone NL - No more roaming in Australia (Translated) – 2024-11-05
https://community.vodafone.nl/t5/Diensten/Geen-roaming-meer-in-Australi%C3%AB/m-p/228832

KPN - 'No service since I've been in Australia. I have a Fairphone' (Translated) – 2025-02-15
https://community.kpn.com/mobiel-15/geen-service-sinds-ik-in-australie-ben-ik-heb-een-fairphone-630770

Reddit - /r/SonyXperia - Xperia 1V + T-Mobile roaming in Australia = SIM not supported? – 2025-09-28
https://reddit.com/r/SonyXperia/comments/1nsgvuf/xperia_1v_tmobile_roaming_in_australia_sim_not/ngm04dk

The telcos in their Submission to the ACMA's Open Consultation did warn they would struggle to exempt Roamers from the device blocking rules.

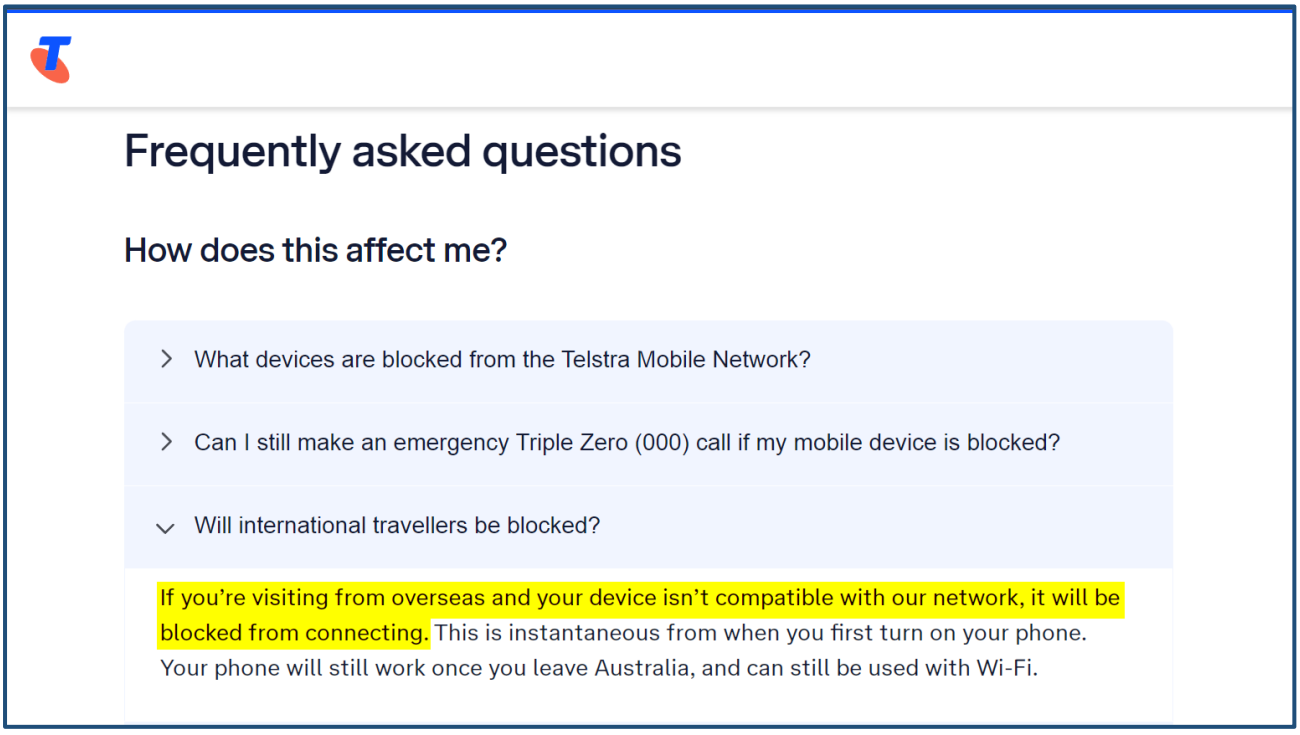
3.3 We cannot utilise (give effect to) the exception for foreign travellers (s.67)

In our proposed solution (see section 4), it is not possible to unambiguously identify international travellers arriving in Australia with a mobile phone that we know is unable to make emergency calls from Australian residents. While we do know when foreign travellers are using *international roaming*, this is not the only method under which foreign travellers appear on mobile networks in Australia. In order to avoid high international roaming charges, foreign travellers to Australia often purchase a prepaid SIM upon arrival (indeed, there are vending machines at airports specifically to meet this demand), however, it is not possible to accurately determine whether the person purchasing a prepaid SIM is a foreign traveller or a local resident.

In addition, our proposed solution, which denies access to a mobile network by blocking the device (see section 4), means that it is not possible for us to give foreign travellers who use international roaming an exception, as the blocking mechanism is completely unaware of the cohort the end user may belong to. Anyone, regardless of who they are, will have their device blocked if it is known to be unable to make an emergency call on the provider's own network, or the device is known to be unable to camp-on to another network.

Telstra - ECS Determination Public Submission - 9 October 2024 - Page 10
https://www.acma.gov.au/consultations/2024-09/proposal-amend-ecs-determination

Telstra subsequently updated their website in November 2024 to include information for travellers. Though many have arrived off the plane with absolutely no idea why their phone isn't working anymore.



Frequently asked questions

How does this affect me?

- What devices are blocked from the Telstra Mobile Network?
- Can I still make an emergency Triple Zero (000) call if my mobile device is blocked?
- Will international travellers be blocked?

If you're visiting from overseas and your device isn't compatible with our network, it will be blocked from connecting. This is instantaneous from when you first turn on your phone. Your phone will still work once you leave Australia, and can still be used with Wi-Fi.

Telstra | 3G network closure - Frequently asked questions - November 2024
https://www.telstra.com.au/support/mobiles-devices/3g-closure

If they are lucky they're allowed to connect to Optus or Vodafone, but many still blocked from all 3 even if their phone is 4G/5G and supports VoLTE Roaming & VoLTE Emergency Calling (Android 12+)

The Amendment to the Emergency Call Service Determination

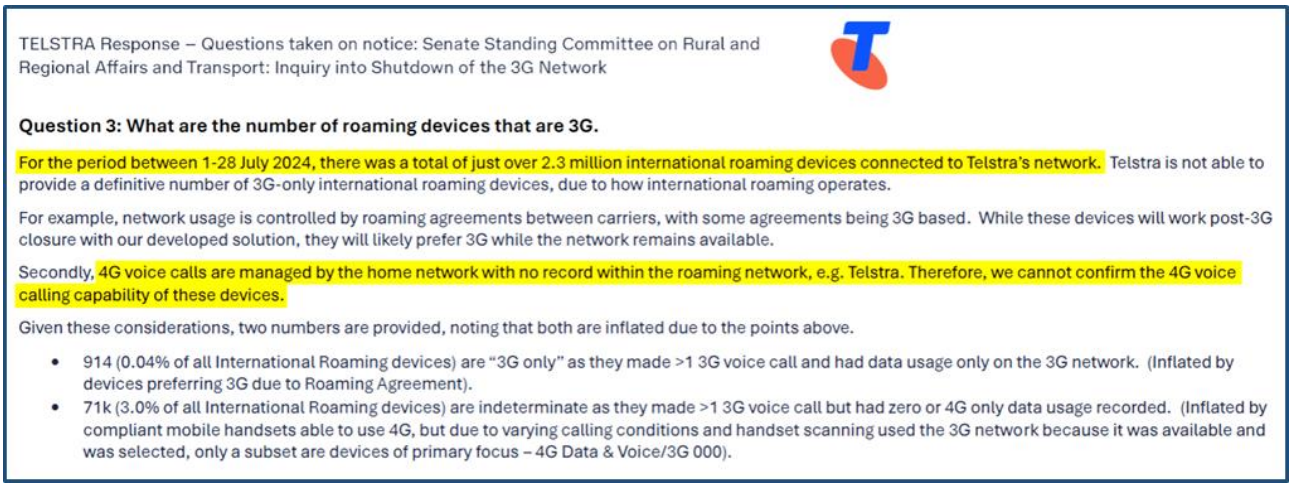
Potential Scale of the Roaming Incompatibility & Blocking

Additionally Telstra & the Telcos were asked a question I wrote in my Submission at the 3G Senate Inquiry on 24 July 2024:

"How many roaming devices are reliant on the 3G network to make or receive roaming calls or Emergency Calls?"

They didn't know that Answer and had to take it on Notice.

In the answers to Telstra's Questions on Notice from the 3G Inquiry they said that in July there were **2.3 million international roaming devices** connected to their network and that Telstra '**cannot confirm the 4G Voice calling capability of the devices'!**



TELSTRA Response – Questions taken on notice: Senate Standing Committee on Rural and Regional Affairs and Transport: Inquiry into Shutdown of the 3G Network

Question 3: What are the number of roaming devices that are 3G.

For the period between 1-28 July 2024, there was a total of just over 2.3 million international roaming devices connected to Telstra's network. Telstra is not able to provide a definitive number of 3G-only international roaming devices, due to how international roaming operates.

For example, network usage is controlled by roaming agreements between carriers, with some agreements being 3G based. While these devices will work post-3G closure with our developed solution, they will likely prefer 3G while the network remains available.

Secondly, 4G voice calls are managed by the home network with no record within the roaming network, e.g. Telstra. Therefore, we cannot confirm the 4G voice calling capability of these devices.

Given these considerations, two numbers are provided, noting that both are inflated due to the points above.

- 914 (0.04% of all International Roaming devices) are "3G only" as they made >1 3G voice call and had data usage only on the 3G network. (Inflated by devices preferring 3G due to Roaming Agreement).
- 71k (3.0% of all International Roaming devices) are indeterminate as they made >1 3G voice call but had zero or 4G only data usage recorded. (Inflated by compliant mobile handsets able to use 4G, but due to varying calling conditions and handset scanning used the 3G network because it was available and was selected, only a subset are devices of primary focus – 4G Data & Voice/3G 000).

Telstra — Answers to questions taken on notice at a public hearing on 24 July 2024 (received 1 Aug 2024) – 3G Inquiry https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Rural_and_Regional_Affairs_and_Transport/3GNetworkShutdown/Additional_Documents

The Amendment to the Emergency Call Service Determination

The Blocking & Shutdown Impacts

Given the impacts to consumers, both in the lead up and after the shutdown & blocking I wrote a few online resources and articles for people to explain what had occurred.

One of which was published in Independent Australia. These articles have received thousands of views.

Independent Australia IA

POLITICS > OPINION

Australia's 3G shutdown: Why your 4G/5G phone is now blocked

By James Parker | 12 November 2024, 11:00am

The shutdown of the 3G network caused a huge disruption to consumers (Image via fizkes | iStock)

The ill-planned shutdown of Australia's 3G network not only happened with little notice, but has caused a technological nightmare for consumers. James Parker reports.

AUSTRALIA IS CURRENTLY in the midst of the most significant change to the telecommunications landscape it has ever experienced in modern history — the shutdown of the 3G Mobile network.

Medium

Australia's 3G Shutdown - Telcos to Block Working 4G/5G Phones!

Silent Policy Change: Telcos to disconnect "Unsupported" Phones

30 min read · Sep 25, 2024

James Parker

Alarming new changes to Australia's Emergency Calling rules could see thousands of working 4G & 5G phones Blocked by Telcos

Medium

Australia's 3G Shutdown — Why your 4G/5G Phone is now Blocked!

Corporate Self Interest and the Failures of Government & Regulators

28 min read · Nov 3, 2024

IA - Australia's 3G shutdown: Why your 4G/5G phone is now blocked – 12 November 2024
https://independentaustralia.net/politics/politics-display/australias-3g-shutdown-why-your-4g5g-phone-is-now-blocked,19159

Australia's 3G Shutdown — Why your 4G/5G Phone is now Blocked! – 3 November 2024
https://medium.com/@jamesdwho/australias-3g-shutdown-why-your-4g-5g-phone-is-now-blocked-5900cd5361e2

Australia's 3G Shutdown - Telcos to Block Working 4G/5G Phones! – 25 September 2024
https://medium.com/@jamesdwho/australias-3g-shutdown-telcos-to-block-working-4g-5g-phones-2bf41e95de8a

For more information around the shutdown and the blocking of devices I would suggest reading the 'Why your 4G/5G Phone is now Blocked' Article above. It's one of the top results on Google for that Question.

How devices are blocked

How devices are blocked

The capabilities & 'compatibility' of devices both prior to and since the shutdown has been broadly determined based on the 'make & model', not based on the individual device.

Mobile devices have unique identifiers that can be used to monitor or limit how devices connect to available mobile networks.

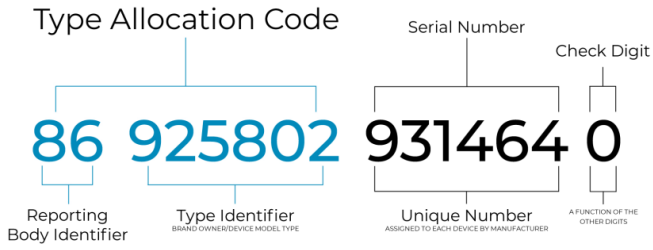
The **IMEI**, or **'International Mobile Equipment Identifier'**, is essentially a unique 15-digit serial number that's used by a device when connecting to mobile networks and using mobile services.

The first 8 digits of this number represents the **'TAC'** or **'Type Allocation Code'** which is essentially the 'Make & Model' of the device. (e.g. Apple iPhone 11, Galaxy Note 20, Google Pixel 4 etc.)

The remaining digits represent the individual serial number of a given model.

Phones that sell more than a million units will have multiple TACs, different hardware model variants or carrier variants can also have different TACs for otherwise the same phone. *(Though not always)*

There are more than 250,000 'TACs' in existence ranging from 2G phones, 4G Payment Terminals and Modems, all the way to modern 5G devices.



IMEI/TAC Example

Apple iPhone 11
(A2221)
TAC: 35016048

Sony Xperia 1 II
(XQ-AT52)
TAC: 35353811

Nokia 6300 4G
(TA-1287)
TAC: 35694111

Determining VoLTE Device 'Compatibility'

In a world of 2G/3G you can very accurately determine the calling and mobile network capabilities of a device based on the hardware make & model identifier alone (the IMEI 'TAC').

The GSMA maintain a device model 'TAC' database which contains a wide range of fields for the radio band and other hardware capabilities of devices that are registered.

GSMA - TAC Allocation
https://www.gsma.com/solutions-and-impact/industry-services/device-services/tac-allocation

However due to VoLTE '4G Calling' compatibility primarily being a Software issue, not a hardware issue, it's essentially impossible to accurately determine the VoLTE Calling capabilities of all devices based on a hardware identifier alone.

Even when used with other aggregate network data and database records.
Given the lack of adherence to standard by networks, this complicates things even further.

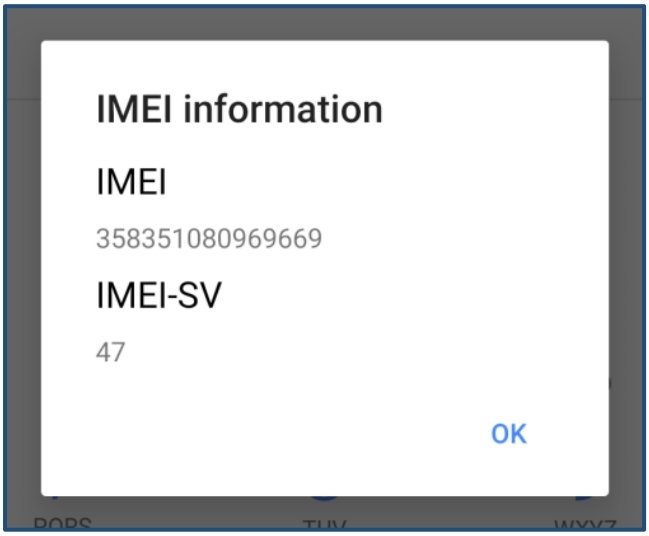
The equivalent analogy would be like determining the roadworthiness of a car based on the make & model and where it was sold rather than if an individual vehicle is actually roadworthy or not.

An IMEI, just like the VIN of a vehicle only tells you what brand and model it is, it doesn't tell you if the 'vehicle' is actually roadworthy or not, this is why roadworthiness inspections exist.

Equally can have two physically identical devices, both the same 'make & model' with the same 'TAC'. One can make an Emergency Call, the other cannot.

How devices are blocked

To combat this the Telcos also for some models check what's known as the IMEI-SV. (Software Version)



IMEI + IMEI-SV - Xperia XZ1

IMEI + IMEI-SV - Samsung Galaxy Note 8

However the IMEI-**SV** is a very crude indicator of the software capabilities of a device and does not explicitly indicate if a device supports VoLTE Calling or Emergency Calling.

Nor what exact settings for VoLTE are presently loaded on the device.

Carriers associate 'known compatible' or otherwise 'whitelisted' 'SV's' with information from handset vendors and network side data.

The IMEI-SV (and SVN) does not correlate with the modem/carrier profile installed or running on the device at a given time, nor the exact capabilities for Emergency Calling.

The telcos have no real time visibility of if a phone can make an Emergency Call and are broadly over reliant on compliance documents and historical call records to determine 'compatibility'.

With the vehicle/VIN example, because there is no 'one source of truth', essentially what largely occurred was anything not sold by the 'main dealer' (telcos) or dealer (telco) partners (handset vendors) was deemed 'not roadworthy' and banned from use, whilst anything from the 'dealers', or major 'dealer partners' was allowed to be used.

In some cases regardless of if they were actually working properly, as we've since seen.

It also appears devices that are less popular that made fewer historical 000 calls were blocked despite being otherwise capable.

More popular models/TACs for the same model that made more historical 000 calls were not blocked.

Additionally in advance of the 3G Shutdown last year in 2024 I also wrote the following articles and resources for Consumers to allow them to more accurately test their devices.

As the information from the telcos was in many cases wrong or misleading.

How to Check for Working 4G VoLTE Calling on Android Handsets
https://medium.com/@jamesdwho/how-to-check-for-working-volte-calling-on-android-8c343362ecfe

The Little Known Problems with VoLTE Emergency Calling - How to Test for 4G Emergency Calling Support on Android
https://medium.com/@jamesdwho/the-little-known-problems-with-volte-emergency-calling-3d4cdaf0e042

Some people who followed those instructions found their device actually wasn't working even though their telco said it would and was 'supported'.

Consumer Impacts & Survey Results

In late October 2024 I created an online Google Forms Survey to collect submissions from people who had their devices blocked.

Given the lack of transparency about what phones were supported I wanted to collect and publish a list of devices, and which networks they were blocked or supported on.

The results for that can be found below on Google Sheets.

Australia's 3G Shutdown - 4G/5G Device Blocking & Capabilities Submission Form
https://docs.google.com/forms/d/1TnX_McW4uMMrb8iu1GQCzthhq1gIs0x34cddMzhluKY/viewform?

The survey also asked people a number of questions about their devices, their experience and the communication from the providers. It also surveyed them on the handling of the shutdown.

Within my survey **more than 75% of respondents** said they **were not offered a free replacement** device by their provider.

Of the **over 600 Surveyed 84%** said purchasing another suitable device **would have a Moderate or Major Financial Impact.**

73% of respondents said they **were not given enough notice that their 4G/5G device would be artificially blocked from all services.**

75% have said their telco has been either Mostly or Very Unhelpful.

86% said they were not well informed about the shutdown by the Government, with only 9.4% saying “Somewhat” well informed.

90% rated the handling of the Shutdown by the Industry and Government as Bad or Very Bad.

85% said they were not given enough information regarding the impacts of the Shutdown from the Industry, Government and Media.

Blocked Devices Survey - Google Sheet Results
https://docs.google.com/spreadsheets/d/1FaJYdW0l9ZydAn8gS_fo-ix73XCPJBldOoJP0Lvwqpo/edit?gid=1584988671

Real Costs to Consumers

In the ACMA's 'Emergency Call Service Determination Amendment' Explanatory Statement they did set out a 'cost-benefit analysis' and attempted to calculate the costs to consumers with the device blocking.

The ACMA's own estimate was in the order of **$83 Million!**
With more than half of the cost borne by consumers.

The full detail of the cost distribution is shown in Table 10 above, and the total (undiscounted) costs of option 2 are summarised in Table 19 below.

Table 19: Total (undiscounted) costs for option 2

Stakeholder group	Total costs over 10 years	Proportion of costs
Total costs to Government	$2,857,932	2%
Total costs to industry	$65,636,508	43%
Total costs to Customers	$83,517,366	55%

ACMA Explanatory Statement registered 24/10/2024 to F2024L01353 | Page 37
https://www.legislation.gov.au/F2024L01353/asmade/downloads

However the ACMA's cost benefit analysis assumed consumers would only be out of pocket around $300 for a new phone.

But based on the data from my (600+ responder) survey, it's basically double that, with the **average value of the blocked devices at around $700.**

Costs to impacted customers.
The key costs imposed on impacted customers are the replacement of handsets and the time required to make the replacement.

The replacement cost of handset is based on a like-for-like replacement which would align with a lower end telephone. Based on a review of available lower end phones from each of the carriers, this analysis used a value of $250 – based on a lower end phone from a reputable brand (such as Samsung).

Cost of administration time is based on an estimate of 2 hours discussion time and search time and the value of leisure time of $26.61 per hour.

Value of leisure time was estimated to be 50% of median wage.[2] The full-time adult average weekly total earnings is reported to be $1,995.90[3] giving an hourly employment rate of $53.22 (based on 37.5 hours per week). These costs arise each month as the affected phones are removed from the network.

Table 9: Costs to customers

Item	Value
Administration time	$53
Cost to buy a new phone	$250
Total per customer	$303

That's also just the average cost to purchase a 'like-for-like' replacement, let alone the significant impact to the lost trade-in and resale value for their existing 4G or 5G device.

Which prior to the blocking would have been worth hundreds of dollars.

Lack of Free Devices

Again, within my survey **more than 75% of respondents said they <u>were not</u> offered a free replacement device** by their provider. *Let alone one 'like for like' and genuinely fit for purpose.*

Some have told me they basically had to demand a free device be provided.

This appears to be reflected within the official number of free devices the telcos (& Department) confirmed were provided being only 35K or so (15K Telstra, 20K Optus).

Approximately **250,000 4G/5G devices were blocked**, and hundreds of thousands were otherwise forced to upgrade, many unnecessarily.

23. Have the telcos provided any detail in regards to the total number of customers that requested a free replacement device post shutdown?

23.1. Were all customers with blocked devices automatically offered replacements or did customers have to request them in order to receive them?

Prior to the 3G switch off:

- Telstra advised it had given over 15,000 complimentary devices to customers in vulnerable circumstances.
- Optus advised it had offered 20,000 no cost handsets to select customers, including those experiencing financial challenges.

15 - DITRDCA - Answers to questions taken on notice at a public hearing on 12 February 2025 (received 25 Feb 2025) https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Rural_and_Regional_Affairs_and_Transport/3GNetworkShutdown/Additional_Documents

I received messages for help from people who were looking at **not being able to pay their rent and other bills due to having to buy a replacement phone!**

Fortunately for some I was able to help them enable VoLTE and switch to a provider where the phone wasn't blocked, **even though it was compatible with their current provider!**

Families stretched thin by ever increasing costs were slugged with hundreds to thousands of dollars of extra costs **for new phones they didn't need**.

Many of the 'low or no cost' devices that were 'available' were also network locked, and the reality is, if someone found their phone blocked, they can't wait 5-7 days for a free or 'low-cost' replacement.

The first thing many people had to do was go and <u>fork out money they didn't have for new phones they didn't need to buy.</u>

Again, **73% of respondents said they were not given enough notice** that their 4G/5G device would be artificially blocked from all services.

Of the submissions I received, **more than 70% were for phones no older than 2020/2021**.
This includes <u>many new 5G devices</u> that Support VoLTE Emergency Calling <u>on every network</u>.

If you multiply the average of $700 by the 10,000+ on my Petition **that's $7 Million, just from petition signers**. That $700 across the approx 250K with 4G/5G devices that were impacted would be closer to **<u>$175 Million</u>** <u>in costs to consumers</u>, not the $83 Million forecast by the ACMA.

Even if the total impact was only $400 it would still be **<u>over $100 Million</u>** <u>in costs borne by consumers</u>, and that's just for phones. That also completely ignores the costs to businesses, farmers and industry.

I have a number of devices that work perfectly for VoLTE Emergency Calling and in some cases have the carrier's <u>own official software installed</u> on the phone, yet I can even get an explanation from them as to why they blocked the phone.

Comments from the Public

I would invite the Committee to read some of the comments I received in my Blocked Devices Survey from 2024. A PDF with the 300+ comments has been sent alongside this submission.

The other comments are also available Online in their thousands, many within the comments sections of the Hugh Jeffery's videos or within discussion threads regarding the articles I wrote.

A sample of survey comments is below. The sentiment around the shutdown has been very critical.

#	***Comment***
20	*When I spoke to my Telco about my phone being blocked they knew nothing about it. That was 3 days before it was blocked. [Nubia Red Magic 5S - NX659J - TAC: 86319804]*
23	*The decision to allow telcos to arbitrarily block devices of their choice feels corrupt*
25	*I spoke at length to my telco representative over phone and went through a number of tests and he said my phone was compatible, however when I kept getting sms messages saying the opposite I was alarmed that from within the organisation I was getting two distinctly opposite messages. Who to trust? [Galaxy S8 - SM-G950F - TAC: 35525709]*
31	*The Government has been hoodwinked into this situation by the telco industry. It is disgraceful. There is nothing in the shutdown of 3G that is in the public interest […]*
36	*The whole thing sounds like a scam to benefit the phone retailers and telcos*
39	*I went to 2 different Telstra stores, both told me my 5G handset will work without issue based on I have 5G network and can do VOLTE, and advised me to ignore the message saying my phone will be blocked [Xperia 5 III - XQ-BQ72 - TAC: 35493043]*
87	*Should have been an option to prove a device could make E000 calls instead of batch blocking based on TAC.*
94	*Bad for ewaste, unnecessary, corporate greed*
108	*Giving someone who was previously a mobile technician four days notice of ACMA proposal to shut down perfectly capable device is a panic move, and negligent or lazy, or worse.*
109	*This is just about Telco and shareholder profits as usual.*
110	*Rushed, knee-jerk legislation*
119	*I'm on a disability pension. I saved up for so long to buy my phone. I waited for ages for it to come in special ($999) as I could not afford its original pricing of approx $1,800. I cannot afford to purchase an equivalent replacement phone. My phone is still in perfect condition....no scratches, chips, cracks, etc. I expected this phone to last me for at least 6 years after I purchased it. […]*
129	*3 days (over a weekend) of notice from "we're going to block you" to being blocked is disgraceful, now I'm forced into purchasing a less capable phone just so I can continue to make phone calls for work while hoping that this can be undone.*
202	*Government makes changes, makes things worse. Story as old as time. Completely out of touch.*
234	*It's ridiculous and indicative of an out of touch government with the best interests of telcos in mind*
258	*What the government and telcos have done is completely unacceptable and despicable. Thank you for putting this together.*
261	*I have 5 phones in my family which are now all bricked by the shutdown. All are less than 1 year old*
267	*This is just another infrastructure mismanagement saga, the cost of which is being born by the tax payer.*
277	*I have the feeling that consumer rights had been deprived in this decision process*
278	*This fiasco is just another example of politicians being the stooges of business rather than advocates of the people.*
294	*Situation is completely f***ed. Replaced loads of 3G dialers with those Australian approved 4G dialers but only now we're finding out they're failing when people try to use them because of this firmware problem with Telstra. The more expensive dialers now have new Telstra updates but those ones don't.*
313	*The shutdown was completely unnecessary. My father who lives in regional NSW has no service now. He is 86 years old and is now completely isolated. He has to drive 10Kms to get flakey 4G service. Also, through no fault of my own my business has suffered as my phone got blocked and I'm out of pocket for hundreds of dollars now having to buy another phone. This is absolutely ridiculous.*

Consumer Impacts & Survey Results

Harms to Consumers

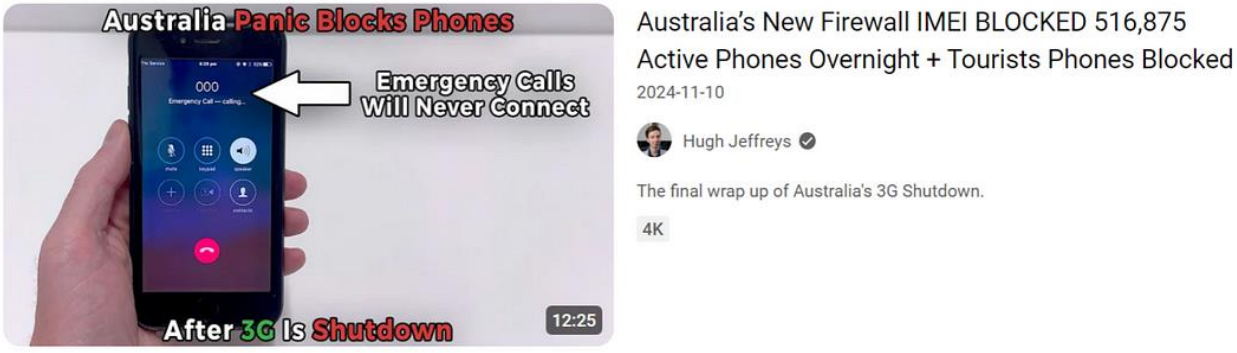
In the days following on from the shutdown and artificial device blocking, there were a number of stories reporting on the consumer experience.

Two of which from the ABC in early November, one of which I featured in.

ABC – 'Customers report basically new phones suddenly blocked from making calls' – Julian Fell - 3 November 2024
https://www.abc.net.au/news/2024-11-03/brand-new-phones-unable-to-make-calls-3g-shutdown/104541440

ABC - Australia's 3G network has shut down, so why are 4G and 5G users being cut off? - 4 November 2024
https://www.abc.net.au/news/2024-11-04/australian-4g-5g-users-cut-off-after-3g-network-shutdown/104559096

Then on 10 November 2024, Hugh Jeffreys published another follow-up video, (which I also featured in).



'Australia's New Firewall IMEI BLOCKED 516,875 Active Phones Overnight + Tourists Phones Blocked' - Hugh Jeffreys
https://www.youtube.com/watch?v=zIJavqEzEIw

Within the above Video, Hugh shows an officially supported phone that can make 4G Emergency Calls (on Optus) being blocked by Optus, and an iPhone that is not blocked but **cannot call 000** with an Optus or Vodafone sim inserted in the phone, only a Telstra sim.

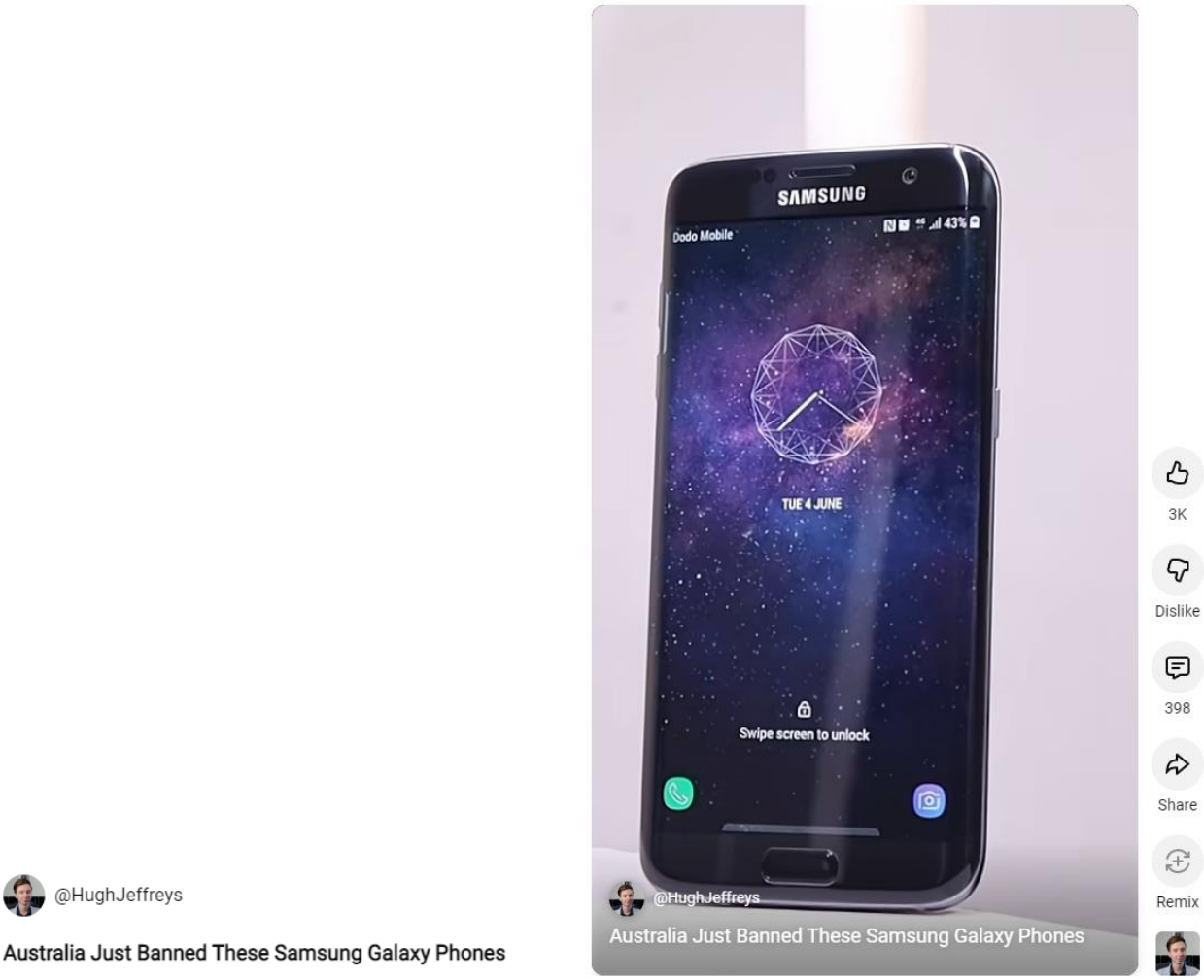
Despite Optus saying that model is 'supported'.

Optus would also later delete their VoLTE support webpage a few weeks after the release of that video.

The November 2024 video also showed how the blocking was happening with international roaming sim cards, even when in 5G phones that support VoLTE International Roaming and have Android 12+.

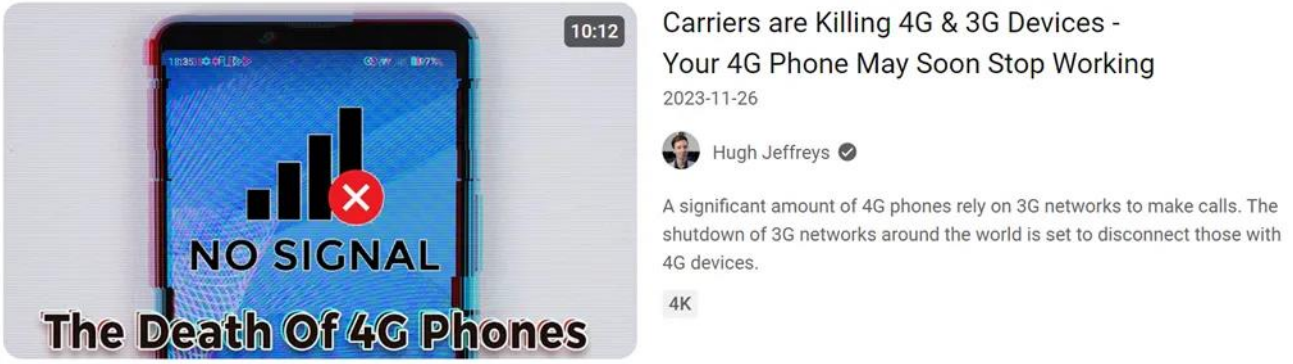
By December 2024 that video had achieved over **188,000 views** and presently has **more than 217,000.**

A recent YouTube short published on 11 November 2025 by Hugh about the Samsung devices being blocked currently has (at the time of writing) **over 60,000 views**.



Australia Just Banned These Samsung Galaxy Phones – 2025-11-11 – Hugh Jeffreys
https://www.youtube.com/watch?v=ojyHOiXwnCI

Combined with the video from September 2024 and another video from November 2023 there have been **over 880,000 Views with over 10,000 comments!**



'Carriers are Killing 4G & 3G Devices — Your 4G Phone May Soon Stop Working' – 2023-11-26 - Hugh Jeffreys
https://www.youtube.com/watch?v=Q6qb9dml6So

Determination Impacts

The (then) Minister's direction though likely very well intentioned, was not well designed or considered. *This was obvious at the time, hence why I wrote a letter warning about the impacts.*

I fully support the core policy intent and objective that phones in use by consumers **are able to reliably call 000**. *That I do not disagree with, I have been raising the alarm about that issue for years.*

Difficulty is you can't fix complex technical issues with blunt legal instruments, even trying to do so is short sighted and ill-considered, along with absolutely no regard for people and the unintended impacts.

While the amendments aimed to ensure access to emergency services, they had severe consequences for consumers, competition, and the overall accessibility of mobile services.

Whilst also **not addressing** the core technical issues with 4G VoLTE Calling and Emergency Calling. The blocking of 'incompatible' devices was a political solution, not a technical one.

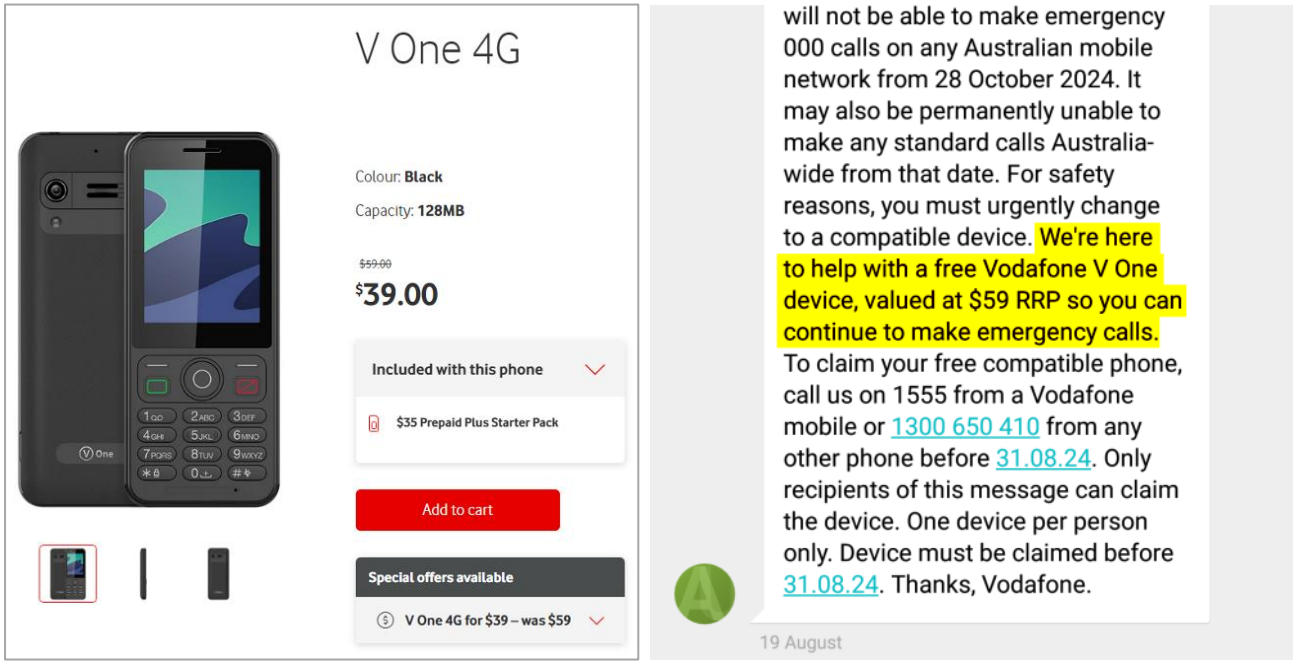
The structure of the direction also had phones being blocked first, then network testing later in April, and finally network wilting during outages a whole year later. A process completely the wrong way around!

The carriers were left to determine themselves what phones people should be allowed to use, which is a clear conflict of interest. The direction and determination both lack any real protection for consumers.

The final Determination and direction also had no requirements for the carriers to supply 'like-for-like' or 'fit-for-purpose' free replacement devices to customers.

With that there was (and still is) **no incentive** for carriers to validate devices they (or their handset partners) didn't test or sell. Even when the device works for 4G Emergency Calls, adheres to global standards and can place emergency calls on every 4G network.

The carriers could simply provide 'low or no-cost' handsets to impacted consumers.
Though many weren't offered low cost options either.



Offer to a Vodafone Customer August 2024 for a $59 value 'Feature Phone' on sale for $39.

The Minister, Department & ACMA perhaps had the view that only people with very old 3G and 4G handsets would be impacted, not people with brand new 5G phones, including some that were being sold in retail stores. *(That would be later blocked by Optus)*

3G Inquiry Hearings on 5 & 12 February 2025

Early in 2025 the 3G Shutdown Senate Inquiry Committee held follow up hearings prior to issuing the final inquiry report later in February. At the 5 February 2025 hearing Telstra and Optus were both in attendance along with the ACMA, ACCC.

The hearing was opened by representatives from National Farmers Federation (NFF) and Grain Growers. They shared stories about farmers and people in regional communities now cut off from vital communications, many out of pocket for boosters and other equipment.

Many told they had 'fortuitous coverage' by their telco.

There were also concerns raised about if Triple Zero could be relied upon in regional areas given the frequency of no service or 'SOS Only'.

A story about an incident in Goolhi NSW from December 2024 was raised.

Senate Rural & Regional Affairs & Transport References Committee | 05/02/2025 (48mins)
https://www.youtube.com/live/1niqoATlXyo?t=2924s

Last year there was an incident on a farm in regional NSW where the people on the ground were unable to reliably call 000. There was unfortunately a loss of life in that incident.

First responders from that incident reported they made several unsuccessful attempts to make an emergency call from the property, and it was only on the last call that they got information through, before that call also dropped out.

Telstra then went on ABC Country Hour to say:

> **Channa Seneviratne (Telstra):**
> All we can do is stick to the facts. And the facts are there were no failed calls to triple'o. Every single call that was originated made its way successfully through to our agents and through to emergency services. There were no dropouts. […]

ABC Radio Country Hour Transcript, tabled by Senator Malcolm Roberts at a public hearing on 5 February 2025.
https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Rural_and_Regional_Affairs_and_Transport/3GNetworkShutdown/Additional_Documents?docType=Tabled%20Documents

However with the hearing with the Department on 12 February 2025 the following week, that statement appears to have been incorrect. There were multiple failed calls to 000 detected on the network.

> **Ms Sparreboom (DITRDCA):** Yes, we are aware of the tragic incident that occurred in Goolhi last year. Telstra notified the department and we asked for a report to be provided.
>
> That report advised that eight calls were made to triple 0, five calls successfully connected to triple 0 and emergency services were called to the scene.
>
> The report advises that for three of those calls there was not sufficient signal strength to reach but five calls were successful. The report was also provided to the ACMA, and the ACMA, as the regulator, is undertaking some further preliminary inquiries in relation to that very sad incident.

Senate Rural & Regional Affairs & Transport References Committee | 12/02/2025 (48mins)
https://www.youtube.com/live/pY80An70jZc?t=1785s

AAP/The Canberra Times - Emergency calls did not connect during fatal farm fire – 2025-02-12
https://www.canberratimes.com.au/story/8890602/emergency-calls-did-not-connect-during-fatal-farm-fire/

Given the wide ranging coverage concerns in regional communities now post shutdown and with no official way for consumers to test for 000 call quality issues, events like this may continue to occur.

Granted the UOMO obligations will help with this at some point (in theory), but that is still years away.

International Response

International Response

Prior to the shutdown last year I spoke to Rudolf van der Berg, the Telecoms Policy Expert that raised the alarm and ‘blew the whistle’ on the issues with VoLTE in 2022 at the EENA Conference.

EENA 2022: Access to emergency services is being impacted by the lack of VoLTE interoperability

2022-05-31

eena112

Some weeks ago, French mobile operator Free warned that calling numbers, including emergency numbers, would not function when roaming in the US.

EENA 2022 - Access to emergency services is being impacted by the lack of VoLTE interoperability: https://www.youtube.com/watch?v=sHjyLmFt-eg

He can't quite believe what we did, he called it 'a stunning mess' and that the telcos **“completely mismanaged the process”**.

He sees the shutdowns of 2G & 3G networks as a major threat to safety due to the issues with VoLTE Calling & Emergency Calling, not to mention the competition & consumer issues.

See below.

Rudolf van der Berg
Partner at Stratix Consulting
2024-10-18

Completely blocking a phone when a competing mobile network doesn't support VoLTE emergency calls for that model? From November 1, that is the surprising reality for Australian mobile networks (and consumers!). When in 2022 EENA 112 and I warned for problems with #2Gshutdown and #3Gshutdown, we hoped for better standardisation and implementation of #VoLTE, particularly for emergency calls. I never expected a country to shoot itself in the foot and brick a few hundred thousand phones that do support VoLTE, but not on all networks or not officially. In 2 weeks Australia will do just that! A cautionary tale for the rest of the world!

The Australian MNOs shutdown 2G in 2018 and want to shutdown 3G in 2024. It was supposed to have happened already, but is now set for October 28. They completely mismanaged the process and made it appear as if it wasn't a big deal and only affected a few stragglers with dumb phones. People warning for the problems were ignored. In 2023 it became clear the problem was bigger than expected. The government panicked and last month the Australian Communications and Media Authority (ACMA) published a new rule, saying that from 1 November 2024 all phones active on networks must support emergency calls over VoLTE on all networks and those that don't should be denied carriage service. So even phones working on 2 of the 3 networks will be blocked. Consumers who didn't buy their phone from the telco but through main street retailers, or who switched operator now find their functioning phones are on the block list even when VoLTE works. Inbound roamers can't expect to switch to Australian SIMs etc. What a stunning mess. For more, see https://lnkd.in/eE--G9VM

LinkedIn Post - Australia’s 3G Shutdown - Telcos to Block Working 4G/5G Phones! - Rudolf van der Berg - 2024-10-17
https://linkedin.com/posts/rudolfvanderberg_australias-3g-shutdown-telcos-to-block-activity-7252642555991879682-H5ON

LinkedIn Post - Australia shuts down 3G and blocks 'foreign' 4G phones - Rudolf van der Berg - 2024-10-28
https://www.linkedin.com/posts/rudolfvanderberg_james-parker-medium-activity-7256760712050495489-bOsM

International Response

He said to me there are major issues in the sector globally that the industry doesn't want to acknowledge and talk about. Especially around Emergency Calling standardisation and network compatibility.

Many people across the globe have contacted him 'off the record' to report issues. It seems the sector is rife with anticompetitive practices by handset makers, telcos and radio equipment suppliers.

A large number of European operators have delayed shutdowns of 2G/3G so these issues can be resolved and they can safely transition.

Again for reference, Mr van der Berg is a Partner at the Dutch Telecommunications Consultancy firm 'Stratix' and he was also an Economist/Policy Analyst at the OECD and has worked for decades in the Telecom sector within Europe.

He also told me that after posting about Australia's blocking plans, someone who works at one of the European regulators said to him that 'Australia will become a good example of what not to do and why Europe needs to wait to transition'.

It's clear we should not have led this change and I think it's clear many other countries won't make the same mistakes. *Though all of this was entirely foreseeable and preventable.*

Due to the videos and articles about what happened here in Australia, consumers from around the globe are now aware of this issue and can call upon their Governments and Regulators to act.

International Response

2G/3G Shutdowns & Coverage

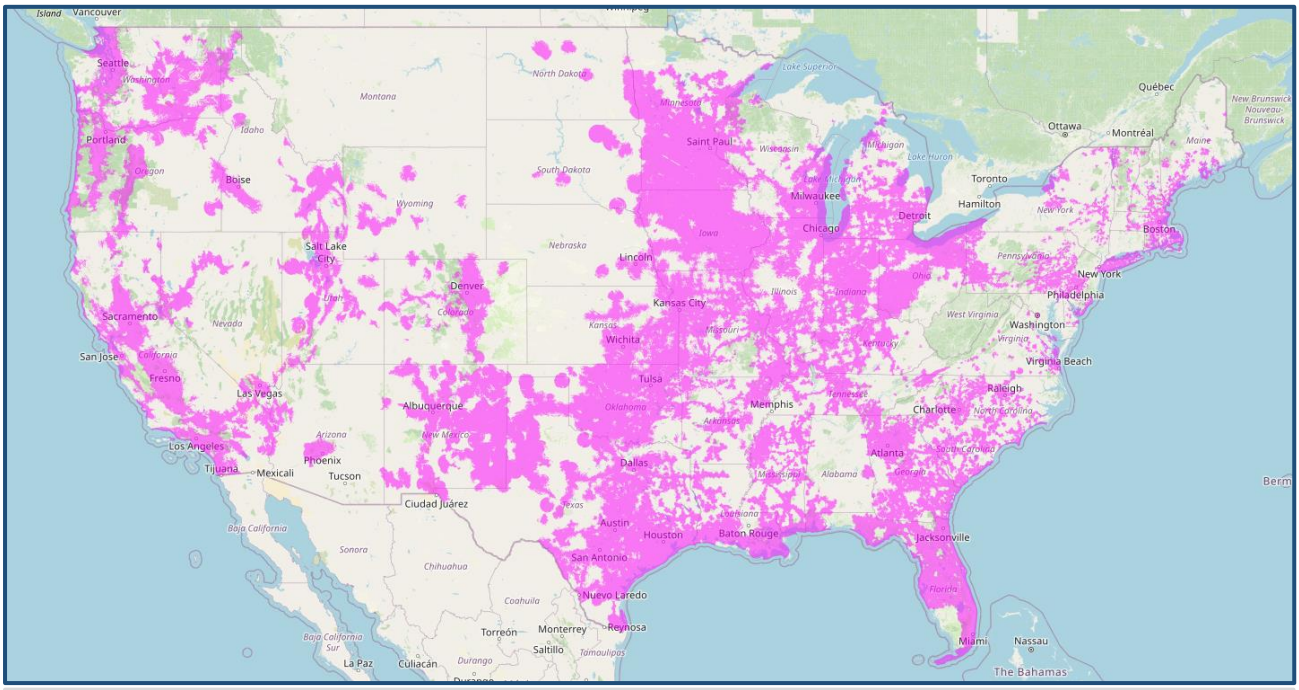
For the last 20-30 years 2G and 3G networks have provided seamless connectivity and greatly enhanced competition in the mobile sector. Those technologies have ensured that anyone can make an Emergency Call regardless of the network or handset.

What we've seen in recent weeks and months with Emergency Calling issues **is not normal**.

By all accounts, we are one of few large countries in the world without any 2G or 3G Mobile network coverage. Now we have shut down all Circuit Switched 2G/3G Networks, we are in largely completely uncharted territory.

The vast majority of the world still have 2G or 3G Network coverage, either in part or in full.

This includes large sections of the US with T-Mobile's 2G Network, which is masking compatibility issues and has been since 2022 when the majority of US providers shutdown 2G & 3G.



3G/2G

3G and 2G are older network technologies with slower speeds than 4G LTE and 5G. These technologies unlocked the simple voice calls and text messaging. 3G coverage is provided by roaming partners where available.

T-Mobile US Coverage Map Data – 2G/GSM Layer Extract – 2025-10-16
https://coverage.lart2150.com/vector/#b=GSM&m=2025-10-16
https://www.t-mobile.com/coverage/coverage-map

By stark contrast to us, France **will have 3G until approx 2028/2029** and the UK will be **keeping their 2G network around until approx 2030/2033**. Both countries have more than 2.5x our population.

Kore Wireless – 'Global 2G & 3G Network Closures'
https://www.korewireless.com/2g-3g-network-sunset-dates

Mobile UK – '2G/3G Switch Off'
https://www.mobileuk.org/2g-3g-switch-off

Though granted the US is predominately a 4G/5G market now.

However the US isn't exactly well known for having a well-functioning, well-regulated and competitive telecommunications sector. Quite the opposite.

The US is also one of the largest markets for handset vendors & equipment supplies to sell into, it's also a priority market for those vendors and suppliers. *Australia is not, we're a rounding error.*

International Response

As the US is now predominantly reliant on 4G and VoLTE for Calls and Emergency Calls (though still with some T-Mobile 2G Coverage) there have been an increasing number of reports of 911 call failures and other technical issues.

Particularly with Google Pixel Devices. *For reference, newer Google Pixel's use their own Tensor Chipset and a Samsung Modem.*

AA - PSA: Some Pixel owners still can't dial 911 during an emergency – 2023-09-11
https://www.androidauthority.com/psa-google-pixel-911-emergency-calling-issues-3362990

AA - Another Pixel, another 911 failure: Pixel 10 users say emergency calls sound like screeches - 2025-09-05
https://www.androidauthority.com/google-pixel-10-911-calling-bug-3594987

AA - Pixel phones keep dropping the ball in a potentially life-threatening way – 2025-10-24
https://www.androidauthority.com/google-pixel-failed-911-calls-3609973

European 2G/3G Shutdowns & Delays

For reference, at the July 2024 3G Inquiry hearings it was mentioned that a number of countries were looking at switching off either 2G or 3G within the next 12 - 18 months. However coincidentally in late 2024 a number of European providers announced further delays to their shutdowns.

As a reminder 4G devices that lack VoLTE Calling and Emergency Calling can use 2G or 3G Networks (Circuit Switched Fallback) for calls, roaming calls and Emergency Calls.

For example in June 2024 Swedish Provider Telia announced a further 2 year delay for shutting down 2G until **2027**. Citing concerns for the Agriculture Sector and Critical Services.

RFBenchmark - Telia Delays 2G Network Shutdown in Sweden to 2027 – 2024-06-03
https://rfbenchmark.com/en/telia-delays-2g-network-shutdown-in-sweden-to-2027/

In October, Telia's Estonia counterpart stated that 2G services would not shutdown **until at least 2029.**

DCD - Telia Estonia denies plans it will retire 2G next year, expects service to last until at least 2029 – 2024-10-15
https://www.datacenterdynamics.com/en/news/telia-estonia-denies-plans-it-will-retire-2g-next-year-expects-service-to-last-until-at-least-2029/

In the Netherlands (home of telecoms policy expert Rudolf van der Berg) the provider KPN in December 2024 announced a 2 year delay to shutting down 2G **until December 2027**.

DCD - KPN extends 2G switch off date to December 2027 – 2024-12-18
https://www.datacenterdynamics.com/en/news/kpn-extends-2g-switch-off-date-to-december-2027

Germany's Deutsche Telekom (T-Mobile) in October 2024 confirmed they would be shutting down 2G in **June 2028**.

Vodafone Germany was set to switch of 2G in 2025, however has since stated that
*"..the switch off of the 2G technology will occur in phases **up to the end of 2030**,"*

Lift Journal - 2G switch-off: experience and outlook – 2024-06-24
https://www.lift-journal.com/news/2g-switch-off-experience-and-outlook

I think looking around the world it's clear we proceeded with a 'cart before the horse' policy with the shutdown, only now fixing issues later. Which is obviously completely nonsensical.

Except we haven't done the second part and consumers are still being impacted.

These problems needed to be addressed prior to the networks being shut down, not after.

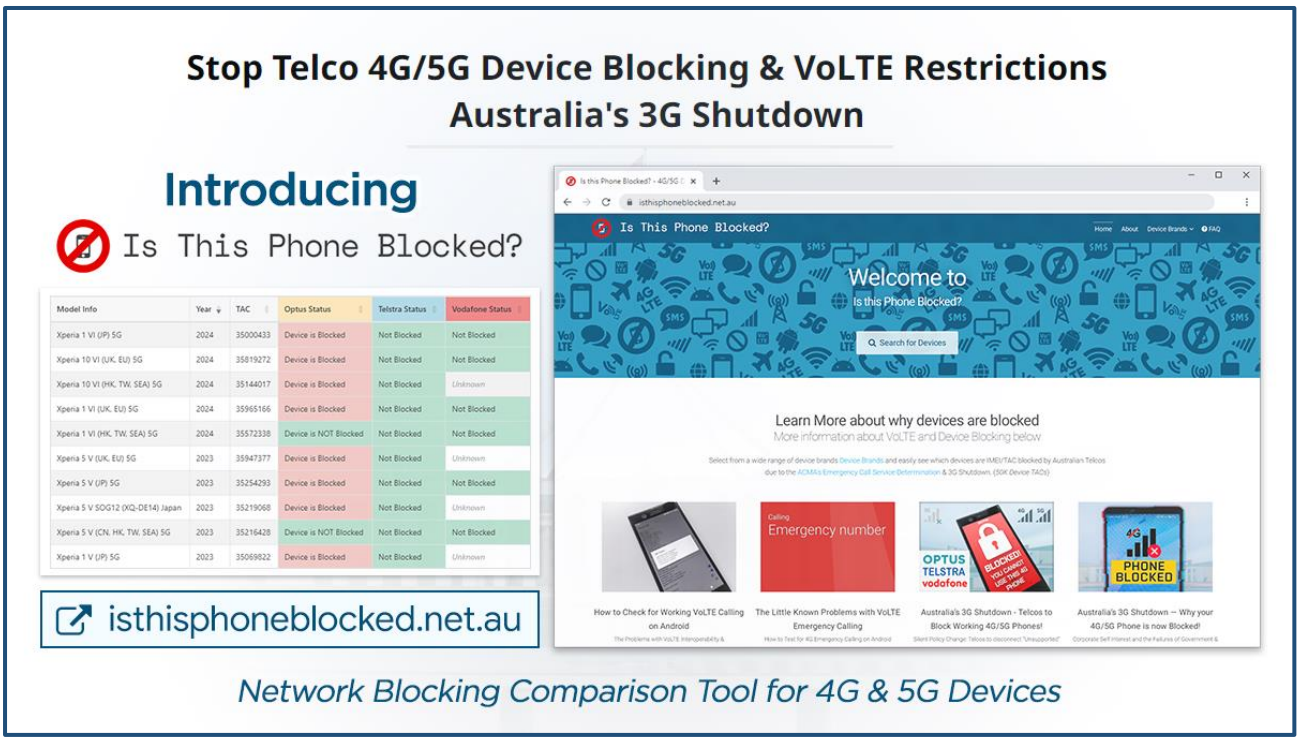
Though the telcos can now just block phones carte blanche and not actually solve the problem or be in any way accountable to their customers.

It's quite clear telco interests were prioritised over the public interests, and this is still happening now.

Lack of Transparency & Systemic Failures

Due to a lack of transparency for consumers around what phones they are allowed to use.
Earlier this year in May I launched an Online Device blocking comparison tool for consumers.
(I started developing the website in late March 2025.)

It's called **isthisphoneblocked.net.au** and it allows consumers to visually see the comparative and inconsistent device blocking results between the telcos.



Change.org – '4G Phone Blocking Update: Introducing 'isthisphoneblocked.net.au' a Network Blocking Comparison Tool'
https://www.change.org/p/stop-telco-4g-5g-device-blocking-volte-restrictions-australia-s-3g-shutdown/u/33534310

Many perfectly compatible 4G & 5G phones have been blocked by some or all of the providers, this includes devices that adhere to global emergency calling standards and work on every network for 000.

With the site consumers can easily search by popular phone brands & models and find out what 4G/5G phones they are currently allowed to use, and on which networks.

The official telco checkers from Telstra and Optus do not allow consumers to search by model or brand, and the list of 'compatible' and impacted models is largely hidden behind serial number (IMEI/TAC) search boxes. TPG/Vodafone also still has no such tool for the public.

Telstra Blocked Device Checker: https://telstrawholesale.com.au/3G-Network-Closure-Blocked-Devices-Checker.html
Optus Blocked Device Checker: https://optus.com.au/support/checkdevice

I have approximately 60,000 unique device models listed across more than two dozen popular brands.

Looking through the data it's abundantly clear that the telcos have failed to do proper analysis, especially for phones they didn't sell or their handset partners didn't sell.

This is especially true with Optus, they are blocking numerous 5G phones that are not blocked (supported) by Telstra and support 000 on every 4G network.

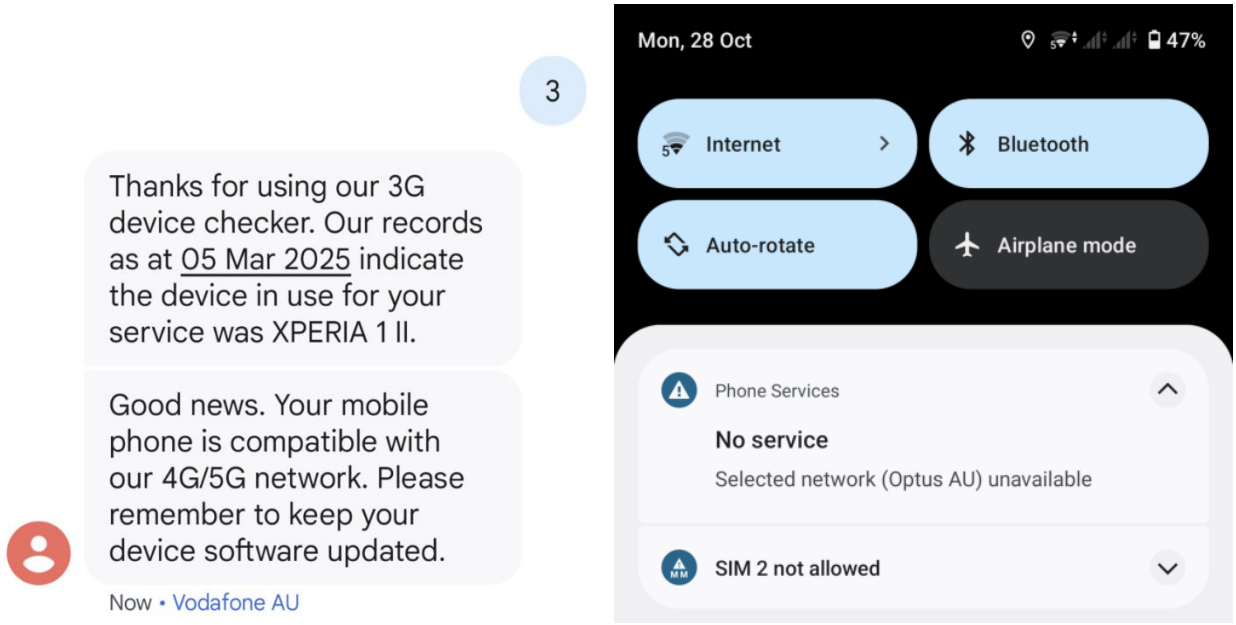
This includes a large number of 2023/2024 model 5G Phones from reputable global brands that adhere to the latest global standards for 4G Calling and Emergency Calling and always work for 000 regardless of the sim card inserted, (unlike a small subset of older devices).

Inconsistent Blocking Results

Below is a sample of the inconsistent blocking results between the providers.

Even new 2020-2024 Model 5G Phones have been blocked by some or all of the providers, even when they work for Emergency Calling on every network and adhere to the latest global standards.

Brand	Model Name	Year	Model No.	TAC	B28	Vodafone Feb - Nov 2025	Telstra Feb - Nov 2025	Optus Feb - Nov 2025
Sony	Xperia 1 II *(US, EU) 5G*	2020	XQ-AT51	35254911	Yes	Not Blocked	Blocked	Device is blocked
Sony	Xperia 1 II *(TW, SEA) 5G*	2020	XQ-AT52	35353811	Yes	Not Blocked	Blocked	Device is blocked
Sony	Xperia 1 III *(UK, EU) 5G*	2021	XQ-BC52	35084938	Yes	Not Blocked	Blocked	Device is blocked
Sony	Xperia 1 III *(TW, SEA) 5G*	2021	XQ-BC72	35292034	Yes	Not Blocked	Not Blocked *(as of 02/25)*	Device is blocked
Sony	Xperia 5 III *(TW, SEA) 5G*	2021	XQ-BQ72	35493043	Yes	Not Blocked	Blocked	Device is blocked



Xperia 1 II XQ-AT52 Screenshots

Lack of Transparency & Systemic Failures

Brand	Model Name	Model No.	Model Info	Year	TAC	Optus Status	Telstra Status	Vodafone Status
Sony	XPERIA 1VI	XQ-EC44	(JP) 5G	2024	35000433	Device is Blocked	Not Blocked	Not Blocked
Sony	XPERIA 10 VI	XQ-ES54	(UK, EU) 5G	2024	35819272	Device is Blocked	Not Blocked	Not Blocked
Sony	XPERIA 10 VI	XQ-ES72	(HK, TW, SEA) 5G	2024	35144017	Device is Blocked	Not Blocked	Not Blocked
Sony	XPERIA 1 VI	XQ-EC54	(UK, EU) 5G	2024	35965166	Device is Blocked	Not Blocked	Not Blocked
Sony	XPERIA 1 VI	XQ-EC72	(HK, TW, SEA) 5G	2024	35572338	Device is NOT Blocked	Not Blocked	Not Blocked
Sony	XPERIA 5 V	XQ-DE54	(UK, EU) 5G	2023	35947377	Device is Blocked	Not Blocked	*Unknown*
Sony	XPERIA 5 V	XQ-DE44	(JP) 5G	2023	35254293	Device is Blocked	Not Blocked	Not Blocked
Sony	XPERIA 5 V	SOG12	Japan (SoftBank)	2023	35219068	Device is Blocked	Not Blocked	*Unknown*
Sony	XPERIA 5 V	XQ-DE72	(CN, HK, TW, SEA) 5G	2023	35216428	Device is NOT Blocked	Not Blocked	Not Blocked
Sony	XPERIA 1 V	XQ-DQ44	(JP) 5G	2023	35069822	Device is Blocked	Not Blocked	*Unknown*
Sony	XPERIA 10 V	XQ-DC54	(UK, EU) 5G	2023	35909579	Device is Blocked	Not Blocked	*Unknown*
Sony	XPERIA 10 V	XQ-DC44	(JP) 5G	2023	35309189	Device is Blocked	Not Blocked	*Unknown*
Sony	XPERIA 10 V	XQ-DC72	(HK, TW, SEA) 5G	2023	35154067	Device is NOT Blocked	Not Blocked	Not Blocked
Sony	XPERIA 1 V	XQ-DQ62	(US) 5G	2023	35851358	Device is Blocked	Not Blocked	*Unknown*
Sony	XPERIA 1 V	XQ-DQ72	(CN, HK, TW, SEA) 5G	2023	35669414	Device is NOT Blocked	Not Blocked	Not Blocked
Sony	XPERIA 1 V	XQ-DQ54	(UK, EU) 5G	2023	35004648	Device is Blocked	Not Blocked	*Unknown*
Sony	XPERIA 5 V	SO-53D	Japan (NTTdocomo)	2023	35992580	Device is Blocked	Not Blocked	*Unknown*
Sony	XPERIA 10 V	SOG11	Japan (au/UQ mobile)	2023	35341945	Device is Blocked	Not Blocked	*Unknown*
Sony	XPERIA 1 V	SOG10	Japan (au)	2023	35784181	Device is Blocked	Not Blocked	*Unknown*
Sony	XPERIA 10 V	A302SO	Japan (SoftBank)	2023	35273245	Device is Blocked	Not Blocked	*Unknown*
Sony	XPERIA 1 IV	XQ-CT72	(CN, HK, TW, SEA) 5G	2022	35951038	Device is NOT Blocked	Not Blocked	Not Blocked
Sony	XPERIA 5 IV	XQ-CQ44	(JP) 5G	2022	35364270	Device is Blocked	Not Blocked	*Unknown*
Sony	XPERIA 5 IV	XQ-CQ72	(CN, HK, TW, SEA) 5G	2022	35908127	Device is NOT Blocked	Not Blocked	Not Blocked
Sony	XPERIA 5 IV	XQ-CQ62	(US) 5G	2022	35368922	Device is Blocked	Not Blocked	*Unknown*
Sony	XPERIA 5 IV	XQ-CQ54	(UK, EU) 5G	2022	35777435	Device is Blocked	Not Blocked	*Unknown*

https://isthisphoneblocked.net.au/device-brands/sony

Lack of Transparency & Systemic Failures

Brand	Model Name	Year	Model No.	TAC	Telstra Feb 2025	Optus Feb 2025
Xiaomi	Redmi Note 13 Pro 4G	2024	23117RA68G	86032107	Not Blocked	Device is Blocked
Xiaomi	Redmi Note 13 Pro 4G	2024	23117RA68G	86068807	Not Blocked	Device is Blocked
Xiaomi	Redmi Note 13 Pro 4G	2024	23117RA68G	86083407	Not Blocked	Device is Blocked
Xiaomi	Redmi Note 13 Pro 4G	2024	23117RA68G	86257406	Not Blocked	Device is NOT Blocked
Xiaomi	Redmi Note 13 Pro 4G	2024	23117RA68G	86327607	Not Blocked	Device is NOT Blocked
Xiaomi	Redmi Note 13 Pro 4G	2024	23117RA68G	86335706	Not Blocked	Device is NOT Blocked
Xiaomi	Redmi Note 13 Pro 4G	2024	23117RA68G	86339107	Not Blocked	Device is Blocked
Xiaomi	Redmi Note 13 Pro 4G	2024	23117RA68G	86417107	Not Blocked	Device is Blocked
Xiaomi	Redmi Note 13 Pro 4G	2024	23117RA68G	86560707	Not Blocked	Device is Blocked
Xiaomi	Redmi Note 13 Pro 4G	2024	23117RA68G	86656707	Not Blocked	Device is Blocked
Xiaomi	Redmi Note 13 Pro 4G	2024	23117RA68G	86723707	Not Blocked	Device is Blocked
Xiaomi	Redmi Note 13 Pro (5G)	2023	2312CRAD3C	86020907	B28 Limited	Device is Blocked
Xiaomi	Redmi Note 13 Pro (5G)	2023	2312CRAD3C	86465406	B28 Limited	Reduced Coverage
Xiaomi	Redmi Note 13 Pro (5G)	2023	2312CRAD3C	86863406	B28 Limited	Device is Blocked
Xiaomi	Redmi Note 13 Pro (5G)	2023	2312DRA50C	86086206	B28 Limited	Reduced Coverage
Xiaomi	Redmi Note 13 Pro (5G)	2023	2312DRA50C	86269307	B28 Limited	Reduced Coverage
Xiaomi	Redmi Note 13 Pro (5G)	2023	2312DRA50C	86431107	B28 Limited	Device is Blocked
Xiaomi	Redmi Note 13 Pro (5G)	2023	2312DRA50C	86556307	B28 Limited	Device is Blocked
Xiaomi	Redmi Note 13 Pro (5G)	2023	2312DRA50C	86705506	B28 Limited	Reduced Coverage
Xiaomi	Redmi Note 13 Pro (5G)	2023	2312DRA50C	86754107	B28 Limited	Reduced Coverage
Xiaomi	Redmi Note 13 Pro (5G)	2023	2312DRA50C	86857907	Not Blocked	Device is Blocked

https://isthisphoneblocked.net.au/device-brands/xiaomi?device=REDMI+NOTE+13+PRO

Lack of Transparency & Systemic Failures

ABC News Coverage about Inconsistent Blocking

In late May the inconsistent blocking between Telstra and Optus was covered by the ABC.

The article included a reference to the website I launched earlier that month, along with a story from an impacted telco customer.

ABC - Telstra and Optus are inconsistently blocking phones. The regulator doesn't know how many - 27 May 2025
https://www.abc.net.au/news/2025-05-27/telstra-optus-inconsistent-blocking-phones/105319626

Within the article the reporter noted that the ACMA had not yet requested the data from the telcos.

> 'The regulator promised to monitor the situation by requesting data from telcos around which phones were being blocked.
>
> However, when asked by the ABC — six months after the 3G network was shut off — an ACMA spokesperson said it had not yet requested this data.
>
> The regulator said it *"will shortly write to relevant telcos to collect the data outlined in our impact analysis".*
>
> In the meantime, customers have been dealing with seemingly arbitrary decisions around which phones continue to work — and which don't.'

ABC - Telstra and Optus are inconsistently blocking phones. The regulator doesn't know how many - 27 May 2025

I myself was a little surprised to read the ACMA had not yet requested that data.

Though given the comments from the 5 February 3G Shutdown Inquiry hearing (with the ACMA in attendance) it did not come as a complete surprise. Though it certainly was disappointing.

The ACMA was asked the below at the hearing:

Senator Roberts:
Did you require the telcos to give you the number of devices that they ended up blocking from networks because of the new emergency calling services determination that you issued?

Ms Rainsford (ACMA):
No, there's no requirement for them to tell us that.

Senator Roberts:
Why not? The explanatory statement to the emergency call amendment said 516,875 devices would be affected. How many of these were 4G and 5G?

Ms Rainsford (ACMA):
We don't have that data to hand.

Rural & Regional Affairs and Transport References Committee - 5/02/2025 - Shutdown of the 3G mobile network - ACMA
https://www.aph.gov.au/Parliamentary_Business/Hansard/Hansard_Display?bid=committees/commsen/28679/&sid=0003

Senate Rural & Regional Affairs & Transport References Committee | 05/02/2025 (2hrs 17mins)
https://youtube.com/live/1niqoATlXyo?t=8256s

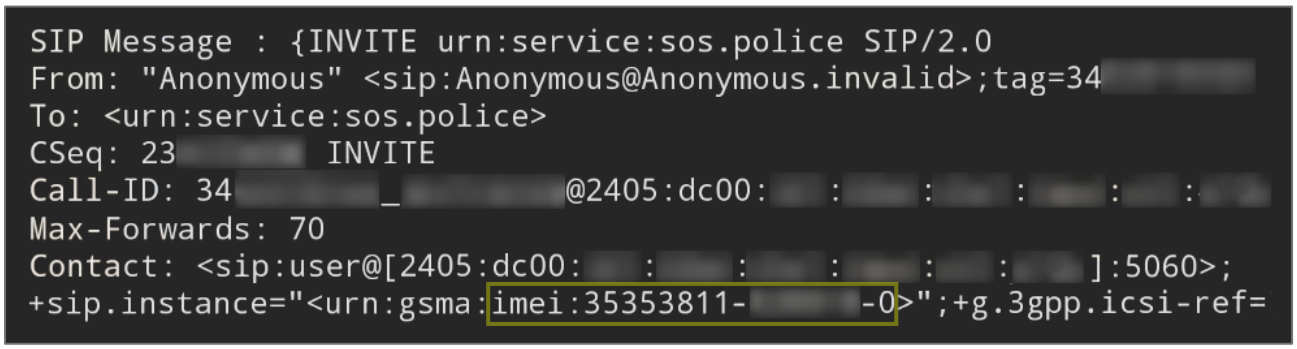
Telco Awareness

Telco Awareness

The telcos are aware they are blocking devices in error that can call 000 on 4G.

Blocked devices that are capable of VoLTE Emergency Calls send their device IMEI (Serial Number) to the network when placing an anonymous (camp-on) 4G Emergency Call.

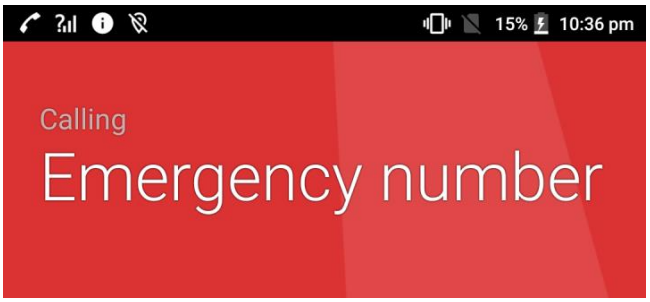
These calls and the associated network activity is logged!

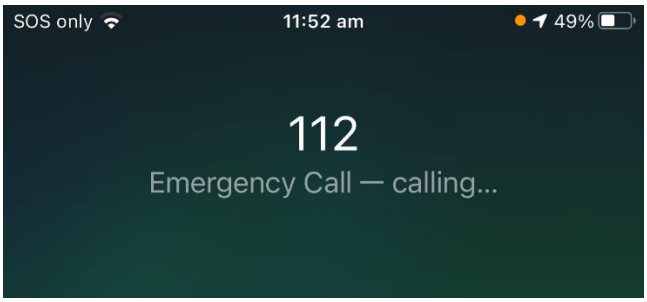


Anonymous Emergency SOS Call – IMEI/TAC 35353811 – Sony Xperia 1 II 5G - Android 12 - Blocked on Optus & Telstra

Devices are **not blocked** from Emergency Calling if they are technically capable.

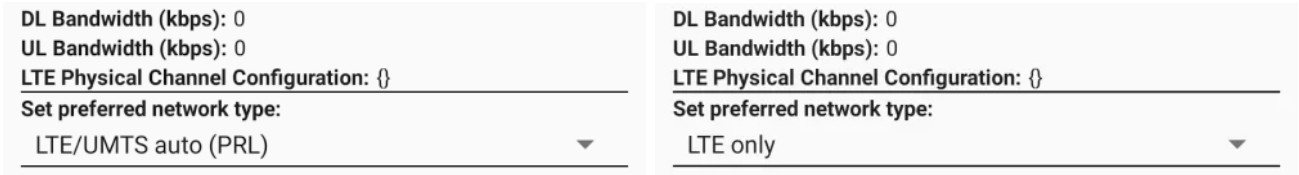
Devices that **require** 3G for Emergency Calls will now just get stuck on calling, including some 'Officially Supported' Devices. (As we've since seen, including those Samsung's on Vodafone)





It's also worth mentioning testing Android devices prior to shutdown was entirely possible, despite claims otherwise. These devices could be tested for 4G Emergency Calling by forcing the device to be 'LTE Only' in settings and monitoring the network band when placing an Emergency Call to 000 or 112.

Devices that relied on 3G for 000 would fall back to a 3G Band (850 or 900Mhz). Devices that supported VoLTE Emergency Calling would instantly place the Emergency Call over 4G on an LTE Band.



Android Phone Info Debug – Set Preferred Network Type – LTE/UMTS (3G) to LTE only

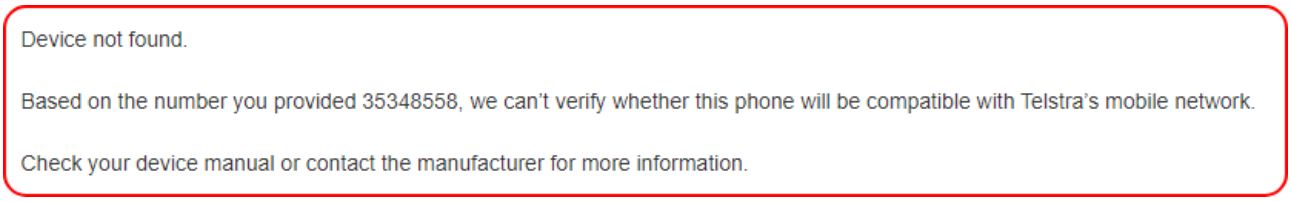
How to Check for Working 4G VoLTE Calling on Android Handsets
https://medium.com/@jamesdwho/how-to-check-for-working-volte-calling-on-android-8c343362ecfe

The Little Known Problems with VoLTE Emergency Calling - How to Test for 4G Emergency Calling Support on Android
https://medium.com/@jamesdwho/the-little-known-problems-with-volte-emergency-calling-3d4cdaf0e042

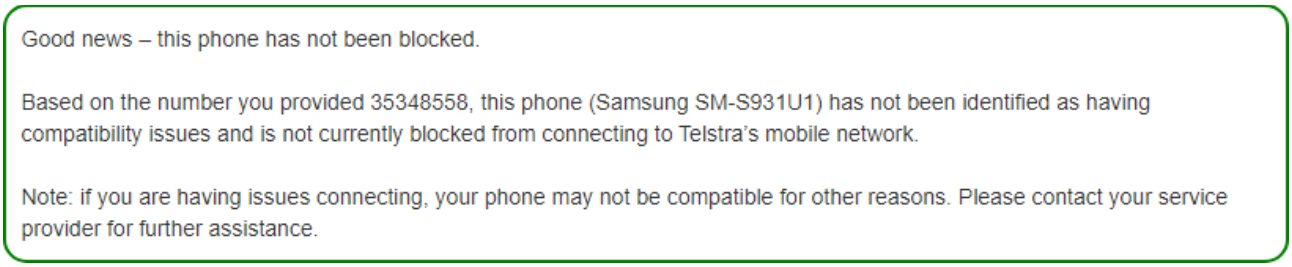
Telco Awareness

Telstra not updating their 'Checker Tool' Database

Additionally **within 4 days of that story being published** in the ABC, Telstra updated their checker database and added many newer models that were missing.



Telstra Blocked Device Checker Result February 2025 - Samsung Galaxy S25 - 35348558



Telstra Blocked Device Checker Result May/June 2025 - Samsung Galaxy S25 – 35348558

Prior to late May it appears they stopped making any changes around February/March 2025.
Between May and October this year there were no identifiable changes to Telstra's database & block list.

Only **on 27 October 2025** did Telstra update their online database, however based on information I scraped (extracted) they essentially only reclassified Samsung and Apple iPhone devices, along with adding a number of missing models to their tool.

Many of which not formally whitelisted, though Telstra does operate on a 'blacklist' approach.

Telstra 'Checker' Database Changelog Extract
https://isthisphoneblocked.net.au/telstra/changelog

Though since the 27th of October Telstra has updated their list a few times.

However Telstra continues to block 4G/5G phones that work perfectly on 4G including for Emergency Calling, including devices that work natively out of the box.

Despite having the network side data and call logs from these phones to know they work and can make emergency calls on 4G.

Optus 'Checker' Database and Systemic Classification Errors

By contrast Optus has been regularly updating their checker database, however their dataset is by far the more inaccurate of the two, astonishingly so. (As highlighted by the ABC story).

The inaccuracy of their dataset I think can be largely explained by the insufficient level of analysis they did pre-shutdown, with 'pre-shutdown' historical call data.

In a story in the ABC from November 2024 regarding this issue, it stated the following.

*"Telstra also said it had **checked billions of call records**, industry records and user device behaviour data to determine which phones were no longer network-compatible."*

*"An Optus spokesperson told the ABC it had **analysed tens of millions** of call records to determine which devices used by its customers were no longer able to call triple-0."*

ABC - Australia's 3G network has shut down, so why are 4G and 5G users being cut off? – 2024-11-04
https://www.abc.net.au/news/2024-11-04/australian-4g-5g-users-cut-off-after-3g-network-shutdown/104559096

It's quite clear that Optus in particular has very poor data for what devices actually work or not.

The fact they themselves say they only analysed 'tens of millions of call records', compared to Telstra's Billions, clearly highlights the lack of proper analysis by Optus prior to switch off.

Telstra is also a bigger provider with more customers and even more data to analyse.

*However due to significant compatibility and VoLTE standardisation issues on Telstra's network prior to the shutdown their data set **is deeply flawed** as well.*

This is obvious when you look at the lists and compare the providers against each other, especially against Vodafone who had months' worth of post-shutdown data to analyse.

The carriers need to reassess with post-shutdown data, they have blocked phones in error but perhaps will not want to admit this.

I have explicit device side network logs and screen recordings showing my devices are entirely capable of making 4G emergency calls and can do so on every network. Yet the phones remain blocked.

I and other consumers can't even get a real explanation as to why they blocked a specific phone. Consumers just get told the device is 'incompatible with the network' and to buy a new one.

It also seems Optus only wants to accept AS/CA S042.1:2022 Testing Certification to unblock devices rather than more globally recognised long standing GSMA IR.92 & ETSI (European Telecommunications Standards Institute) Compliance Testing.

Which Telstra seems to accept, given Telstra unblocked some 2024 model 5G phones in Jan/Feb that Optus has not. The devices they unblocked didn't need any software updates to function.

Optus 'Checker' Database and Systemic Classification Errors

Again having looked through the data I have from both telcos it's obvious that no-one has actually looked at them, let alone side by side. The misclassification extends to many brands and types of devices.

Brand	Model Name	Year	Model No.	TAC	B28	Telstra Nov 2024	Telstra Feb - Nov 2025	Optus Feb - Nov 2025
Sony	Xperia 10 VI *(TW, SEA) 5G*	2024	XQ-ES72	35144017	Yes	Blocked	Not Blocked	Device is blocked
Sony	Xperia 10 VI *(UK, EU) 5G*	2024	XQ-ES54	35819272	Yes	Blocked	Not Blocked	Device is blocked
Sony	Xperia 1 VI *(TW, SEA) 5G*	2024	XQ-EC72	35572338	Yes	Not Blocked	Not Blocked	Device is NOT Blocked
Sony	Xperia 1 VI *(UK, EU) 5G*	2024	XQ-EC54	35965166	Yes	Blocked	Not Blocked	Device is blocked
Sony	Xperia 1 VI *(JP) 5G*	2024	XQ-EC44	35000433	Yes	Not Blocked	Not Blocked	Device is blocked
Sony	Xperia 1 V *(TW, SEA) 5G*	2023	XQ-DQ72	35669414	Yes	Blocked	Not Blocked	Device is NOT Blocked
Sony	Xperia 1 V *(US) 5G*	2023	XQ-DQ62	35851358	Yes	Blocked	Not Blocked	Device is blocked
Sony	Xperia 1 V *(UK, EU) 5G*	2023	XQ-DQ54	35004648	Yes	Blocked	Not Blocked	Device is blocked
Sony	Xperia 1 IV *(JP) 5G*	2022	XQ-CT44	35093524	Yes	Blocked	Not Blocked	Device is blocked
Sony	Xperia 1 IV *(UK, EU) 5G*	2022	XQ-CT54	35666018	Yes	Blocked	Not Blocked	Device is blocked
Sony	Xperia 1 IV *(US) 5G*	2022	XQ-CT62	35119411	Yes	Blocked	Not Blocked	Device is blocked
Sony	Xperia 1 IV *(TW, SEA) 5G*	2022	XQ-CT72	35951038	Yes	Blocked	Not Blocked	Device is NOT Blocked
Sony	Xperia 1 III *(JP) 5G*	2021	XQ-BC42	35671845	Yes	Blocked	Not Blocked	Device is blocked
Sony	Xperia 1 III *(UK) 5G*	2021	XQ-BC52	35084938	Yes	Blocked	Blocked	Device is blocked
Sony	Xperia 1 III *(US) 5G*	2021	XQ-BC62	35242794	Yes	Blocked	Blocked	Device is blocked
Sony	Xperia 1 III *(TW, SEA) 5G*	2021	XQ-BC72	35292034	Yes	Blocked	Not Blocked	Device is blocked

https://isthisphoneblocked.net.au/device-brands/sony

Brand	Model Name	Model Number	Year	TAC	Optus Nov 2025	Telstra Nov 2025	Vodafone/AMTA Q2 2025
Motorola	Moto G84 5G	XT2347-1	2023	35955648	Device is Blocked	Not Blocked	*Unknown*
Motorola	Moto G84 5G	XT2347-1	2023	35883372	Device is Blocked	Not Blocked	*Unknown*
Motorola	Moto G84 5G	XT2347-1	2023	35428965	Device is Blocked	Not Blocked	*Unknown*
Motorola	Moto G84 5G	XT2347-1	2023	35368581	Device is Blocked	Not Blocked	*Unknown*
Motorola	Moto G84 5G	XT2347-1	2023	35332961	Device is Blocked	Not Blocked	*Unknown*
Motorola	Moto G84 5G	XT2347-1	2023	35723170	Device is NOT Blocked	Not Blocked	OK - AMTA

https://isthisphoneblocked.net.au/device-brands/motorola?device=MOTOROLA+MOTO+G84+5G

Optus 'Checker' Database and Systemic Classification Errors

Brand	Model Name	Model Number	Model Info	Year	TAC	Optus Nov 2025	Telstra Nov 2025	Vodafone/ AMTA Q2 2025
Redmi	Note 13 5G	2312DRAABI	India/Asia	2024	86198907	Device is Blocked	Not Blocked	*Unknown*
Redmi	Note 13 5G	2312DRAABI	India/Asia	2024	86432807	Device is Blocked	Not Blocked	*Unknown*
Redmi	Note 13 5G	2312DRAABI	India/Asia	2024	86608306	Device is NOT Blocked	Not Blocked	OK - AMTA
Redmi	Note 13 5G	2312DRAABI	India/Asia	2024	86842806	Device is Blocked	Not Blocked	*Unknown*

https://isthisphoneblocked.net.au/device-brands/xiaomi?device=Xiaomi+2312DRAABI

In some cases Optus blocked multiple versions of the same phone which are not blocked by Telstra and the only one they haven't blocked is one that shows up as "OK" in the AMTA checker as having the necessary 'compliance declarations' from the manufacturer. *As shown in the above examples.*

Those phones being new 4G/5G models work the same for Emergency Calling regardless of the sim and network.

It's a built-in function of the Android software on the device, the chipset and device modem.

It seems Telstra knows this, Optus doesn't.
Though Telstra are inconsistent with their blocking as well compared to Optus and Vodafone.

Brand	Model Name	Model Number	Model Info	Year	TAC	Optus Nov 2025	Telstra Nov 2025	Vodafone
Xiaomi	Note 12 Pro 4G	2209116AG	Global Model	2022	86025306	Device is NOT Blocked	Blocked	*Unknown*
Xiaomi	Note 12 Pro 4G	2209116AG	Global Model	2022	86224406	Device is NOT Blocked	Blocked	*Unknown*
Xiaomi	Note 12 Pro 4G	2209116AG	Global Model	2022	86300106	Device is Blocked	Not Blocked	*Unknown*
Xiaomi	Note 12 Pro 4G	2209116AG	Global Model	2022	86459406	Device is NOT Blocked	Blocked	*Unknown*
Xiaomi	Note 12 Pro 4G	2209116AG	Global Model	2022	86705106	Device is NOT Blocked	Blocked	*Unknown*
Xiaomi	Note 12 Pro 4G	2209116AG	Global Model	2022	86741406	Device is NOT Blocked	Blocked	*Unknown*
Xiaomi	Note 12 Pro 4G	2209116AG	Global Model	2022	86832106	Device is NOT Blocked	Blocked	*Unknown*
Xiaomi	Note 12 Pro 4G	2209116AG	Global Model	2022	86855206	Device is NOT Blocked	Blocked	*Unknown*

https://isthisphoneblocked.net.au/device-brands/xiaomi?device=Xiaomi+2209116AG

Optus Blocking 'Non-Phone' (IOT) 'Internet of Things' Devices

Within the ACMA's Emergency Call Service Determination Amendment explanatory Statement they made it clear the device blocking requirements apply only to mobile phones.

> The amendments stipulated under subsection 6(2) of the Direction apply only to mobile phones that cannot make an emergency call and disabling the supply of services to those mobile phones. The amendments do not relate to devices that are not a mobile phone, such as medical alert devices. It follows that this Impact Analysis only assesses data relevant to mobile phones.

Emergency Call Service Amendment Determination 2024 Explanatory statement | F2024L01353ES Pg7
https://www.legislation.gov.au/F2024L01353/asmade/text/explanatory-statement

Despite this both Optus and Telstra have blocked 'Non Phone' IoT (Internet of Things) and various 'M2M' (Machine to Machine) and other general 'non-phone' devices.

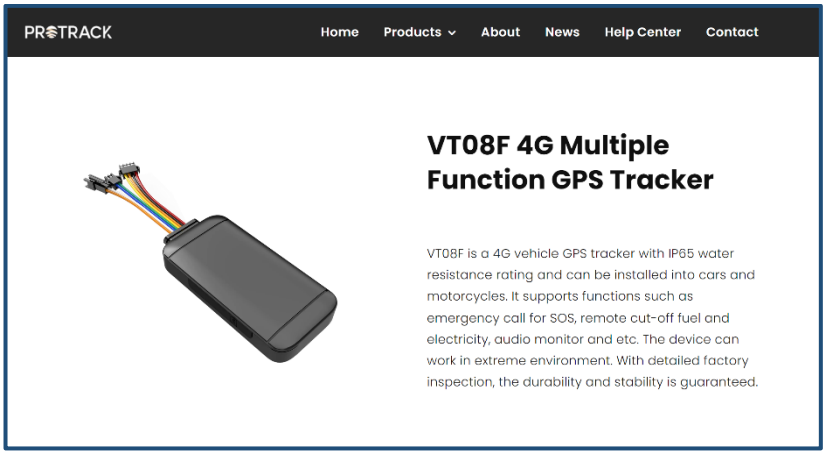
This also includes devices such as Tablets, Smartwatches, and Asset Trackers, amongst many others.

So at the time of the shutdown all of these 'non-phone' devices stopped working as well, not because they weren't 4G compatible but because **they were being artificially blocked**.

As I've scraped the historical data from the telcos, I've been able to review and analyse some of these devices in their list, what they have blocked and which ones they have unblocked. (2025 Data)

In July this year Optus unblocked a 4G Vehicle Asset Tracker that they had blocked (PROTRACK VT08F) and in their 6 August dataset they unblocked a handheld mobile barcode scanner they had blocked (CHAINWAY C66). *Telstra has always classified these as "Not Phone".*

Chainway - C66 Mobile Computer
https://chainway.net/Products/Info/75



VT08F 4G Multiple Function GPS Tracker
https://gps-protrack.com/product/vt08f-4g-multiple-function-gps-tracker

TAC	Optus Model Name Telstra Name	Optus Status	Optus Status	Telstra Status
		Oct 2024 - June 2025	July 2025	2024 - 2025
35546859	PROTRACK VT08F Itrybrand Technology VT08F	Device is Blocked	Device is NOT Blocked	Not Phone
		Oct 2024 - July 2025	August 2025	2024 - 2025
86407504	CHAINWAY C66 Shn Chainway C66	Device is Blocked	Reduced Coverage *Not Blocked – No 700MHz*	Not Phone

In total only two devices were unblocked in July and August respectively.
https://isthisphoneblocked.net.au/optus/changelog

However Optus are still blocking numerous other IoT and non-phone devices such as Smartwatches, other Vehicle/Asset Trackers, Two-Way Radios that use LTE Mobile Data (Internet) and more.

Below is just a sample, these devices are extremely easy to find by looking through their list.
I noticed most of these months ago.

TAC	Model	**Optus Status** November 2025	**Telstra Status** November 2025
35182311	ESTALKY E550 2-Way/Push-to-Talk 4G Radio	Device is Blocked	Not Blocked
35216411	ETERA E880 2-Way/Push-to-Talk 4G Radio	Device is Blocked	Not Blocked
35369523	TRACKIMO UNIVERSAL TRACKER 4G Vehicle Tracker	Device is Blocked	Not Phone
35620711	FAMOCO FX105 Handheld Payment Terminal & Scanner	Device is Blocked	'TAC Not Blocked'
35878256	FIRE-BOLTT BSW220 Smartwatch	Device is Blocked	Not Phone
86000106	HONOR WATCH 4 Smartwatch	Device is Blocked	Not Phone
86591306	OPPO WATCH 3 Smartwatch	Device is Blocked	Not Phone

ESTALKY E550 (2-Way/Push-to-Talk Radio that uses LTE Data)
https://www.estalky.com/lte-push-to-talk-radio/e550.html

ETERA E880 (2-Way/Push-to-Talk Radio that uses LTE Data)
https://eteraptt.com/products/e880

Optus 'Checker' Database and Systemic Classification Errors

In May Optus also **unblocked** a 4G LTE Radio module/modem for IoT/M2M (Machine to Machine) Devices, the 'Tuge TM18'.

TAC	Optus Model Name Telstra Name	Optus Status February 2025	Optus Status May 2025	Telstra Status November 2024
86301007	Tuge TM18 Shanghai Tuge Data TM18	Device is Blocked	Reduced Coverage *Not Blocked – No 700MHz*	'TAC Not blocked'

Modules like that are integrated into a variety of devices such as payment terminals, industrial equipment, trackers and other 'smart devices'.

Cat.1 vSIM Module TM18 Series
https://en.tugegroup.com/prod_view.aspx?nid=3&typeid=11&id=200

There is no clear information as to why Optus blocked it in the first place, the requirement is to only block mobile phones, not IoT Devices.

Additionally in May Optus Unblocked the 'ZTE Telstra Flip 4' (Z2336T) that they had blocked, and the 'Telstra Essential Smart 2.1' (ZTE BLADE A30).

Both are devices that Telstra says supports 4G Emergency Calling, **but both were blocked by Optus** *(but Not Blocked by Telstra).*

TAC	Optus Model Name Telstra Name	Optus Status February 2025	Optus Status May 2025	Telstra Status November 2024
86294006	Z2336T ZTE Telstra Flip 4	Device is Blocked	Device is NOT Blocked	Not Blocked
86195605	ZTE BLADE A30 Telstra Essential Smart 2.1	Device is Blocked	Device is NOT Blocked	Not Blocked

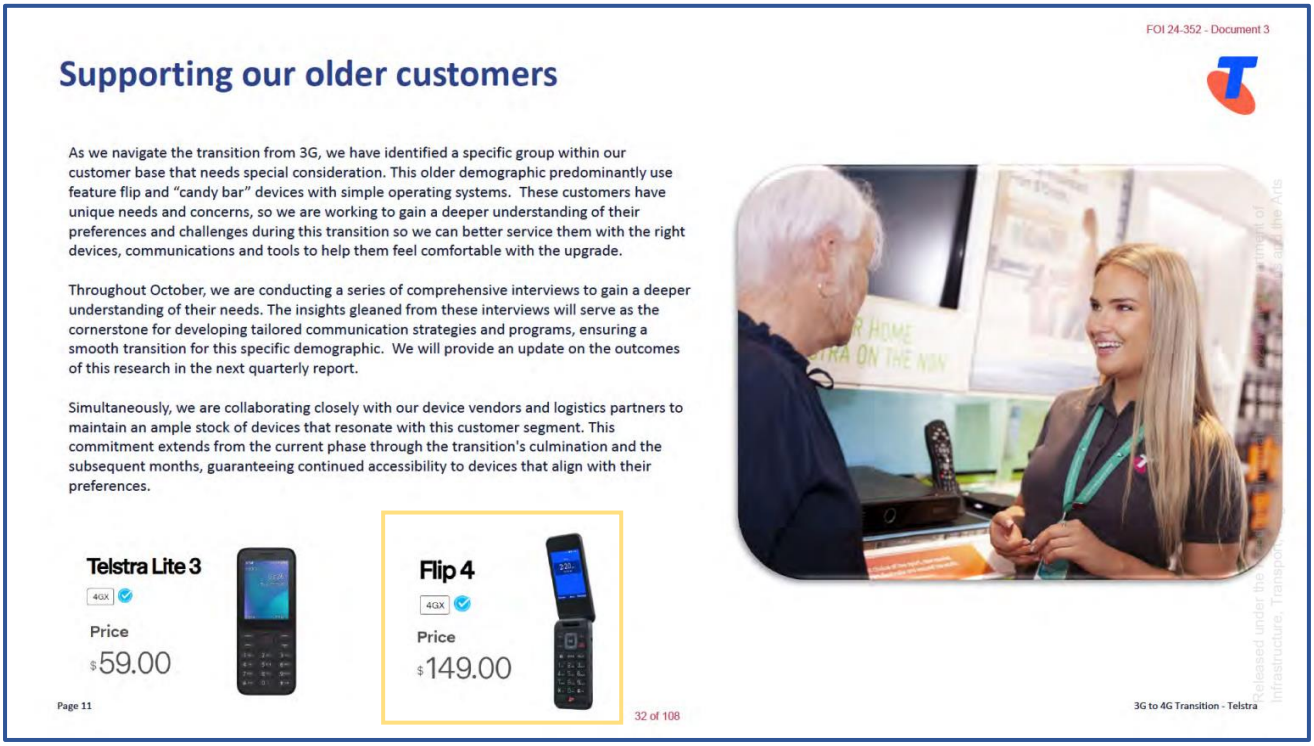
https://isthisphoneblocked.net.au/optus/changelog

The Flip 4 is a phone that Optus said in October 2024 was incompatible and **would be blocked** based on user reports at the time. (Even if it was configured to be network unlocked)

> Can anybody here help me work out if the Telstra Flip 4 4GX will still work after the 3G shutdown. O.P.
>
> This phone was purchased earlier this year and I recently unlocked it and inserted an Amaysim sim (Optus network) so the old folks can use it because their current phone is 3G.
>
> I keep getting email from Amaysim telling me to replace the phone (ZTE Z2336T) and that it will not work when 3G is shut down. I spoke to them on chat and they confirmed it will not work.
> I entered my IMEI at https://amta.org.au/3g-closure-old/check-my-device/ and it says my phone may not be fully supported when 3G closes.
>
> I then contacted Telstra on Chat, and ended up chatting to 2 people over almost 2 hours whilst they kept 'checking' if it will work. They finally came back and said it wouldn't and that I need to upgrade.
>
> I asked them why they are still selling it on their website, and if that was the case, I'd like a refund of the phone and of the unlocking fee. https://www.telstra.com.au/mobile-phones/prepaid-mobiles/flip4
>
> After checking again, they are now saying that it WILL work on 4G. I don't know who to believe now and I don't want my elderly parents to be without a phone...

Whirlpool – 'Telstra Flip 4 4GX and 3G shutdown' – 2024-09-17
https://forums.whirlpool.net.au/archive/9z4y2x85

The Flip 4 was also a device Telstra provided customers in hardship for free or at low cost!
(Though certainly not a 'like-for-like' replacement for most users)



FOI 24–352 Quarterly reports from Telstra & Optus regarding 3G network switch offs - 27 March 2023 to 27 March 2024
https://www.infrastructure.gov.au/sites/default/files/documents/foi-24-352--documents-for-release--pdf.pdf

Telstra Blocking Tablet PCs

Looking through the dataset Telstra has also blocked a number of 'Non Phone' devices such as the below examples.

TAC	Optus Model Name Telstra Name	Year	Telstra Status Nov 2024 - 2025	Optus Status February 2025
86712703	HUAWEI MEDIAPAD M5 8.4 Huawei SHT-AL09	2018	Blocked	Reduced Coverage *Not Blocked – No 700MHz*
86371303	HUAWEI MEDIAPAD T2 7.0 PRO Huawei PLE-703L	2016	Blocked	Reduced Coverage *Not Blocked – No 700MHz*
86400403	HUAWEI MEDIAPAD T3 8.0 Huawei KOB-L09	2017	Blocked	Reduced Coverage *Not Blocked – No 700MHz*
86747102	HUAWEI MEDIAPAD X2 Huawei GEM-702L	2015	Blocked	Device is NOT Blocked
35166606	SAMSUNG GALAXY TAB 4 8.0 LTE Samsung SM-T335	2014	Blocked	Reduced Coverage *Not Blocked – No 700MHz*
35169709	SAMSUNG GALAXY TAB A (2017) Samsung SM-T385C	2017	Blocked	Reduced Coverage *Not Blocked – No 700MHz*
35777307	SAMSUNG GALAXY TAB S2 Samsung SM-T819	2016	Blocked	Reduced Coverage *Not Blocked – No 700MHz*

The above is just a sample, though by and large Telstra has been more accurate with classifying if something is "not a phone". They even have a dedicated category for it of "Not phone".

Though there are other issues with device classifications in their list, including with which ones support Band 28 and the inaccurate Whitelisting of some older models that definitely don't work.

I could list these but to some extent that's a pointless exercise.
Telstra should go looking for them, they're easy to find.

Optus Blocking Serial Numbers of Engineering Prototypes

Optus has also blocked some TACs used for Test Engineering Prototype devices from LG, Motorola, Sony, HP, Sharp, HMD and others.

List of 'Test' Device TACs Blocked by Optus:

TAC	Optus Database Name 20 January 2025	Optus Status November 2025
00440113	BLACKBERRY THIS IS A TEST IMEI	Device is Blocked
00440224	BLACKBERRY THIS IS A TEST IMEI	Device is Blocked
00440300	DATALOGIC THIS IS A TEST IMEI	Device is Blocked
00440170	ERICSSON THIS IS A TEST IMEI	Device is Blocked
00440297	HMD THIS IS A TEST IMEI TO BE	Device is Blocked
00440145	HP THIS IS A TEST IMEI TO BE	Device is Blocked
00440109	LG THIS IS A TEST IMEI TO BE	Device is Blocked
00440234	LG THIS IS A TEST IMEI TO BE	Device is Blocked
00440274	MICROSOFT THIS IS A TEST IMEI	Device is Blocked
00440123	SHARP THIS IS A TEST IMEI TO	Device is Blocked
00440214	SONY THIS IS A TEST IMEI TO BE	Device is Blocked
00440245	SONY THIS IS A TEST IMEI TO BE	Device is Blocked

Other Test TACs by Apple, Google, HTC, Samsung are not blocked.

TAC	Optus Database Name 20 January 2025	Optus Status November 2025
00107200	APPLE THIS IS A TEST IMEI TO	Device is NOT Blocked
00110900	GOOGLE THIS IS A TEST IMEI TO	Device is NOT Blocked
00440226	HTC THIS IS A TEST IMEI TO BE	Device is NOT Blocked
00440263	SAMSUNG THIS IS A TEST IMEI TO	Device is NOT Blocked

Those TACs are only used for development & engineering sample devices and not production devices.

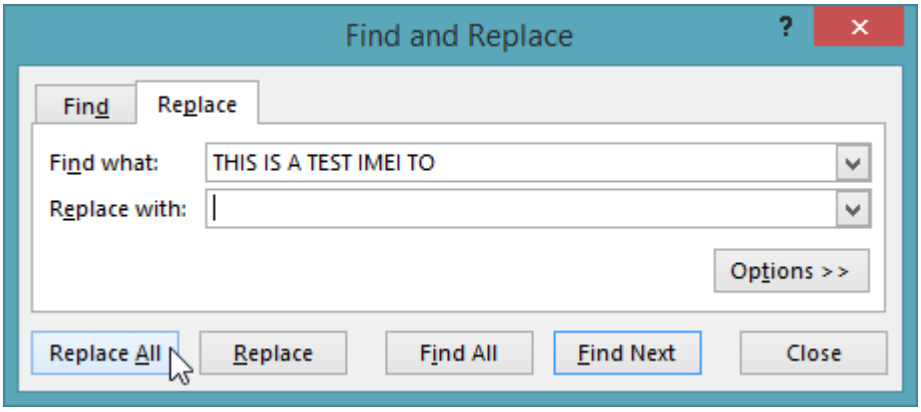
The full model name/description from the dataset Optus has used is
"This is a Test IMEI to be used with multiple prototype models."

'Test IMEI' Device Examples & Name Information
https://swappa.com/imei/info/004402544234630
https://swappa.com/imei/info/004402243216649
https://swappa.com/imei/info/004403151247931

Editing the 'Test IMEI' Device Names

I also found in February it appears someone at Optus has used a "Find and Replace" text search and removed the phrase "THIS IS A TEST IMEI TO", as for some brands there are left over letters for the word "BE" that were missed, such as "SONY BE" and "HMD BE".

It appears that rather than unblocking them, the names were edited instead.



Find & Replace Text Search Example – MS Excel

TAC	Optus Name 20 January 2025	Optus Name 20 February 2025	Optus Status 20 February 2025
00440329	APPLE IT IS A TEST IMEI USED	APPLE	Device is NOT Blocked
00107200	APPLE THIS IS A TEST IMEI TO	APPLE	Device is NOT Blocked
00440174	ASUSTEK THIS IS A TEST IMEI TO	ASUSTEK	Device is NOT Blocked
00440113	BLACKBERRY THIS IS A TEST IMEI	BLACKBERRY	Device is Blocked
00440224	BLACKBERRY THIS IS A TEST IMEI	BLACKBERRY	Device is NOT Blocked
00440271	FAIRPHONE THIS IS A TEST IMEI	FAIRPHONE	Device is NOT Blocked
00440323	GOOGLE IT IS A TEST IMEI USED	GOOGLE	Device is NOT Blocked
00110900	GOOGLE THIS IS A TEST IMEI TO	GOOGLE	Device is NOT Blocked
00440297	HMD THIS IS A TEST IMEI TO BE	HMD BE	Device is Blocked
00440109	LG THIS IS A TEST IMEI TO BE	LG BE	Device is Blocked
00440315	MICROSOFT IT IS A TEST IMEI	MICROSOFT IMEI	Device is NOT Blocked
00440247	MICROSOFT THIS IS A TEST IMEI	MICROSOFT	Device is NOT Blocked
00440274	MICROSOFT THIS IS A TEST IMEI	MICROSOFT	Device is Blocked
00440263	SAMSUNG THIS IS A TEST IMEI TO	SAMSUNG	Device is NOT Blocked
00440309	SONY IT IS A TEST IMEI USED	SONY	Device is NOT Blocked
00100900	SONY THIS IS A TEST IMEI TO BE	SONY BE	Device is NOT Blocked
00440107	SONY THIS IS A TEST IMEI TO BE	SONY BE	Device is NOT Blocked
00440214	SONY THIS IS A TEST IMEI TO BE	SONY BE	Device is Blocked
00440254	SONY THIS IS A TEST IMEI TO BE	SONY BE	Device is Blocked

https://isthisphoneblocked.net.au/optus/changelog

Optus Adding 2G Phones to their Blocklist

I've also noticed that for some reason each month Optus has been blocking the Model TACs for some 2G and 3G devices (in addition to some 4G models).

Some of these devices are models that are more than 20-25 years old such as the below examples. *(There are hundreds in total).*

TAC	Model Name	Year	Optus Status June 2025	Optus Status July 2025
44934180	NOKIA 8210	1999	Device is NOT Blocked	Device is Blocked
52024961	SONY ERICSSON R380S	2000	Device is NOT Blocked	Device is Blocked
35279500	HP IPAQ H6300 SERIES	2004	Device is NOT Blocked	Device is Blocked
35223501	MOTOROLA C118V	2005	Device is NOT Blocked	Device is Blocked
35155301	HTC EXCALIBUR	2006	Device is NOT Blocked	Device is Blocked
35505801	MOTOROLA RAZR V3T	2006	Device is NOT Blocked	Device is Blocked
35636802	HUAWEI E156 (3G USB MODEM)	2008	Device is NOT Blocked	Device is Blocked
35822402	SAMSUNG SGH-L700	2008	Device is NOT Blocked	Device is Blocked
35536004	NOKIA 2700 CLASSIC	2009	Device is NOT Blocked	Device is Blocked
49550860	NOKIA 5130 XPRESSMUSIC	2009	Device is NOT Blocked	Device is Blocked

https://isthisphoneblocked.net.au/optus/changelog

NOKIA 8210 (1999)

SONY ERICSSON R380S (2000)

MOTOROLA C118V (2005)

SAMSUNG SGH-L700 (2008)

I would welcome the Committee to look at the data on the changelog page on my website, all of the data can be downloaded to CSV spreadsheet format.

Based on the data I can't see any logical reason why they would be adding those devices to the blocklist at all given they can't connect and people weren't even using 2G phones prior to the shutdown.

There are also other TACs (production batches) with identical model names that they haven't blocked.

TAC	Optus Name	Year	Optus Status
44934180	NOKIA 8210	1999	Device is Blocked
44934191	NOKIA 8210	1999	Device is NOT Blocked
44934192	NOKIA 8210	1999	Device is NOT Blocked

If you only look at the headline number of devices blocked each month, then one by-product of blocking those old models is that, at a glance, it makes it appear Optus is being more proactive with blocking than they are in reality

Whilst also blocking 4G & 5G devices that work perfectly out of the box and not unblocking them, along with 000 compatible devices sold by other telcos.

Optus are blocking (and did block) 4G Vehicle Asset Trackers, 2-Way LTE Based Radios, payment terminals and IOT 'Internet of Things' Devices.

At the time of the shutdown there were also reports of new 4G Enabled diallers for Emergency Lift phones not working with Optus Network Sims but they would work with Telstra.

The reverse also occurred as well.

If Optus and the telcos can't even be accurate with the type of device they deny service to, then how can we trust they are being accurate with any of it? (We can't)

The telcos also refuse to say they've blocked devices in error, yet are not blocking all devices that don't work. They've also unblocked a handful of devices that didn't need any software updates to function.

That includes brand new 4G/5G phones that were being sold by local retailers prior to the shutdown.

Last year Optus blocked brand new devices being sold at JB Hi-Fi for the Australian Market.
They were always compatible, Optus just failed to manage their support lists properly.

Notice on 3G Shutdown and Network Connection for Xiaomi Devices

OCTOBER 31, 2024

As of 31 Oct 2024 -

As Australia's 3G networks are being phased out, some Xiaomi Redmi and POCO users may experience connection issues on certain Australian mobile networks. This is not due to any compatibility issues with our devices for 4G or 5G networks. Instead, the disconnection results from new ACMA regulations effective October 28, 2024, requiring carriers to restrict devices that can't support 000 emergency calls over 4G or 5G from accessing their networks.

As Xiaomi's authorised distributor in Australia, we've ensured that all models we've brought into the country meet local regulatory and network requirements. Each of these products supports 000 emergency calls over 4G and 5G. We are working closely with Telstra, Optus, and Vodafone to update their whitelists to include all authorised Xiaomi models. Once this process is complete, customers will regain uninterrupted network access on local 4G and 5G networks.

If you purchased your Xiaomi device from one of our authorised retailers—including JB HiFi, Harvey Norman, Amazon Australia (not including third-party sellers), Mobileciti, or directly from our website Xiaomitech.com.au —since December 2023, you can be assured your device meets these regulatory standards. Full connectivity will be restored as soon as the carriers complete their whitelist updates. In the meantime, you may try to contact your carrier to request unblocking of your device. If you prefer not to wait, or if your carrier is unable to assist, please reach out to your retailer for exchange or return options.

Notice on 3G Shutdown and Network Connection for Xiaomi Devices — 31 October 2024
https://web.archive.org/web/20241102034051/https://xiaomitech.com.au/blogs/news/notice-on-3g-shutdown-and-network-connection-for-xiaomi-devices

JB HI-FI
ALWAYS CHEAP PRICES

Xiaomi Redmi 13 4G 256GB (Midnight Black)

3G shutdown made this a network locked phone

ganayej558

4 months ago - 2024-11-13

This phone doesn't work on Optus and Vodafone networks due to the 3G shutdown. Avoid unless you have a Telstra sim

Quality of Product 1

Value of Product 1

No, I do not recommend this product.

Helpful? (6) (3) Report

Xiaomi Redmi 13 Review - 2024-11-13 – JB HiFi

JB HI-FI
ALWAYS CHEAP PRICES

Xiaomi Redmi Note 13 Pro+ 5G 512GB (Aurora Purple)

Not suitable for AMAYSIM customers

Sajimon Pradeep

3 months ago - 2024-11-21

I'm completely frustrated with the product without network coverage with AMAYSIM. Contacted Xiaomi global services several times, getting not a positive response to replace mobile phone

Quality of Product 1

Value of Product 1

No, I do not recommend this product.

Helpful? (3) (4) Report

Xiaomi Redmi Note 13 Pro+ Review - 2024-11-21– JB HiFi

A JB Hi-Fi employee I spoke to told me it took a couple of weeks for those issues to get resolved.

Optus Database Numbers

In Optus correspondence to the ACMA from 23 May 2025 (prior to the release of the May ABC Story) Optus advised about the number of devices on average per month they block.

However this number was redacted in the FOI release from 1 August 2025.

> The strength of the TAC-based model lies in its efficiency: a single TAC entry can block thousands of handsets at once. This makes it a practical and effective method for meeting industry-wide obligations such as those introduced in the 2024 Amendments. For example, between 29 October and 1 November 2024, Optus blocked approximately [redacted] TACs, covering around [redacted] individual IMEIs. We continue to block around [redacted] new TACs each month.

Log 169: Request for documents relating to the Emergency Call Service Determination
https://www.acma.gov.au/foi/2025-08/log-169-request-documents-relating-emergency-call-service-determination

Whatever that redacted number is, it includes the 2G/3G devices and therefore is overinflated.

Given the above numbers have been redacted I thought I would provide below the numbers I've been able to determine from database changes.

Optus Dataset Date	Devices Blocked	Devices Unblocked
20 February 2025	-	6
7 May 2025	532	8
6 June 2025	91	2
14 July 2025	291	2
6 August 2025	78	2
3 September 2025	93	9
22 October 2025	107	2
6 November 2025	220*	-

https://isthisphoneblocked.net.au/optus/changelog

There are very few devices that have been unblocked.

Since about February Optus has only unblocked about 31 devices out of the 25,065 devices they blocked (as recorded in their 20 January 2025 dataset).

All of which appear to have been unblocked due to the vendors supplying documentation to Optus given the quantity and types of devices. *Contrast that with the approx 9,000 devices blocked by Telstra.*

There are other issues with their device classifications I could mention as well, but I have concerns that consumers will just be unfairly harmed in the process if I mention it here.

Telstra VoLTE Issues with 'Open Market Devices'

Prior to Shutting down, Telstra's network did not support and work with the most widely used 'Open Market' (Global) 4G Calling Profiles and Settings, those devices did work with Optus and Vodafone.

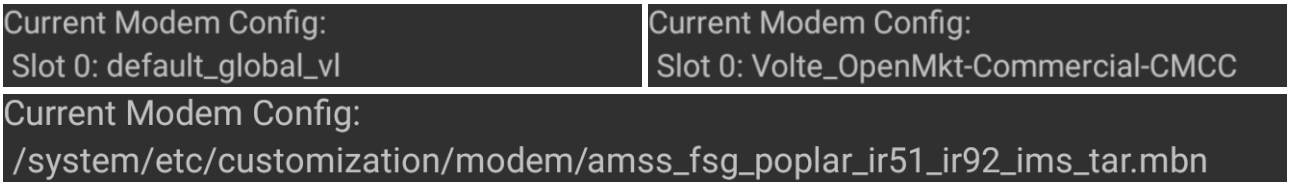
In my September 2024 letter to the (then) Minister and in my ECS Consultation Submission to the ACMA I said that 'Telstra needs to be forced to support as many devices as possible, by supporting the most widely used 'Open Market' VoLTE profiles & standards'.

I also spoke to this at the Senate Hearing on the 23rd of July 2024 and to the ACCC in late August.

In an October 2024 letter from Communications Minister Rowland my concerns were somewhat acknowledged, but up until the shutdown nothing was done about this.

Telstra was then allowed to block VoLTE capable 4G & 5G devices they didn't sell that work perfectly (including for 000) simply because they used 'generic' VoLTE profiles and by extension couldn't make standard 'IMS' VoLTE Calls on Telstra (and therefore had no IMS/'4G Calling' Registration).

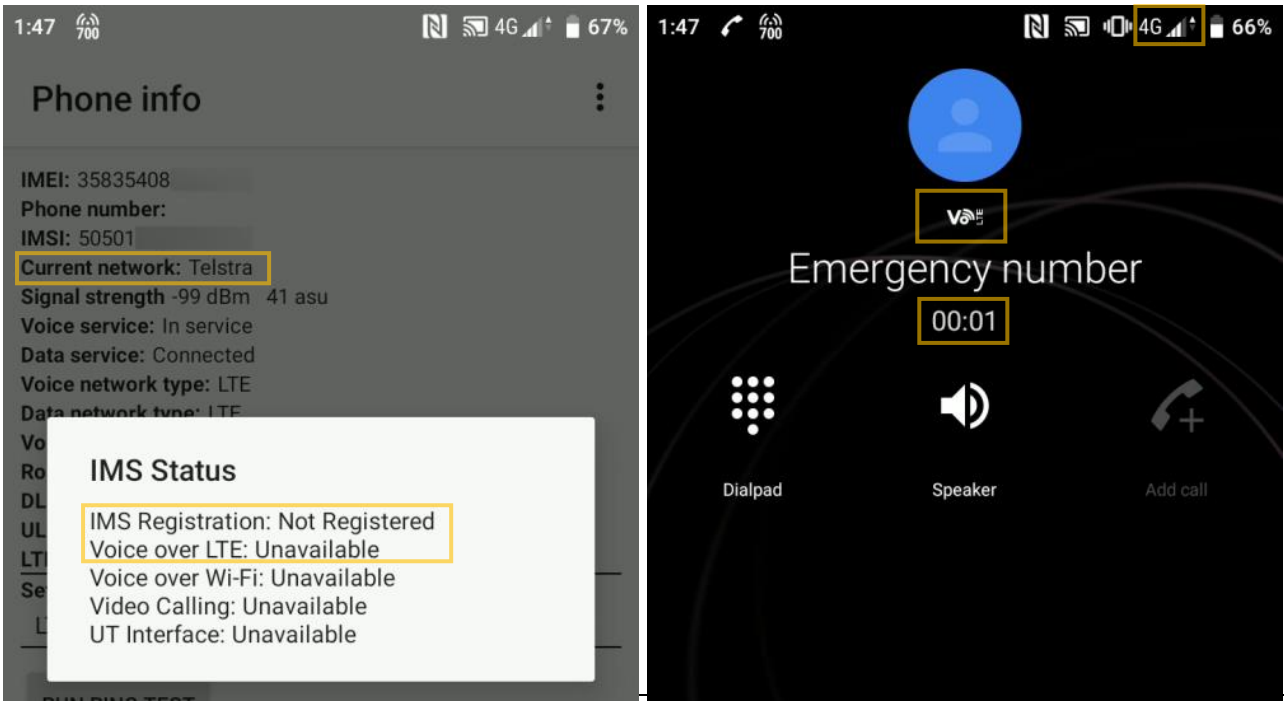
Modern 4G/5G Devices typically use a 'Global or Generic' 'Open Market' (e.g. a GSMA IR.92) profile.



Global/Open Market (IR.92) VoLTE Modem Configs

This includes devices sold by OnePlus, Sony, Xiaomi and Nubia/ZTE, and many more.

These devices were always perfectly capable of 000 Calls as it's a separate 'SOS' bearer (connection). *Telstra has likely categorised these phones as "3G Only for all calls" as standard calls were 3G Only.*



Emergency Call on Telstra with a Generic 'GSMA IR.92' VoLTE Profile –October 2024

There was even a Change.org Petition about this issue which has garnered over 2,000 signatures. It even pre-dates my Petition.

https://www.change.org/RemoveTelstraRestrictions

Why this is possible - 4G 'IMS' Calls vs 'SOS' Calls

Normal 4G Calls and 4G Emergency Calls are effectively carried out over two different connections on devices. An 'IMS' connection for Calls and an 'SOS' connection for Emergency Calls.

A device might be able to make standard voice calls (over IMS) but that doesn't mean it can actually make an 'SOS' Emergency Call to 000, or on all networks.

This is again one part of the compatibility & standardisation issues with 4G.

NSG Log – 'Camp-on' (Anonymous) 4G VoLTE Emergency Call to 000 via 'urn:service:sos'

The same is true in reverse, a device can work for Emergency Calling 'SOS' on every network but due to settings and standards issues may not support normal calls on some networks.

In some cases these devices have been previously classified by Telstra as "Function Limited".

The purpose of separate 'bearers' is to ensure traffic priority & broad interoperability for Emergency Calls.

It's important to mention the 'SOS' Emergency Call Connection on devices is really only established when an Emergency Call is placed on the device. (Either with our without a sim)

This is in part why the telcos have poor visibility of what works and doesn't and why they are over reliant on 'compliance documents' and historical call records for device models.

A device can successfully register for VoLTE Calling & IMS (which the telcos can see and have lots of data for), but Emergency Calls over 'SOS' can fail to connect when calling 000.

For example if the device is 3G only for 000.

The 000 capabilities should be determined on an individual device basis (per full unique IMEI Number) and they can be determined on an individual device basis.

It just requires the carriers to put in the work.
They already have a way of gathering the data from the network with real calls, they just need to use it.

It is not possible to accurately determine the emergency calling capabilities of a device based on the hardware make and model identifier (a TAC), but that's what the telcos are doing.

As mentioned earlier, Emergency Calling compatibility is a software issue, not a hardware problem and software can break, be it on the device or network.

The IMEI-SV isn't sufficient for this either.

Telstra VoLTE Issues with 'Open Market Devices'

Calling 112 vs 000

Additionally, unlike what is commonly believed dialling 112 during these recent 000 outages would not have made any difference. Both 000 and 112 initiate a special 'service:sos' Emergency call on the device, neither actually call the phone number. (As shown above)

Devices have on board preconfigured numbers in software that are configured to establish an 'SOS' Emergency Call, devices also receive this information from the networks when connecting and through various other means.

Android ASOP Documentation - Emergency numbers and emergency calling
https://source.android.com/docs/core/connect/emergency-call

So a call to 112 (or any other 'emergency number') during the 18 September outage would have had the exact same result as the Optus network was not allowing 'SOS' call traffic correctly on the network.

However if the sim was removed it would force the device to try another network and 'camp-on'.

It's also worth mentioning that a device could also say **'SOS only'** or **'Emergency Calls Only'** but be **unable to actually call 000.**

As per my 3G Inquiry Submission, that issue was identified by US Carrier OptimERA in 2020.

OptimERA- 'VoLTE Emergency Calls - Testing of 3GPPCompliance in OEM Handsets' – January 2020
https://optimerainc.com/wp-content/uploads/2021/11/OptimERA_VoLTE_Emergency_Calls_Report.pdf

Calling 000 as a Standard Call

If dialling 000 directly doesn't work but other calls do, (depending on the network & device) it's *generally* possible to dial **+61 000** and call 000 as a standard call, or alternatively **+61 112**. (It must be +61)

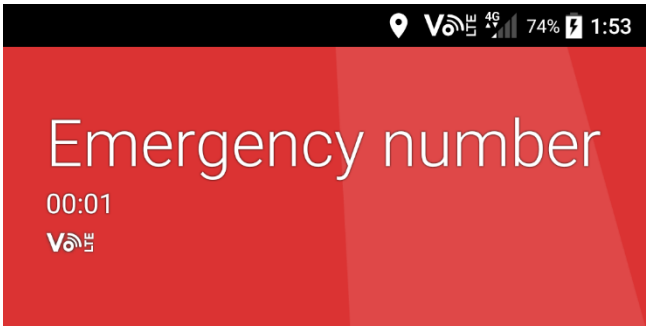
Dialling it with the country code on many devices actually calls the number
(over the IMS connection/'bearer') as opposed to establishing an 'SOS' call. *As shown below*.

'+61 000' IMS Call on the Telstra Network – Android Device (MCC 505 Australia - MNC 01 Telstra) – NSG Log

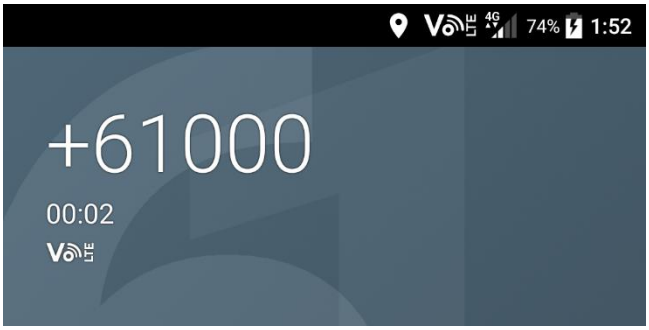
This isn't that dissimilar to what happens with an NBN based Landline or other VoIP Phone service, the phone number is called.

Calls over 'IMS' don't receive the same level of traffic prioritisation compared to 'SOS' calls and in the event of a call service/network outage no calls will work.

So performance isn't guaranteed, but clearly native 000 'SOS' calls aren't either.



SOS Emergency 4G/VoLTE Call to 000/112 - Android



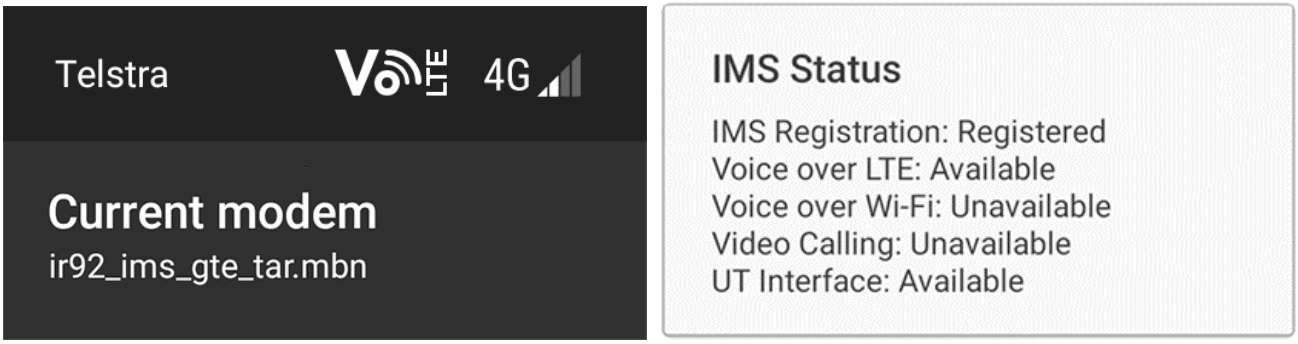
Standard IMS 4G/VoLTE Call to '+61 000' - Android

Telstra VoLTE Issues with 'Open Market Devices'

Telstra VoLTE Changes & Open Market Devices

Sometime in late January or early February this year Telstra quietly made some changes to their network to allow Generic 'Open Market' 'IR.92' VoLTE Profiles to register and obtain (IMS) Call Service.

A Telstra specific Modem profile/config or the latest GSMA profile is now no longer required.



VoLTE Calling on Telstra – 'Open Market' IR.92 Config - Android

Even generic VoLTE profiles on Android 7 (2016) devices can now register and obtain call service. *Previously they would only work on Optus and Vodafone, as shown below.*

MBN Modem Configurations Qualcomm SD 820 Chipset (2016)	Network Name	Country	4G VoLTE Emergency Calls (112/000)	Optus VoLTE	Vodafone VoLTE	Telstra VoLTE
bell_ims_tar.mbn	Bell CA	Canada	Yes	No	*No* *	No
china_mobile_hk_ims_tar.mbn	China Mobile HK	China/HK	No	No	*No* *	No
ee_ims_tar.mbn	EE	UK	Yes	No	*No* *	No
hutch_uk_volte_vowifi_tar.mbn	3 (Three) UK	UK	Yes	Yes	Yes *	No
ir51_ir92_ims_gte_tar.mbn	VoLTE + WiFi Call	GSMA Open Mkt	Yes	Yes	Yes	**No**
ir92_ims_gte_tar.mbn	GSMA IR.92 VoLTE	GSMA Open Mkt	Yes	Yes	*Yes* *	**No**
optus_ims_tar.mbn	Optus	Australia	**No**	Yes	**No**	No
orange_france_ims_tar.mbn	Orange FR	France	Yes	Yes	Yes	No
reliance_jio_ims_tar.mbn	Jio Mobile	India	Yes	No	*No* *	No
rogers_ims_tar.mbn	Rogers CA	Canada	Yes	No	*No* *	No
sfr_france_ims_tar.mbn	SFR FR	France	No	*Yes* *	Yes	No
singtel_ims_tar.mbn	Singtel SG	Singapore	No	No	*No* *	No
tele2_netherlands_ims_tar.mbn	Tele2 NL	Netherlands	No	*Yes* *	Yes	No
telefonica_germany_ims_tar.mbn	O2 DE	Germany	No	No	*No* *	No
telefonica_uk_ims_tar.mbn	O2 UK	UK	No	Yes	Yes	No
telekom_germany_ims_tar.mbn	Telekom DE	Germany	Yes	Yes	*Yes* *	No
telstra_ims_tar.mbn	Telstra	Australia	**Yes**	No	*No* *	Yes
vha_ims_tar.mbn	Vodafone AU	Australia	**No**	Yes	Yes	No
vodafone_germany_ims_tar.mbn	Vodafone DE	Germany	No	Yes	*Yes* *	No
vodafone_uk_ims_tar.mbn	Vodafone UK	UK	No	Yes	Yes	No

***** = *Estimated Result based on other network testing* *Test Device: Sony Xperia XP - 2018 Android 8.0 Firmware*

Tested Q2 2024

I only discovered this after carrying out some device testing in early February (which was difficult to do as Telstra has blocked the majority of Android devices I own, even though they can all call 000 on 4G and on every network.)

This change could and should have happened more than a year ago well prior to the shutdown, it was even mentioned in the interim Senate Inquiry report.

Only some newer generic 'Open Market' profiles would work on Telstra, not the most widely used.

> 1.39 At the hearing in Cooma, Mr Parker told the committee that when 4G devices were first rolled out in 2012 and 2013, 'there was no, and has continued to be no, built-in functionality for any calling, including emergency calling; 4G is data only. For the industry to enable calling, they've relied on adding software to devices to do that'.[39] The standardisation of 4G calling is a software issue and is entirely fixable if the mobile network operators agree on a configuration. The Global System for Mobile Communications is the world's largest industry group for the telecom sector and has recommended standards and specifications that providers can use to configure their devices and networks. This specification, known as the 'open market configuration', is designed to be a global, generic configuration that can work on any network. In Australia, Optus and Vodaphone have both configured devices using this standard, while Telstra has chosen to use its own configuration and effectively locked devices to its network.[40]

https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Rural_and_Regional_Affairs_and_Transport/3GNetworkShutdown/Interim_Report/Chapter_1_-_Interim_Report#Heading1148

I also raised this as an issue in my September 2024 letter to the Minister, and to the ACCC in late August, the ACCC advised they would raise this issue with the ACMA being the technical regulator.

Yet nothing changed prior to the shutdown. Telstra also has not unblocked the devices they blocked in error due to this compatibility issue.

Telstra IP Version Issues

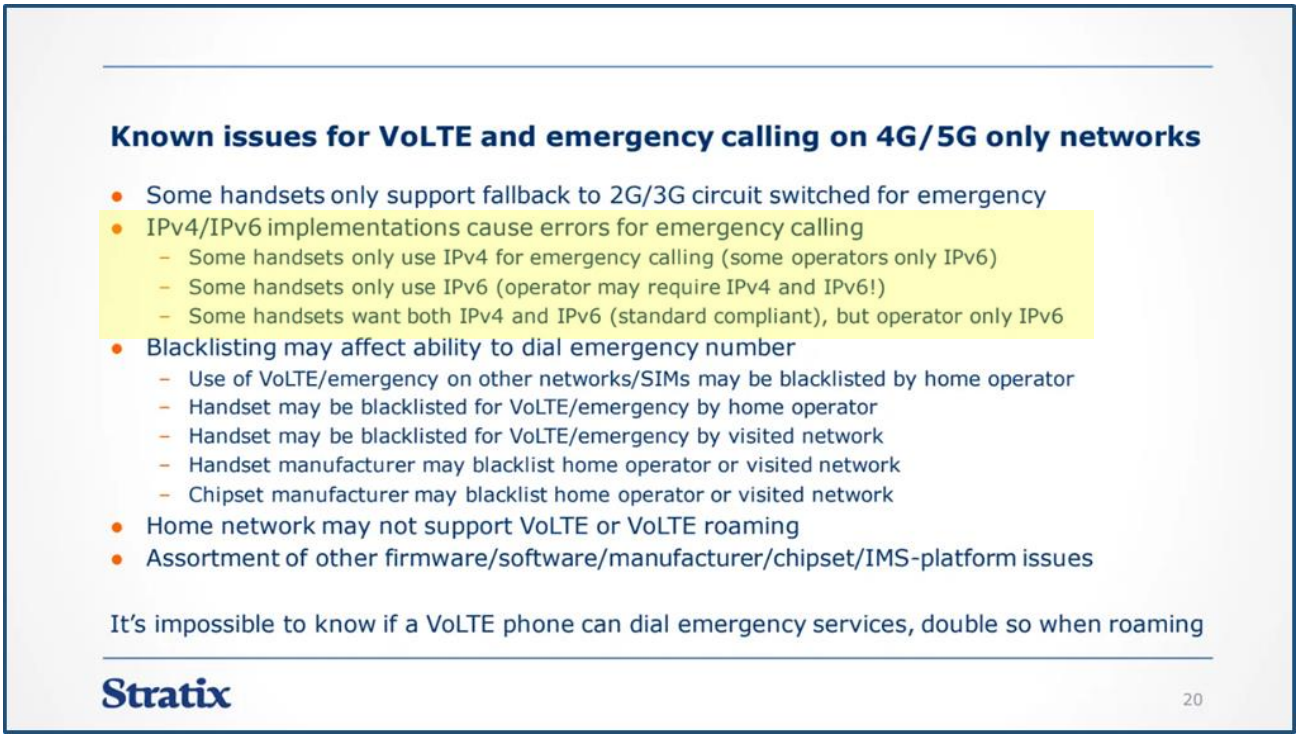
However still today Telstra has standardisation issues which **have not been resolved**, even despite the problem being well known.

At the time of writing, Telstra network still only allows IPv6 (Internet Protocol Version 6) for Emergency Call attaches and calls.

Whereas Vodafone and Optus Support IPv4 and IPv6, which is the correct GSMA IR.92 'standard compliant' approach (as shown at the EENA Presentation in 2022).

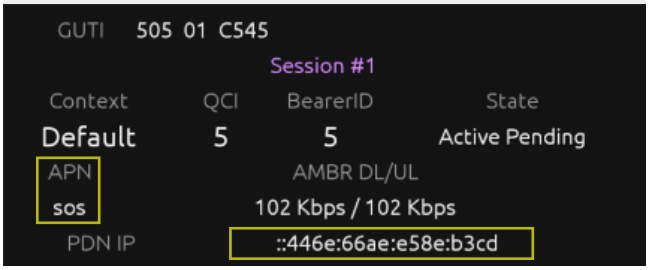
Network / VoLTE Call Bearer	Telstra	Optus	Vodafone (TPG)	GSMA IR.92 Standard
Standard 'IMS' Calls	✖ IPv6 Only	✖ IPv6 Only	✖ IPv6 Only	✔ IPv4/IPv6
Emergency 'SOS' Calls	✖ IPv6 Only	✔ IPv4/IPv6	✔ IPv4/IPv6	✔ IPv4/IPv6

Telstra VoLTE Issues with 'Open Market Devices'



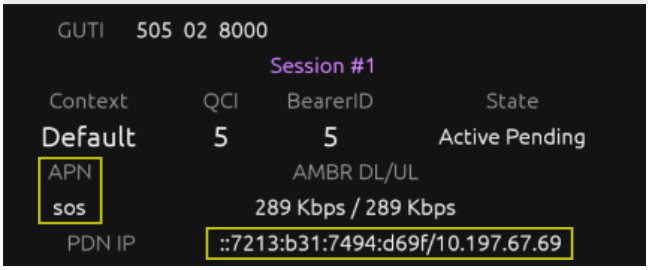
'Should we stop the shutdown of 2G/3G to save lives??' Slide 20 - Rudolf van der Berg - Stratix - EENA 2022
https://drive.google.com/file/d/1WC16k8C1gpeFRJif23yDIuLSRg1OJOnZ/view

SOS APN - IPv6
Telstra



NSG - MCC 505 MNC 01 – Telstra - IPv6 Only PDN

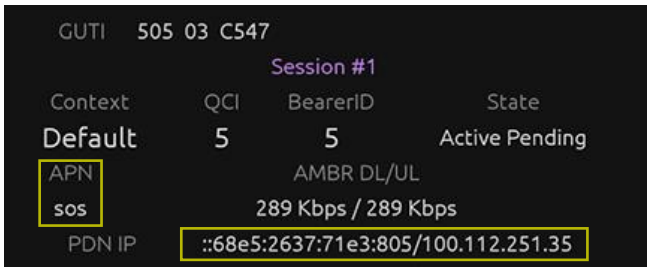
SOS APN - IPv6 & IPv4
Optus & Vodafone



NSG - MCC 505 MNC 02 – Optus - IPv6 & IPv4 PDN

NSG - Telstra - NW to UE Message 'IPv6 only allowed

APN = Access Point Name
PDN = Packet Data Network
IP = Internet Protocol (Address)
NW = Network
UE = User Equipment (Phone)

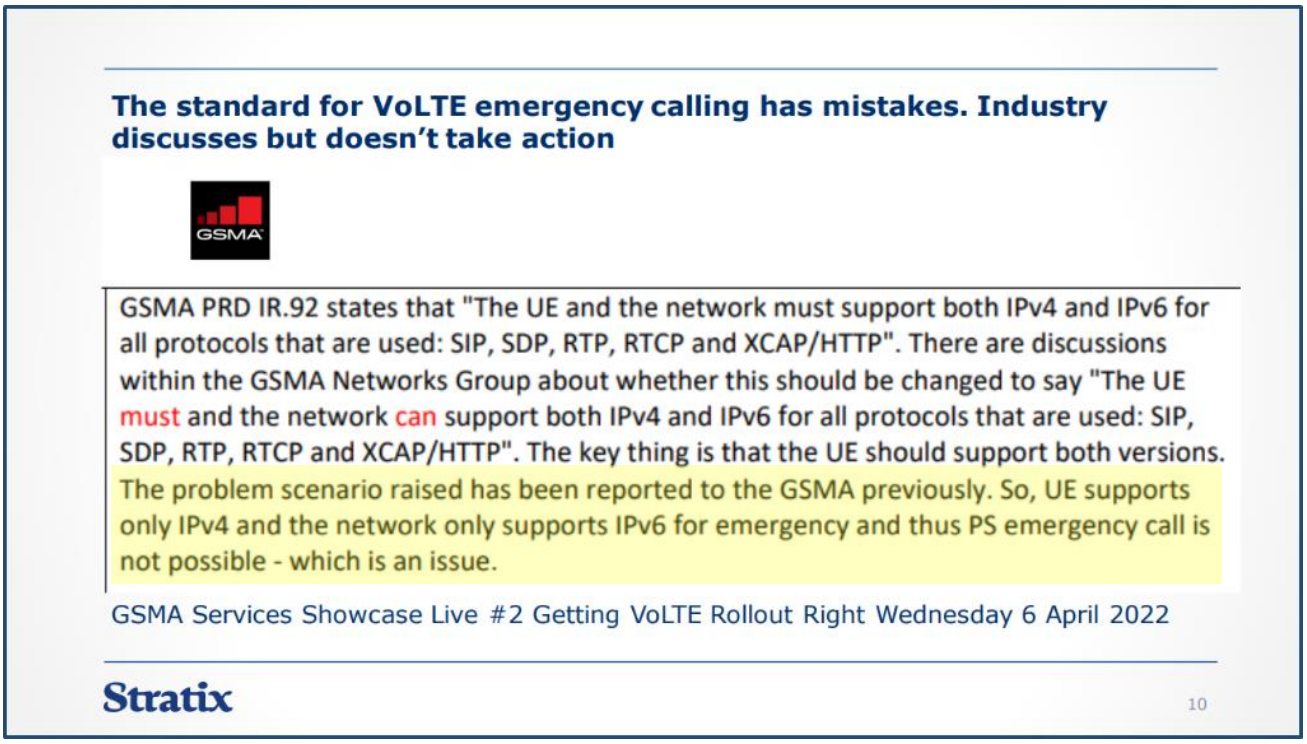


NSG - MCC 505 MNC 03 – Vodafone - IPv6 & IPv4 PDN

Telstra VoLTE Issues with 'Open Market Devices'

So Telstra still has some work to do, though I'm sure they will say they've never had a standards issue, despite this exact problem also being raised by the GSMA as an issue in April 2022.

Then further raised at the 2022 EENA Conference in the Presentation by Mr van der Berg.



'Should we stop the shutdown of 2G/3G to save lives??' Slide 10 - Rudolf van der Berg - Stratix - EENA 2022
https://drive.google.com/file/d/1WC16k8C1gpeFRJif23yDIuLSRg1OJOnZ/view

Translated Version

'So the [Phone] supports only IP Address Version 4 and the Network only supports IP Address Version 6 for Emergency Calling thus [VoLTE/4G] (Packet Switched) ***emergency calling is not possible****.'*

Both the device and the network need to support the same IP addressing scheme in order to connect.
This is one of the most basic settings to get right.

Beyond IP Version, there are a number of other settings the carriers need to get right as well.

			Device		
Network	Network ↓ / Device →		IPv4 only	IPv6 only	Dual stack IPv4/v6
		IPv4 only 'SOS'	✓ Yes	✗ No	✓ Yes
	T	IPv6 only 'SOS'	✗ No	✓ Yes	✓ Yes
	Yes / O	Dual stack IPv4/v6 'SOS'	✓ Yes	✓ Yes	✓ Yes

If Telstra can't get the IP versions right it's clear why their network had other configuration issues and didn't work properly with the most widely used 'Generic/Open Market' VoLTE Profiles and software.

Telstra VoLTE Issues with 'Open Market Devices'

The GSMA's own Voice over LTE Implementation Guide explicitly says that
"…both the UE (Phone) and N/W (Network) must support both IP versions."

> **B.5 IPv4/IPv6 Compatibility Issues**
>
> IP compatibility issues have been observed whereby :
>
> - Not all devices request IPv4/v6 - some only request IPv4 on all APNs.
> - Some UEs request IPv4 only for emergency calls.
> - Not all operators support IPv6 – and in this case, if the device only requests IPv4, the request will fail.
>
> GSMA PRD IR.92 [24] section 5.1 states that both the UE and N/W must support both IP versions.

GSMA - VoLTE Implementation Guide April 2024 – Page 24 of 50
https://gsma.com/get-involved/working-groups/wp-content/uploads/2024/04/VoLTE-Implementation-Guide-April-2024.pdf

Definitions:
UE = 'User Equipment' (Handset/Phone) | N/W = 'Network' (Telco/Carrier)
IPv4 = Internet Protocol Version 4 | IPv6 = Internet Protocol Version 6

Telstra is a member of the GSMA, yet they seem to not follow their standards and implementation guides.

Though 4G devices that are 'IPv4 Only' for Emergency Calling are generally limited in numbers and largely now blocked. It does still indicate a serious failure for Telstra to correctly adhere to global standards and to otherwise ensure their network is as interoperable as possible with Emergency Calls.

They **have not** done that.

We could continue to see other devices and overseas carrier specific variants of 'supported phones' that require IPv4 for Emergency Calls being used. **This must be fixed as soon as possible.**

A similar issue occurred with one of the US Carriers when they shut down, yet it was promptly fixed.

This was even mentioned at the EENA conference in 2023!

51:46 EENA 2023: 2G 3G Shutdown and the Potential Impact on Access to Emergency Services
205 views • 2 years ago
eena112
As 2G and 3G networks approach their end of life, the transition to emergency communications over VoLTE (Voice over LTE (4G)) ...

EENA 2023: 2G 3G Shutdown and the Potential Impact on Access to Emergency Services (at 6:27 mins)
https://www.youtube.com/watch?v=ZZ6_0n8gXYI&t=387s

> **Quote EENA 2023:**
> "The other issues, there was some kind of incompatibility between support for IPv4 and IPv6 and networks and handsets, anecdotally we know this was an issue on one network in the US and with some sort of informal discussions and intervention between the FCC and that operator the issue was resolved quite quickly"

Telstra VoLTE Issues with 'Open Market Devices'

IPv4 Carriers & Devices

For example the Vodafone NZ (now 'ONE NZ') VoLTE Emergency Calling settings (as extracted from Samsung devices) show their network is configured to be IPv4 Only for Emergency Calls.

As is the Two Degrees NZ Profile.

So should someone be using a device in Australia that's configured in software to be IPv4 only for Emergency Calls **they won't be able to make an Emergency Call on Telstra.**

Carrier Name	Country	Samsung Profile	PDN Type	IP Version
FarEasTone	Taiwan	FET E911	emergency	IPv4 Only
Asia Pacific Telecom	Taiwan	APT E911	emergency	IPv4 Only
Chunghwa Telecom	Taiwan	CHT Mobile E911	emergency	IPv4 Only
Sprint/T-Mobile US	United States	Sprint E911	emergency	IPv4 Only
Sprint/T-Mobile US (Google Fi)	United States	Sprint Google Fi E911	emergency	IPv4 Only
SaskTel	Canada	SaskTel E911	emergency	IPv4 Only
2degrees	New Zealand	TWO_DEGREES Emergency	emergency	IPv4 Only
One NZ (Vodafone NZ)	New Zealand	Vodafone NZ Emergency	emergency	IPv4 Only
EE UK	United Kingdom	EE for Emergency UK	emergency	IPv4 Only
BT Openreach	United Kingdom	BTOP for Emergency	emergency	IPv4 Only
Sky Mobile UK	United Kingdom	Sky for Emergency UK	emergency	IPv4 Only
Telenor Denmark	Denmark	Telenor Denmark E911	emergency	IPv4 Only
Reliance Jio	India	RJIL Emergency	emergency	IPv4 Only

February 2021 IMS Profiles – Carrier Network Settings - Samsung

Though Telstra may say IPv4 is optional under 'technical 3GPP standards', but given the GSMA has flagged it as an important safety issue for emergency calling this needs to be addressed.

As an example, I have a device that is IPv4 Only for Emergency Calls and is not blocked with one of the other providers, it can make an Emergency Call on that provider with IPv4, but cannot with Telstra.

All the network providers in Australia need to interpret and implement **global standards**, and do so in the exact same way to ensure maximum interoperability.

This is obvious, yet it still hasn't been completed.

Fragmented Standardisation

The Telcos and Australian Telco Industry groups may also say that the industry and handset makers need to follow Australian specific standards because there is no other way. (e.g AS/CA S042 etc).

That is quite frankly nonsensical, we don't make phones in Australia.
Nor the IMS and radio platforms used to run them.

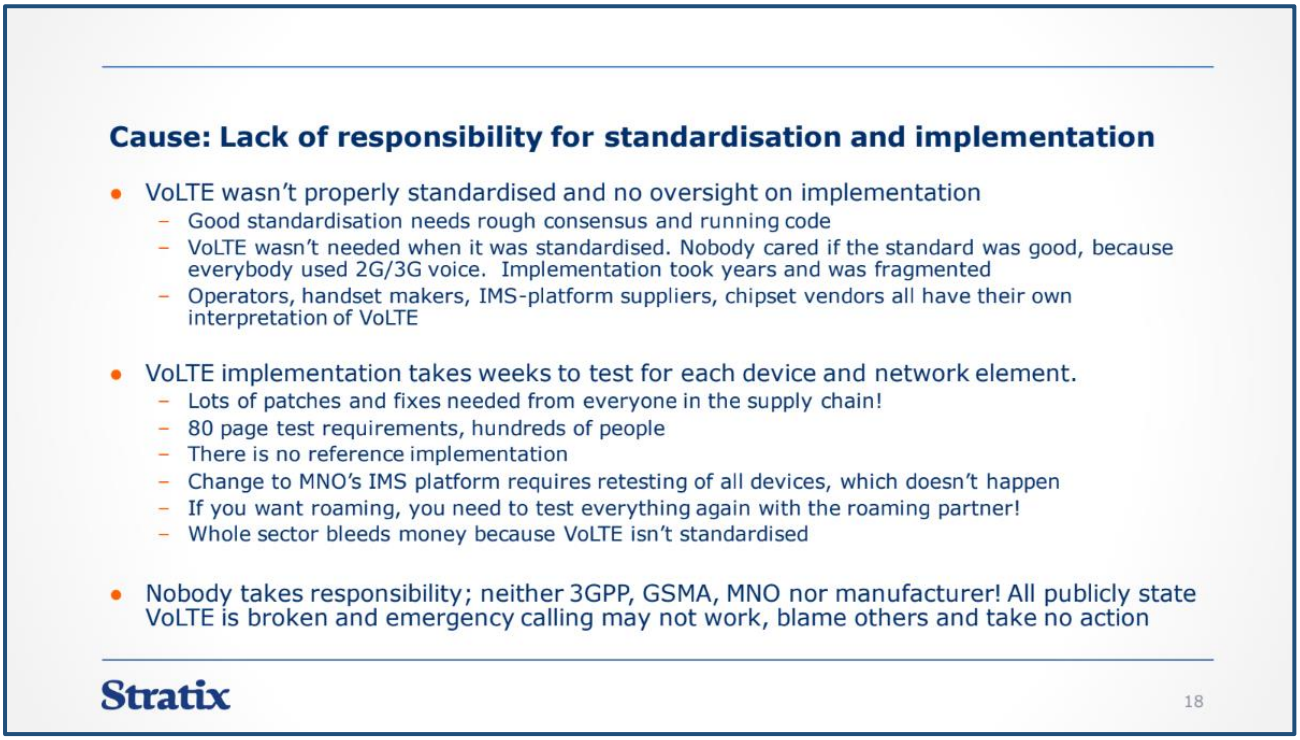
As a country we need to follow **global standards** as we have done previously with 2G/3G.
We need to ensure maximum interoperability across the networks and the devices need to do the same.

Standards for Mobile networks and Voice over LTE do exist from entities like the 3GPP, ETSI, GSMA.

This cannot be solved by making another 'standard'.

To fix these issues it requires a consensus of running code and ensuring things are properly tested and also properly implemented.

As outlined by Rudolf in this 2022 EENA presentation.



'Should we stop the shutdown of 2G/3G to save lives??' Slide 18 - Rudolf van der Berg - Stratix - EENA 2022
https://drive.google.com/file/d/1WC16k8C1gpeFRJif23yDIuLSRg1OJOnZ/view

This hasn't happened yet.

Problems with Telstra's '000 Call Server' (Proxy/E-CSCF)

The issues around Carrier Compliance and VoLTE Emergency Calling interoperability with devices & networks is not the only problem that has occurred with the networks.

In 2024 I along with another person that signed my Change.org Petition identified (from device diagnostics & call logs) that Telstra appeared to be using 'OpenSIPS Version 2.4.6' to connect 000 calls from devices through to the rest of their network.

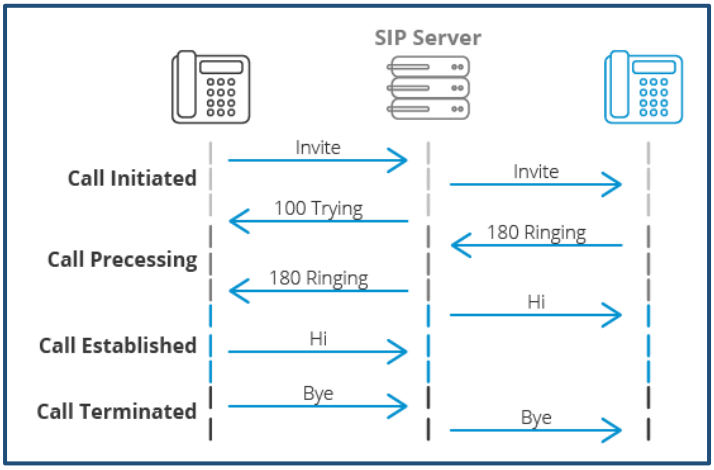
```
Server: OpenSIPS (2.4.6 (x86_64/linux))
Session-Expires: 1800;refresher=uac
```

NSG – 000 Call Log Extract – Telstra Network – 2025 Screenshot

For reference, SIP or 'Session Initiation Protocol' is essentially the signalling backbone for modern VoIP (Voice over IP) and VoLTE (Voice over LTE) Calling.

SIP has been around for decades, and prior to its inclusion with modern '4G Calling', SIP has been used to provide VoIP Calling to Landline Telephones and Office handsets via the Internet & IP Networks.

Devices use SIP signalling to connect to a 'SIP Server', this server then exchanges information with other devices in order to establish and terminate calls.



What is SIP - Session Initiation Protocol Meaning – 3CX
https://www.3cx.com/pbx/sip

What are SIP Phones? – 3CX
https://www.3cx.com/pbx/sip-phones/

Now on the surface none of that may sound even remotely noteworthy, nor raise any concerns. OpenSIPS is a very popular 'Open Source' SIP ('VoIP') software used right across the globe in a wide range of deployments.

However that '**2.4.6**' version is **from June of 2019** and is vulnerable to multiple known security vulnerabilities and has been for nearly 3 years.

> 6. **OpenSIPS 2.4.6**
>
> Minor release (see **Changelog from 2.4.5**)
>
> Release date: 11th of June 2019

OpenSIPS 2.4.x – About Versions
https://www.opensips.org/About/Version-2-4-x

CVEdetails - OpenSIPS 2.4.6 - Security Vulnerabilities, CVEs
https://cvedetails.com/vulnerability-list/vendor_id-21194/product_id-63803/version_id-1301780/Opensips-Opensips-2.4.6.html

Telstra VoLTE Issues with 'Open Market Devices'

List of OpenSIPS Vulnerabilities that affect Version 2.4.6

#	CVE Code	OpenSIPS CVE List (Common Vulnerabilities and Exposures)	Common Vulnerability Scoring System	Rating
1	CVE-2023-28096	Memory leak in cJSON lib NVD: https://nvd.nist.gov/vuln/detail/CVE-2023-28096	CVSS: 4.5	Medium
2	CVE-2023-27596	Vulnerability 3 in the codec_delete_XX() functions NVD: https://nvd.nist.gov/vuln/detail/CVE-2023-27596	CVSS: 7.5	High
3	CVE-2023-28097	Vulnerability in the Content-Length Parser NVD: https://nvd.nist.gov/vuln/detail/CVE-2023-28097	CVSS: 7.5	High
4	CVE-2023-28099	Vulnerability in the ds_is_in_list() function NVD: https://nvd.nist.gov/vuln/detail/CVE-2023-28099	CVSS: 5.9	Medium
5	CVE-2023-27597	Vulnerability in the parse_uri() function NVD: https://nvd.nist.gov/vuln/detail/CVE-2023-27597	CVSS: 7.5	High
6	CVE-2023-27598	Vulnerability in the parse_via() function NVD: https://nvd.nist.gov/vuln/detail/CVE-2023-27598	CVSS: 7.5	High
7	CVE-2023-27599	Vulnerability in the parse_to_param() function NVD: https://nvd.nist.gov/vuln/detail/CVE-2023-27599	CVSS: 7.5	High
8	CVE-2023-27600	Vulnerability 2 in the codec_delete_XX() functions NVD: https://nvd.nist.gov/vuln/detail/CVE-2023-27600	CVSS: 7.5	High
9	CVE-2023-27601	Vulnerability in the codec_delete_XX() functions NVD: https://nvd.nist.gov/vuln/detail/CVE-2023-27601	CVSS: 7.5	High
10	CVE-2023-28095	Vulnerability in the building the local negative replies NVD: https://nvd.nist.gov/vuln/detail/CVE-2023-28095	CVSS: 7.5	High
11	CVE-2023-28098	Vulnerability in the Digest Authentication Parser NVD: https://nvd.nist.gov/vuln/detail/CVE-2023-28098	CVSS: 5.9	Medium

Enable Security - OpenSIPS Security Audit Report is fully disclosed and out there – 2023-03-17
https://www.enablesecurity.com/blog/opensips-security-audit-report

I think the general public would expect that a company like Telstra wouldn't leave an important part of their network and '000 call system' seemingly out of date for nearly 6 years and vulnerable to known security issues for nearly 3.

That's what appears to have happened, at least from the network and call data I have.

Certainly when I saw that my mind when to what else is not up-to-date or being done properly?

Given the IP version issue as well, it seems perhaps a lot.

Rating	CVSS Score
None	0.0
Low	0.1-3.9
Medium	4.0-6.9
High	7.0-8.9
Critical	9.0-10.0

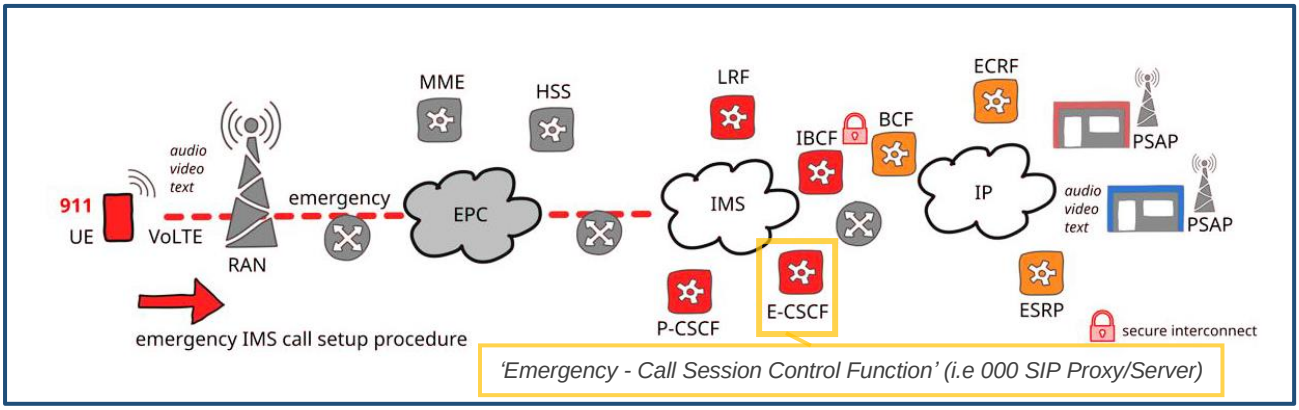
National Vulnerability Database - Vulnerability Metrics
https://nvd.nist.gov/vuln-metrics/cvss

Vulnerability Risks

Though *somewhat* limited in terms of risk, these vulnerabilities could (at least in theory) enable a bad actor (be that a nation state backed or otherwise) to crash that SIP (Call) Server which connects 000 calls from devices on Telstra's network through to the rest of the network and to Emergency Operators.

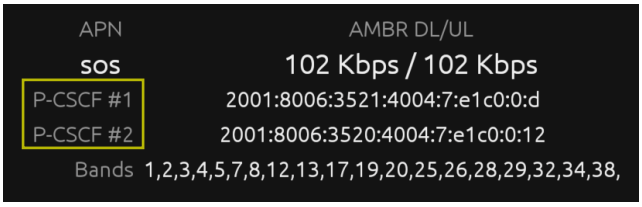
Particularly the below vulnerabilities:

- **CVE-2023-28098**
  'This issue may cause erratic program behaviour or a server crash.'
- **CVE-2023-27599**
  'An attacker abusing this vulnerability will crash OpenSIPS leading to Denial of Service.'
- **CVE-2023-27598**
  'Abuse of this vulnerability leads to Denial of Service due to a crash.'
- **CVE-2023-27597**
  'When a specially crafted SIP message is processed, this issue causes the server to crash.'
- **CVE-2023-27596**
  'By abusing this vulnerability, an attacker is able to crash the server.'



'Emergency IMS call setup ('NG112')' – VoLTE Emergency Call - Indicative Reference Example – EENA – 2023-10-26
https://eena.org/knowledge-hub/documents/ims-packet-switched-emergency-communications-esinet-interconnection
https://eena.org/blog/ng112-implementation-in-europe-demystifying-the-esinet-and-next-generation-core-services-2

Though there are backup (primary and secondary E-CSCF) 'SIP' servers that devices can connect to should one 'proxy' server be unavailable, along with other security & network mitigations the providers deploy on their networks (such firewalls). *(All in addition to device 'camp-on' capabilities)*



NSG - Telstra - E-CSCF #1 & #2

NSG - Vodafone - E-CSCF #1 & #2

But it still seems an extraordinary oversight for Telstra to apparently be not be updating and maintaining an important element of their network for Emergency Calls.

The inoperability of devices being unable to connect to that network element, for example during a Denial of Service ('D/DOS') Attack, would be not that dissimilar to what occurred with Emergency Calling during the 18 September 2025 Optus 000 Failure.

In that scenario, calls were being sent to a part of the network that was not accepting (or able to accept) Emergency Call Sessions and Network Traffic.

Triple Zero service outage Submission 1 – Optus
https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/TripleZero48P/Submissions

Telstra VoLTE Issues with 'Open Market Devices'

For reference (and full disclosure) I initially noticed that server identifier in mid-2024 when carrying out device testing, and in early 2025 it was once again brought to my attention after the shutdown by someone who signed my petition.

I agree with responsible disclosure and reporting, so I reported this issue to the Department of Infrastructure in May along with some other correspondence.

Telstra 000 VoIP/SIP Server Security Vulnerabilities

I should also raise with you something that was pointed out to me earlier this year by a Petition Signer.
They identified that the Telstra's 000 SIP (VoIP/VoLTE) Server reports in the connection log to be running 'OpenSIPS Version 2.4.6' which is a version from June of 2019.

This version is vulnerable to a number of Critical Security Vulnerabilities (CVE's).
https://www.cvedetails.com/vulnerability-list/vendor_id-21194/product_id-63803/version_id-1301780/Opensips-Opensips-2.4.6.html

The OpenSIPS 2.4 branch ceased to be supported with 2.4.11 in June of 2021 and is presently up to 3.5.0 with the latest release from April 2025.

A number of these vulnerabilities would potentially enable a bad actor to carry out a Denial of Service attack and crash their SIP (VoIP/VoLTE) server which would impact 000 access.

Extract - Email to the Department of Infrastructure (DITRDCA) – May 2025

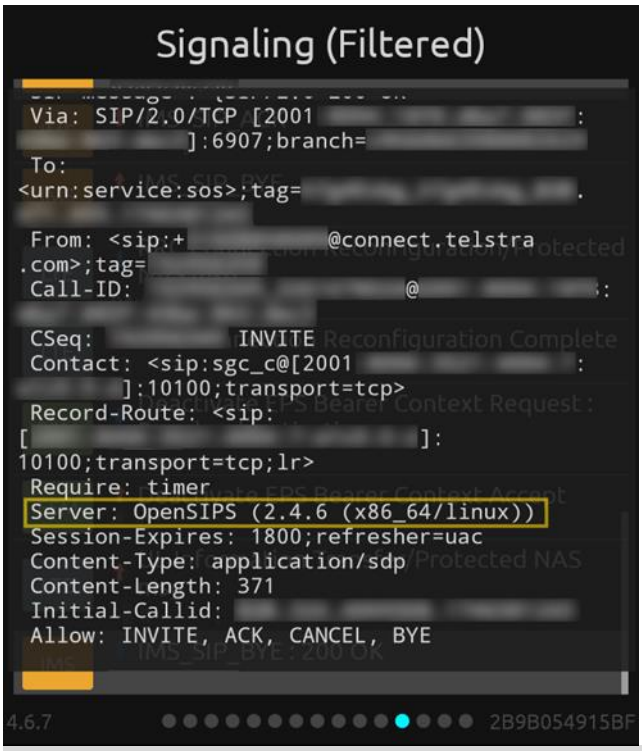
The Department very promptly engaged with me on the various issues I raised and I believe not long after that, the issue was raised with Telstra by the Department.

Though, through May until June nothing changed on Telstra's end.

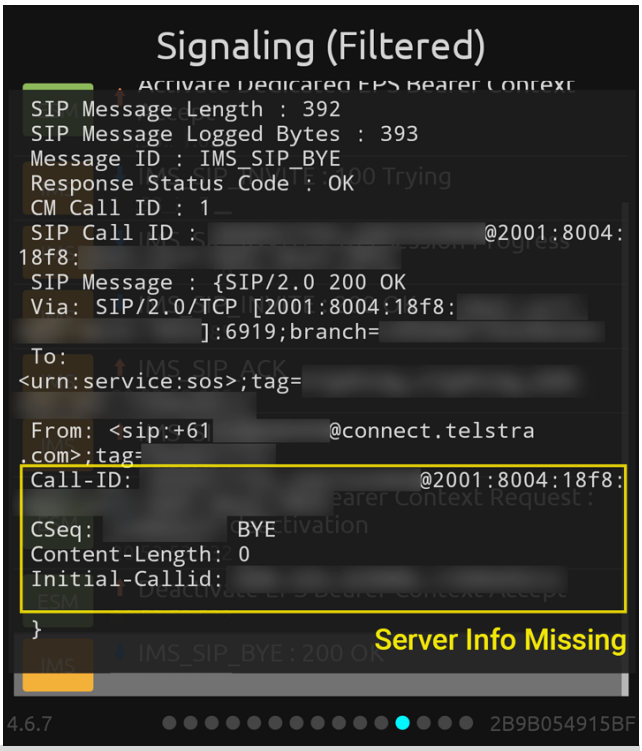
Telstra VoLTE Issues with 'Open Market Devices'

Telstra Hiding Server information

However on 11 June 2025 I identified that the Server signature value had disappeared from the SIP Logs for 000 calls. Though on a single test call later that same day the information briefly returned.

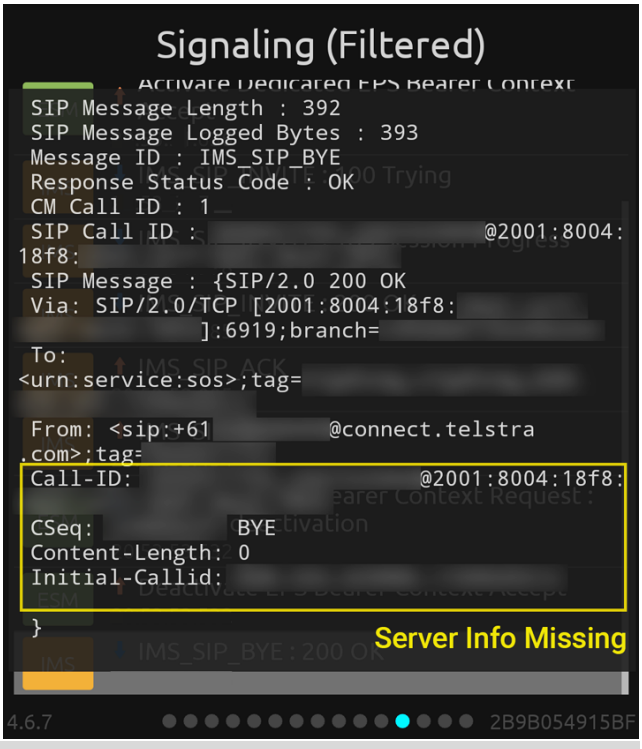


Up until 8 June 2025



11 June 2025 – Between 8-9 PM

11 June 2025 – Between 10-11 PM



Current Result Example

The OpenSIPS identifier was present with every 000 call on **8 June 2025**.

So from the limited information I have, it appears that Telstra *may* have (at least initially) just opted to hide they were running 6 year old software for 000 calls from the call log metadata and not actually update what appears to be a significant security vulnerability.

For reference based on official documentation, OpenSIPS software has the server identifier information enabled by default and it takes a manual change of a configuration file to disable the log output.

> **4.26 server_signature**
>
> This parameter controls the "Server" header in any locally generated message.
>
> Example of usage:
>
> ```
> server_signature=no
> ```
>
> If it is enabled (default=yes) a header is generated as in the following example:
>
> ```
> Server: OpenSIPS (0.9.5 (i386/linux))
> ```

OpenSIPS GitHub Code Repository – 'server_signature'
https://github.com/OpenSIPS/opensips/blob/4ccf042cebd7f1d18a5ad8b969c4d4474efdd08f/globals.c#L109

OpenSIPS Documentation - Core Parameters v1.4
https://www.opensips.org/Documentation/Script-CoreParameters-1-4#toc63

Both Optus and Vodafone also presently hide the Server information for their Emergency Call SIP Server ('Call Proxy'/E-CSCF).

Telstra may have at that time (and probably now has) updated to a newer software, however if they did I would have expected to see an updated server version appear (at least initially), not for it to disappear.

Though given Telstra at the time of writing still does not support IPv4 for Emergency Calling in line with GSMA IR.92 Global Standards and best practice, it does make me wonder if it actually has been fixed.

Regardless it appears there has been potentially a significant security vulnerability on Telstra's 000 network for many years that hasn't and wasn't addressed prior to myself and the Department raising this issue with Telstra.

I've opted to include this information in this submission because I believe the public has the right to know and this information should be on the public record.

I would like to thank the Department for ensuring this was raised through the appropriate channels.

Telstra VoLTE Issues with 'Open Market Devices'

Telstra Hiding IMS Server Information

Somewhat related, not long after the 'OpenSIPS' Server information was hidden by Telstra, they started hiding the server information for standard 'IMS' Phone Calls.

Both on the Telstra Retail and Wholesale Networks.

This happened at some point after 21 July 2025 but before 16 September 2025.

Telstra Retail network serves Telstra, Boost.
Telstra Wholesale network serves Aldi, Woolworths Everyday Mobile, Belong and others.

As an additional note, according to my device call logs all three MNOs use Ericsson MTAS (Multimedia Telephony Application Server) for normal 'IMS' VoLTE 4G calls, though it appears all three have slightly different builds/versions, including Telstra Wholesale.

The 'MTAS' version for Telstra Retail also appears to be notably different compared to Optus & Vodafone, and even Telstra Wholesale. Vodafone appears (on the surface) to be on a more recent build.

Telstra Retail

- **19 June 2025:** Ericsson MTAS - CXP2010134/1 **R28G01**
- **20 November 2024:** Ericsson MTAS - CXP2010134/1 **R28G01**

Telstra Wholesale

- **19 June 2025:** Ericsson MTAS - CXP2010134/1 **R31C04**

Optus Network

- **17 June 2025:** Ericsson MTAS - CXP2010134/1 **R31B07**

Vodafone Network

- **19 June 2025**: Ericsson MTAS - CXP2010134/1 **R33B16**
- **3 September 2023:** Ericsson MTAS - CXP2010134/1 **R27A104**

Ericsson MTAS - Multimedia Telephony Application Server (IMS Platform)
https://www.ericsson.com/en/portfolio/cloud-software-and-services/cloud-core/communication-services-udm-and-exposure/communication-services--udm/cloud-ims/multimedia-telephony-application-server

```
Server: Ericsson MTAS - CXP2010134/1 R33B16
Session-Expires: 1800;refresher=uas
```

Though with carrier specific builds and patches they may be more similar than they might appear.
But it is interesting nonetheless.

It's not clear why Telstra thought it necessary to remove that information from the standard call logs as well. It's not a secret that Telstra uses Ericsson. It's public that Optus and TPG use them as well.

Optus and Vodafone don't hide that MTAS information, nor do other carriers globally.

Telstra announces world first proof-of-value engine for 5G – 2024-02-26
https://www.telstra.com.au/aboutus/media/media-releases/telstra-5g-slicing-world-first

Telstra and Ericsson collaborate to shape the future of autonomous networks – 2025-10-07
https://ericsson.com/en/press-releases/7/2025/telstra-and-ericsson-collaborate-to-shape-the-future-of-autonomous-networks

If their network is secure and up-to-date that information has minimal value.
'Security through obscurity' is not a viable cyber security strategy. Though obscurity has a role.

Okta - Security Through Obscurity (STO): History, Criticism & Risks
https://www.okta.com/identity-101/security-through-obscurity

Telstra VoLTE Issues with 'Open Market Devices'

As someone with an IT and traditional 'routing & switching' networking background, these issues are obvious even to me, so it does bring to question what else might not be getting addressed that isn't as visible or obvious?

Including issues that would only be known to those that work directly in the sector.

Given the recent comments by ASIO Chief Mike Burgess, this does highlight the importance of issues like this and it's I think a timely reminder about the need to ensure systems are up-to-date & secure.

ABC - Spy chief warns of China espionage threat to business, critical infrastructure – 2025-11-12
https://www.abc.net.au/news/2025-11-12/spy-chief-warns-of-china-espionage-threat-to-business/105999522

Especially given the rise of vulnerabilities with Voice over LTE and the IMS platforms that underpin those technologies.

P1 Sec - IMS And SIP Protocol: Addressing Vulnerabilities In Prepaid And Postpaid Systems – 2024-12-10
https://www.p1sec.com/blog/ims-and-sip-protocol-addressing-vulnerabilities-in-prepaid-and-postpaid-systems

Understanding, Identifying, and Addressing the Security Implications of VoLTE Roaming
https://www.thefastmode.com/expert-opinion/34135-understanding-identifying-and-addressing-the-security-implications-of-volte-roaming

O2 VoLTE: locating any customer with a phone call
https://mastdatabase.co.uk/blog/2025/05/o2-expose-customer-location-call-4g

Systemic Unconscionable Conduct & Non Compliance

It's clear there have been major failures with device classification and networks across the board.

Given the recent unconscionable conduct findings of Optus in Federal Court, all of these issues need to be thoroughly investigated and Optus & the telcos need to be held accountable for their actions.

ABC - Optus to face $100 million penalty for unconscionable conduct selling products to vulnerable customers
https://www.abc.net.au/news/2025-06-18/accc-optus-admit-unconscionable-conduct-100m-penalty/105430714

ABC - Federal Court hears details of Optus's 'unconscionable' conduct
https://www.abc.net.au/news/2025-09-02/accc-federal-court-action-against-optus-vulnerable-customers/105724206

ABC - Optus to pay $100m fine, as crisis engulfing Australia's second biggest telco continues
https://www.abc.net.au/news/2025-09-24/optus-fined-100-million-for-sales-misconduct/105810174

If they do the wrong thing, there need to be consequences.

It should not require myself or others to try and establish a class action lawsuit to get transparency and accountability from the telcos and the industry.

If I had more time, resources and deeper pockets I would have already done so. But I'm just one person.

And all of that's aside from any restorative justice or compensation.

Upselling of new Devices & Services

In my view the providers and industry are only interested in selling people new products and services as the 'solution' to compatibility or coverage issues.

That is quite clear, it's quite possibly the only thing they really know how to do, and this misclassification behaviour and failure to implement standards properly shows the clear disregard in ensuring accurate and fair processes.

Those concerns seem to only extend to the devices the telcos or their handset partners have sold.

All of the burden and responsibility has been put onto consumers, not the telcos.

Carriers (and handset makers) are more interested in selling customers new products or services to 'fix' issues, not actually supporting people with their current devices and current service.

We've seen both Telstra and Optus accused by the ACCC of upselling vulnerable customers products and services they couldn't afford and don't need.

ABC - Telstra fined $50 million over unconscionable treatment of Indigenous phone plan customers – 2021-05-13
https://www.abc.net.au/news/2021-05-13/telstra-fined-over-treatment-of-indigenous-phone-plan-customers/100132000

ABC - ACCC suing Optus alleging it engaged in unconscionable conduct when selling phone products – 2024-10-31
https://www.abc.net.au/news/2024-10-31/accc-optus-court-action-unconscionable-conduct-first-nations/104541466

Systemic Unconscionable Conduct & Non Compliance

The TIO confirmed similar behaviour occurred prior to shut down at the 24 July 2024 3G hearing.

Ms Gebert: *"We have seen some customers coming to us who have approached their telco in order to work out what device they need and have been encouraged to purchase additional devices that may not have been a direct replacement." […]*

"…it can mean a more expensive plan than maybe what they were on before. But we've also seen instances where there have been additional products put forward by the provider and sold as a broader package."

Rural and Regional Affairs and Transport References Committee - 24/07/2024 - Shutdown of the 3G mobile network
https://www.aph.gov.au/Parliamentary_Business/Hansard/Hansard_Display?bid=committees/commsen/28168/&sid=0000

So the fact large numbers of consumers report issues with the 3G shutdown isn't a surprise and this behaviour is par for the course in my view.

Along with the telcos outright blocking perfectly working phones they didn't sell and not blocking all devices that don't work.

There is clearly **not enough oversight or transparency** with the messaging and classification of devices by the telcos, this needs independent and public oversight to ensure fairness for consumers.

It seems those in a position to do something about this either do not fully understand how things work and what is occurring, or maybe do not care.

Optus even had the audacity to describe the transition as "smooth" at the Inquiry Hearing on 5 February.

Mr Wright: "*As we've just described, I think the transition has been, by all accounts, very smooth."*

Rural and Regional Affairs and Transport References Committee - 5/02/2025 - Shutdown of the 3G mobile network
https://www.aph.gov.au/Parliamentary_Business/Hansard/Hansard_Display?bid=committees/commsen/28679/&sid=0000

Telco Profits & Share Buybacks

Telstra also now has so much money after shutting down they've seen fit to spend not just hundreds of millions, but **billions of dollars** buying back their own shares rather than properly helping their customers.

Reuters - Telecom giant Telstra's profit jumps, announces $476 million (USD) buyback – 2025-02-19
https://www.reuters.com/business/media-telecom/telecom-firm-telstra-posts-higher-first-half-profit-announces-476-million-2025-02-19/

Reuters - *Telstra forecasts annual earnings below view, taking shine off share buyback plan – 2025-08-13*
https://www.reuters.com/business/media-telecom/telstra-forecasts-annual-earnings-below-view-taking-shine-off-share-buyback-plan-2025-08-13/

Telstra - Market Release: Telstra announces additional on-market share buy-back – 2025-08-14
https://www.telstra.com.au/content/dam/tcom/about-us/investors/pdf-i/market-release-telstra-announces-additional-on-market-share-buy-back-fy25.pdf

Given what they did to many of their customers, and have been allowed to do by regulators.
This is quite appalling.

Systemic Unconscionable Conduct & Non Compliance

5G Investment & Returns

For reference, in a now deleted Blog Article, in 2024 the (then) Chief Strategy Officer from Aussie Broadband (Jonathan Prosser) wrote an article in response to Optus's increase to Wholesale Network prices. *(Aussie Broadband use the Optus Network for Mobile Services)*

For reference I included a link to this Blog Article in my 2024 3G Shutdown Senate Inquiry Submission.

Thursday 1 Feb 2024 | 4 min read

Think like an Aussie: 5G and our mobile plan refresh

Written by Jonathan Prosser, Chief Strategy Officer

Web Archive – Archive.org: Aussie Broadband - 'Think like an Aussie: 5G and our mobile plan refresh' - 2024-02 01
https://web.archive.org/web/20250120153629/https://www.aussiebroadband.com.au/blog/think-like-an-aussie-5g-and-our-mobile-plan-refresh

In the article he talked about how *"the adoption of 5G has been a much slower crawl than anticipated."* and that *"Australians have not embraced the upgrade to 5G with the same fervour as with 3G or 4G in the years prior.* ***Of our mobile customers, those with 5G plans only account for about 2%"***. and that *" 'consumers appear indifferent to 5G',* *with* ***nearly 3 in 4 respondents*** *saying they* ***were not actively looking to upgrade.****"*

He went on to say,
"These innovations don't add the kind of value shareholders are looking for just yet, but public companies still need to show their shareholders that ***they are recouping their investment in 5G.****"* and that "...*mobile network operators are* ***struggling to deliver a return-on-invested-capital*** *(ROIC) that is palatable to investors."*

In my view all of this lines up with what Rudolf showed (on Slide 14) in his presentation in regards to trying to prevent any switch-offs,

'***telecom sector will deny*** *[there's a problem]****, be angry over 5G investment and bargain for half baked measures..'***

Samsung's & 000 on Vodafone

In late October it was reported that various Samsung devices had issues with calling 000 on Vodafone. Many of which required a software update.

Many devices that were supposed to have been blocked were not, and for quite some time.

ABC - Vodafone gave mixed messaging over service issues with triple-0, customer says – 2025-10-24
https://www.abc.net.au/news/2025-10-24/vodafone-customer-service-samsung-triple-0/105922288

To some extent what TPG/Vodafone did is not entirely unreasonable in regards to not completely blocking a device that just needs a simple software update.

If the device was entirely (IMEI/Serial Number) blocked from all services (as technically required under the Emergency Call Service Determination) then users couldn't be informed to update the software on the device.

People would insert their sim and have no idea why the phone isn't working.

A *better,* more effective approach that could have been implemented, is that a longer outbound (RVA – Recorded Voice Announcement) message could have been placed on calls from the device.

Such outbound messages were in use prior to the shutdown.

Consumers faced with a 30-60 second long (or longer) outbound message when making calls would be heavily deterred from using that device, whilst still having basic connectivity to receive messages from their provider and download software updates (if they don't have WiFi to do so).

It would also ensure they remain contactable by family, the telco or even (if required) by emergency services. That approach though still very anti-consumer in nature, it's a far better proposition as opposed to blocking someone from all means of mobile communication on their device.

It's obvious why that's not a good idea, yet it's technically the law.

Outright blocking a device from all telecommunications services that just needs a software update with no alternatives is a very poor idea.

Just disabling all call service outright and leaving SMS only is also equally an ill-considered idea.

Within the blocking notification window affected customers could (and I'd argue should) be provided with a temporary number they can use to contact emergency services (with a standard "IMS" Call),

(e.g. +61 000, +61 112, or even 0000, which Telstra has an 'SOS' Emergency Number on their network).

Customers that still haven't updated after an extended period of time should be followed up directly by customer support to check if that customer is in a vulnerable circumstance.

From there the device could be either partially or fully blocked once someone has a replacement.

Samsung's & 000 on Vodafone

Vodafone's Escalation after the 18 September Failure

However I first found out about Samsung devices that were going to be blocked by Vodafone when reading through some online discussion boards in late September this year.

I stumbled across a number of Samsung users on the Vodafone network that were reporting their phone was going to be blocked by the **7th of October 2025.**

One such thread was posted on 30 September 2025 by a user using a Galaxy S20+. Many others would later comment and post a similar thing.

Phone to Be Blocked Due to Lack of Software Update

L [redacted] on 30/09/2025 - 13:16
Last edited 30/09/2025 - 15:59 by 1 other user

Hi guys, I'm currently using a Samsung S20+ for the past two weeks while my Fold 5 is in for a screen repair with Samsung Care.

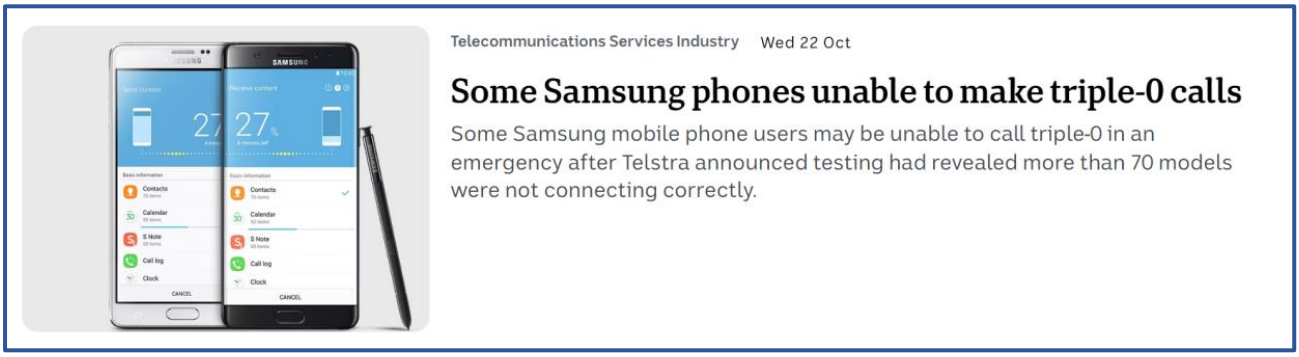
I keep receiving the message shown below, and I also hear the same message before making calls. I'm not sure what to do in this situation and was wondering if switching to a physical SIM might fix it. For context, I'm with Lebara and using an esim. Any thoughts for what I should do would be appreciated.

> Urgent, act now - Your device will be blocked by 7th October if you fail to update to the latest software, as it is identified as currently being unable to make emergency 000 calls. Please urgently update your software in your device settings to be able to make emergency 000 calls on your handset, and to avoid your device being blocked.

Thanks

OzBargin Forums - Phone to Be Blocked Due to Lack of Software Update - Lebara (TPG/Vodafone) – 30 September 2025
https://www.ozbargain.com.au/node/926352

However this was weeks before Telstra would advise of the discovered compatibility problem where a Samsung device (without Telstra or Optus network coverage) *may* not be able to make an Emergency Call on Vodafone. But could make calls with Telstra or Optus coverage and service.



Telecommunications Services Industry Wed 22 Oct

Some Samsung phones unable to make triple-0 calls

Some Samsung mobile phone users may be unable to call triple-0 in an emergency after Telstra announced testing had revealed more than 70 models were not connecting correctly.

ABC - Telstra testing reveals some Samsung mobile phones unable to make triple-0 calls – 2025-10-22
https://www.abc.net.au/news/2025-10-22/samsung-mobile-devices-triple-0-telstra-network/105920816

So it seems in direct response to the events of 18 September 2025 TPG/Vodafone tried to get in front of the issue by IMEI Blocking devices that weren't updated.

However with all of this there seem to be some attempts at revisionist history in regards to this issue, TPG/Vodafone's handling of their 3G Shutdown and their awareness of the 4G Emergency Calling Compatibility problems with devices, including Samsung's.

Samsung's & 000 on Vodafone

Vodafone's awareness of the 4G Emergency Calling Issue

As I wrote in my Supplementary #32.1 Submission to the 3G Shutdown Senate Inquiry in **August 2024**.

Sometime between late **July and August 2023** Vodafone **removed** a number devices from the 'Supported VoLTE Devices' page on the Vodafone Website. Many of these devices are able to make calls on 4G (with VoLTE) on Vodafone **but not to Emergency numbers**.

I first noticed a number of devices were missing from the website on 31 August 2023 when registering the sim card I purchased for device testing. *(The removed devices were still listed on 10 July 2023).*

Devices Removed from Vodafone's Website between July-August 2023

A summary of the removed devices are below.
Archived copies of the Vodafone website can be found on The Internet Archive 'Wayback Machine'.

Samsung	**Huawei**	**HTC**	**Sony**
Galaxy S5 (2014)	GR5 2017	10 (2016) ✔✔	Xperia Z3 (2014)
Galaxy S6 (2015) ✔	Mate 10 (2017)	U 11 life (2017) ✔✔	Xperia Z5 (2015)
Galaxy S6 edge (2015) ✔	Mate 9 (2016)	U Ultra (2017)	Xperia X (2016)
Galaxy S6 edge+ (2015) ✔	Mate20 (2018)		Xperia XZ Premium (2017) ✔✔
Galaxy S7 (2016) ✔✔	Mate20 Pro (2018)	**Oppo**	**Nokia**
Galaxy S7 edge (2016) ✔✔	Nova 2i (2017)	A73 (2020)	3 (2017)
Galaxy J5 Pro (2017) ✔	Nova 3e (2018)	R11 (2017)	6 (2017)
Galaxy Note 4 (2014)	P10 (2017)	R11s (2017) ✔	
Galaxy Note 5 (2015) ✔✔	P9 (2016)		
Key: ✔ = On Optus's VoLTE List (2024) | ✔ = On Telstra's VoLTE List (2024)			

Some of the above devices will have working calling and emergency calling when used with either Telstra or Optus Network Sim Cards but when a Vodafone Sim Card is inserted the phone may continue to make calls but lose the ability to make 4G Emergency Calls.

This is due to 4G Emergency Calling not being enabled within the Vodafone (AU) Modem Configurations on some devices, despite emergency calling being configured for the Telstra and Optus modem configurations.

Additional Note: *There are 'Non-Samsung' devices on that list to absolutely do work for Emergency Calls on every network including Vodafone if used with a Telstra or Optus sim (or software).*

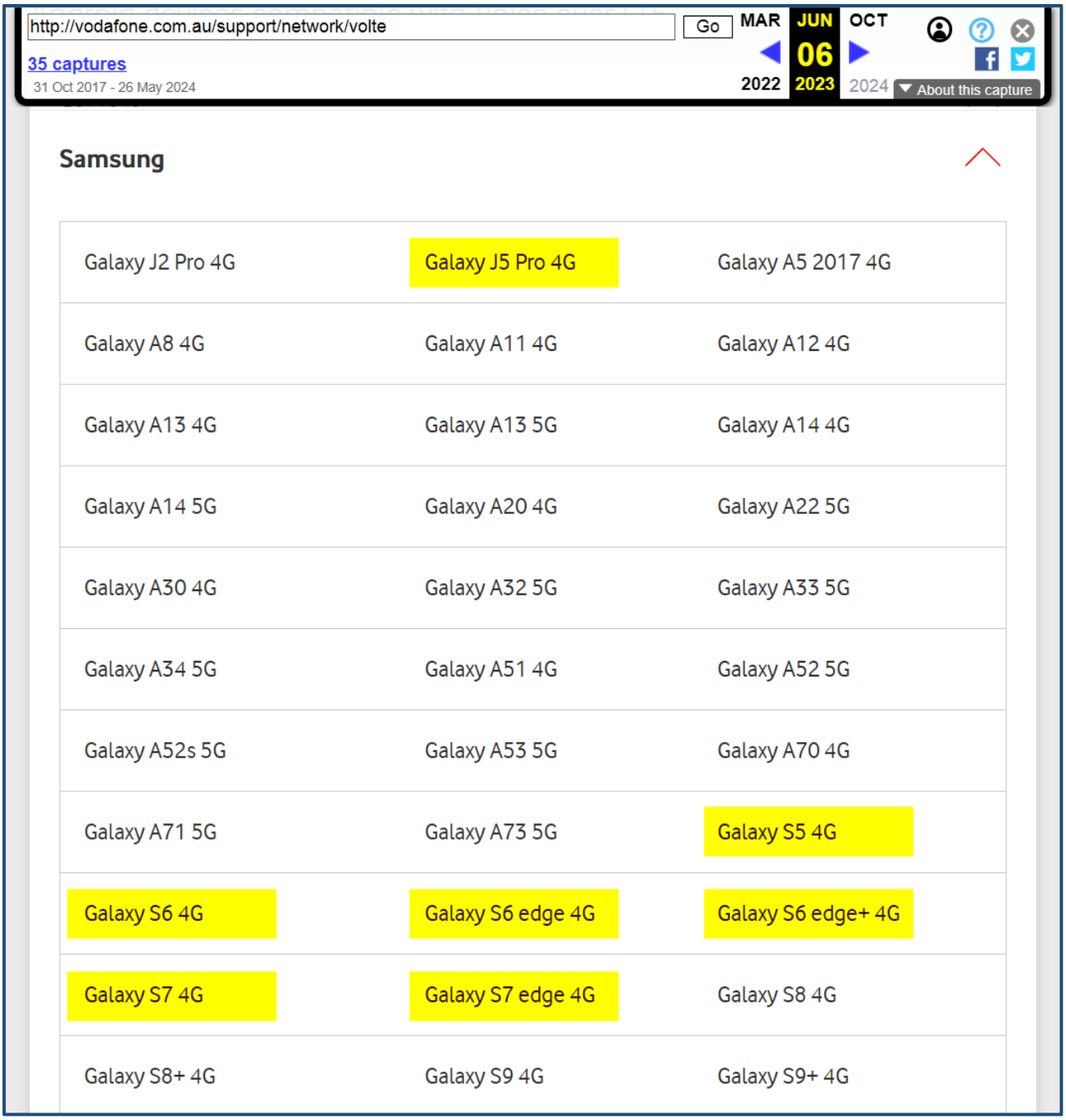
In my view it would be entirely unlawful for Telstra or Optus to block those compatible phones as the device either entirely uses a Telstra or Optus Modem configuration when in use.

If you insert a Vodafone sim into the phone the device loads the vha (Vodafone AU) modem config and this config can only do VoLTE Calls on Vodafone and does not work for Emergency Calling at all on 4G or on any network. This is different to the Samsung issue as Samsung's profile system for VoLTE works differently.

Samsung's & 000 on Vodafone

Vodafone AU VoLTE Device Support List – Before Device Removal - 2023-06-06

The Samsung devices in yellow were removed and are missing from the updated version of the page.



Internet Archive - Wayback Machine – 'Vodafone AU VoLTE Device Support List' – Before Removal - 2023-06-06
https://web.archive.org/web/20230606093226/http://www.vodafone.com.au/support/network/volte

Internet Archive - Wayback Machine – 'Vodafone AU VoLTE Device Support List' – After Removal - 2023-10-25
https://web.archive.org/web/20231025002229/https://www.vodafone.com.au/support/network/volte

Samsung's & 000 on Vodafone

It <u>was not</u> 2024 when TPG identified and became aware of the issue as has been reported and claimed.

Triple Zero and Samsung Devices

24 October 2025: TPG Telecom identified a cohort of older Samsung handsets leading into the 3G network shutdown in 2024 that were unable to make Triple Zero (000) calls on the TPG/Vodafone mobile network and could not be fixed with a software upgrade.

These devices were blocked from the Vodafone network as part of the 3G shutdown process.

Vodafone - Triple Zero and Samsung Devices – 24 October 2025
https://www.vodafone.com.au/news/triple-zero-and-samsung-devices

FINANCIAL REVIEW

Users told to buy new phones

Optus said it would play "a constructive role" in the upcoming parliamentary inquiry and would comply with rules for the new public registers.

TPG last year identified some Samsung phone models that could not make Triple Zero calls on its Vodafone network last year as part of preparations for the national shutdown of 3G services.

It blocked the devices from using its network and shared the information with Telstra and Optus.

But Telstra said its engineers had recently discovered during testing that the same Samsung devices contained technology that were still trying to connect Triple Zero via Vodafone's old 3G infrastructure, which has been switched off.

"Why this was configured this way is a question for Samsung and Vodafone," a Telstra spokesman said.

AFR - Samsung Triple Zero phone failures could be 'systemic': Wells – 28 October 2025
https://www.afr.com/companies/telecommunications/samsung-triple-zero-phone-failures-could-be-systemic-wells-20251028-p5n5u6

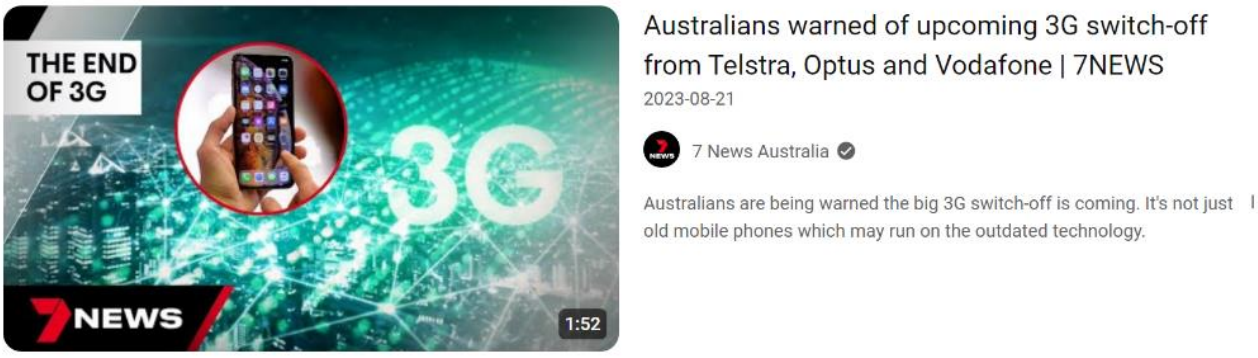
Samsung's & 000 on Vodafone

Considering that TPG/Vodafone was not required to provide any formal quarterly reporting to the Department and Government prior to their shutdown.

It does bring into question their awareness of the scale of the VoLTE emergency calling compatibility issues in **2023**, and the reasons why these devices were removed at the time without any alarms being raised for customers or the general public.

The Media releases by the telcos and coverage at the time **did not** even remotely mention that 4G devices would be impacted.

As an example, on 21 August 2023 both 7 News and 9 News aired stories about the 3G switch-off with their 6PM Bulletins. Both TV Networks included interviews from the providers however the fact that 4G and 5G devices could be affected wasn't mentioned once.

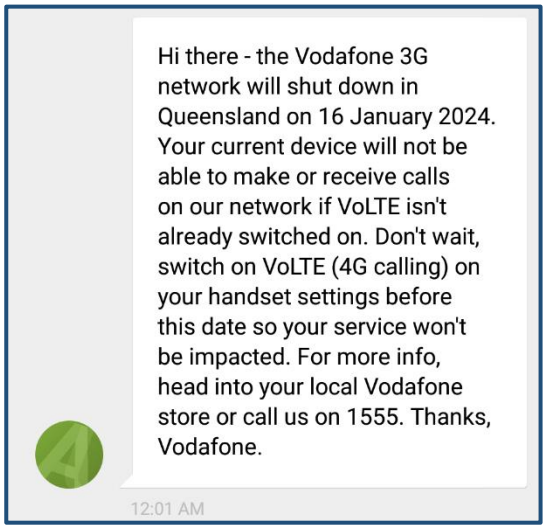


YouTube - Australians warned of upcoming 3G switch-off from Telstra, Optus and Vodafone – 7 News - 2023-08-21
https://web.archive.org/web/20240124101628/https://www.youtube.com/watch?v=yJZotwC3hjg

YouTube - 3G network to shutdown in a number of months - 9 News Australia – 2023-08-21
https://www.youtube.com/watch?v=JiRdec-E8ps

I also had a Vodafone test sim at the time they shut down and I didn't receive any notice about my device being unable to make Emergency Calls on 4G.

Even on a device they removed from the support page.



Samsung's & 000 on Vodafone

3G Inquiry Senate Hearing Warning

In my 3G Inquiry submission I also warned that a number of the devices not present on Vodafone's support list were still in some cases on Telstra's and Optus's Support List, which meant many of these potentially affected devices were likely still in use and circulation.

Especially given the extent of the software issues with VoLTE.

I spoke to this directly when speaking to the Committee **on 23 July 2024**.

> *"Part of the issue, as well, is that there are devices that are on Telstra's list — maybe if you put a Telstra sim card or an Optus sim card in a phone, it will do calling and it will do emergency calling.*
>
> *But the moment you put a Vodafone sim card in that phone **it will lose the ability to do emergency calling** but will continue to do calling.*
>
> *Yet that's a model of device that is on the other two network providers' support lists.*
>
> *So if someone ever switches provider, even if they've gone and done the due diligence and done the tests with Optus, if they then switch to Vodafone, **they are still going to be impacted.***
>
> ***These devices still exist.***
>
> *Unless you're going to replace everyone's phones, which I don't think they want to do, **these standardisation and compatibility issues are still going to persist.**"*

Senate Rural & Regional Affairs & Transport References Committee | 3G Inquiry - 23/07/2024 (Section at 2hr 42mins)
https://www.youtube.com/live/Tlofv0UfoI0?t=9727s

APH - RRAT Committee - 23/07/2024 - Shutdown of the 3G mobile network Hansard – James Parker
https://www.aph.gov.au/Parliamentary_Business/Hansard/Hansard_Display?bid=committees%2Fcommsen%2F28167%2F&sid=0004

Many of these devices are now some of the ones that are going to be blocked by Telstra and Optus as well, such as the Galaxy S6, S7.

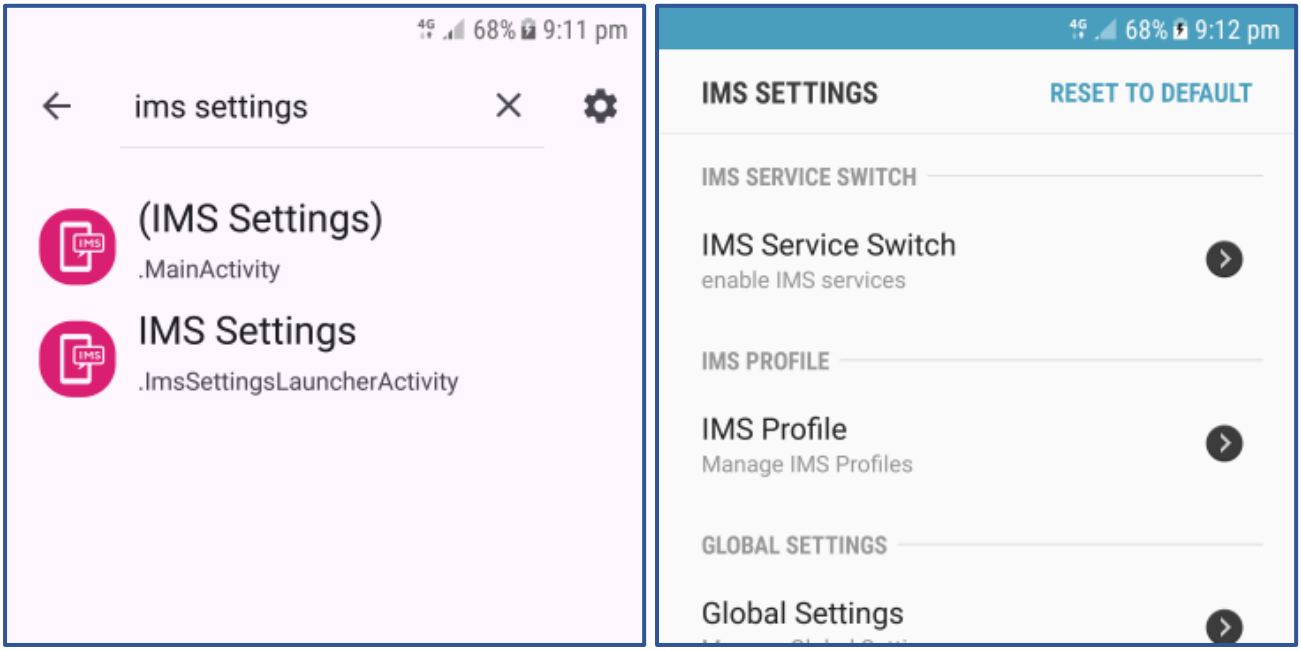
Samsung's & 000 on Vodafone

The Missing Samsung 'VoLTE Emergency Calling' Settings for Vodafone

Additionally within Samsung device firmware there is an application on board that is designed to detect the loaded sim card number (the IMSI prefix) and load the corresponding carrier settings & profiles to enable VoLTE Calling & Emergency Calling. *(Along with other Carrier Features).*

For example 505-01 is Telstra, 505-02 is Optus, 505-03 is Vodafone.
(505 is the Mobile Country Code for Australia)

This is known as the "IMS Service" Application, along with the IMS Settings Application.



IMS Settings Application – Samsung Android Devices

The "IMS Service" Application is a 'privileged' app that runs in the background and has control over the VoLTE call (IMS) settings running on the device.

This particular application is specific to Samsung phones, as Samsung have their own VoLTE (IMS) profile system. User access to this app is also blocked by Samsung on newer software builds.

Samsung's VoLTE Settings solution is also essentially closed source and proprietary compared to other Android handsets that use standard Qualcomm Modem Binaries ('.mbn' files).

XDA - How to enable VoLTE on Qualcomm devices running Generic System Images (GSIs)
https://www.xda-developers.com/how-to-enable-volte-qualcomm-devices-running-generic-system-images-gsis

So this is why in part this is a Samsung specific issue.

However after decompiling various versions of Samsung Software I've found that with firmware up until late 2020 the Vodafone VoLTE Emergency Calling settings are missing.

But are present for Telstra and Optus.
Only settings for standard (IMS) VoLTE Calls are present for Vodafone.

Telstra and Optus VoLTE Emergency Calling settings are present with devices as old as the Galaxy S6 with Android 7 (2017 Update).

Based on decompiled firmware code from the 'IMSService.apk', the Vodafone 'VAU Emergency' 4G Emergency Calling settings only appeared in Official Samsung firmware around early 2021 (Feb 2021)

A June 2020 version of the same application is missing the 'VAU Emergency' Setting.

Samsung's & 000 on Vodafone

There was also a significant increase in the number of Emergency Calling profiles in the newer 2021 application code.

The previous June 2020 package only has ~132 registered carrier entries for Voice over LTE.
The newer 2021 application has 168.

Carriers typically need to inform handset vendors, chipset & equipment suppliers of the exact settings for their network so that calling can work.

An extract of the various Carrier settings 2017-2021 is below.
In the 2020 & 2021 versions the VoLTE Emergency Calling settings are also missing for Singtel.

Samsung IMS Service & Settings Application
2017 – 2021

2017 Version (Galaxy S6)

	Carrier	VoLTE Profile (IMS)	Emergency Profile (SOS)
	Telstra AU	✓ TEL VoLTE	✓ TEL Emergency
	Optus AU	✓ OPS VoLTE	✓ OPS VoLTE EMERGENCY
	Vodafone AU	✓ VAU VoLTE	✗ None

June 2020 Version

	Carrier	VoLTE Profile (IMS)	Emergency Profile (SOS)
	Telstra AU	✓ TEL VoLTE	✓ TEL Emergency
	Optus AU	✓ OPS VoLTE	✓ OPS VoLTE EMERGENCY
	Singtel SG	✓ Singtel VoLTE	✗ None
	Vodafone AU	✓ VAU VoLTE	✗ None
	One NZ (Vodafone NZ)	✓ Vodafone NZ VoLTE	✓ Vodafone NZ Emergency

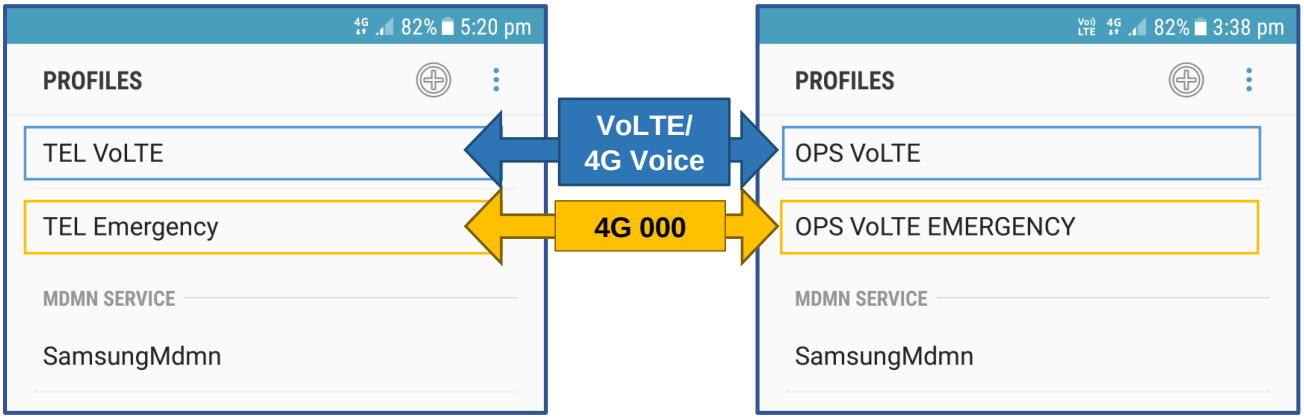
February 2021 Version

	Carrier	VoLTE Profile (IMS)	Emergency Profile (SOS)
	Telstra AU	✓ TEL VoLTE	✓ TEL Emergency
	Optus AU	✓ OPS VoLTE	✓ OPS VoLTE EMERGENCY
	Singtel SG	✓ Singtel VoLTE	✗ None
	Vodafone AU	✓ VAU VoLTE	✓ VAU Emergency
	One NZ (Vodafone NZ)	✓ Vodafone NZ VoLTE	✓ Vodafone NZ Emergency

Source: com.sec.imsservice.apk /res/raw/imsprofile.json – Google Sheet Extract
https://docs.google.com/spreadsheets/d/1mo0DQjbVA2sVUeTG5_e2mDa5NDfdFo003HgArNdyuIM

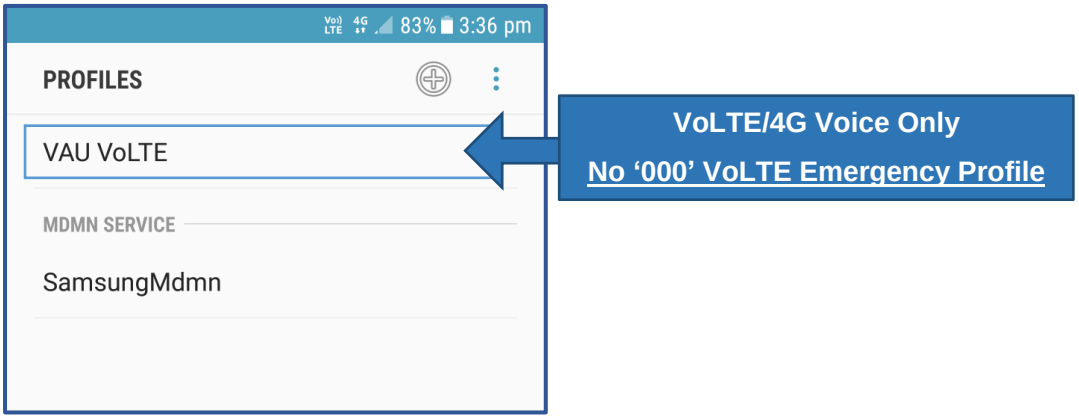
Samsung's & 000 on Vodafone

Carrier profiles on a Galaxy S6 as seen in the 'IMS Settings' Application

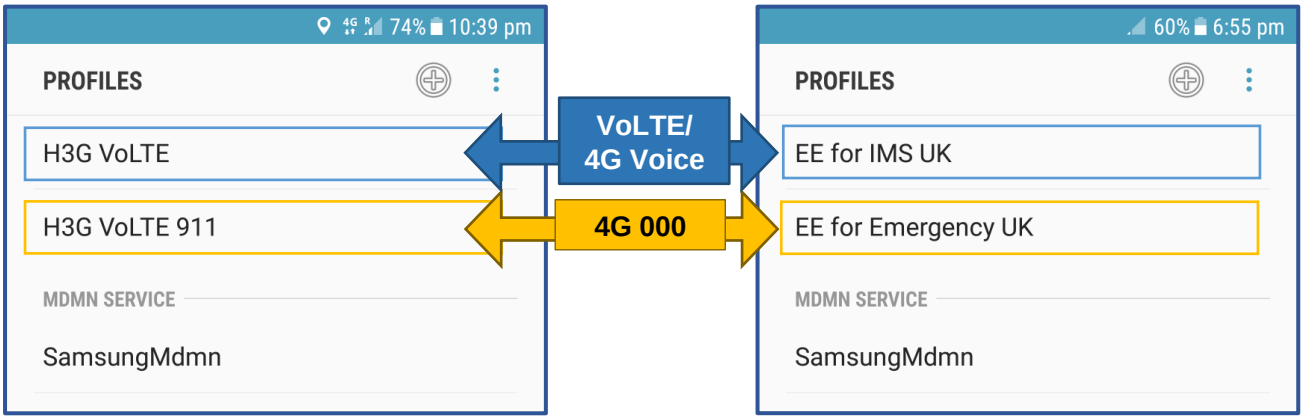


Galaxy S6 G920I – Telstra VoLTE Profiles
Android 7.0 – August 2018 Patch - XSA CSC

Galaxy S6 G920I - Optus VoLTE Profiles
Android 7.0 – August 2018 Patch - XSA CSC



Galaxy S6 G920I - Vodafone VoLTE Profile No 000
Android 7.0 – August 2018 Patch - XSA CSC



Galaxy S6 G920I - 3UK VoLTE Profiles
Android 7.0 – August 2018 Patch - XSA CSC

Galaxy S6 G920I - EE UK VoLTE Profiles
Android 7.0 – August 2018 Patch - XSA CSC

Samsung's & 000 on Vodafone

Extract of the Vodafone Emergency Settings Missing on Older Samsung Firmware

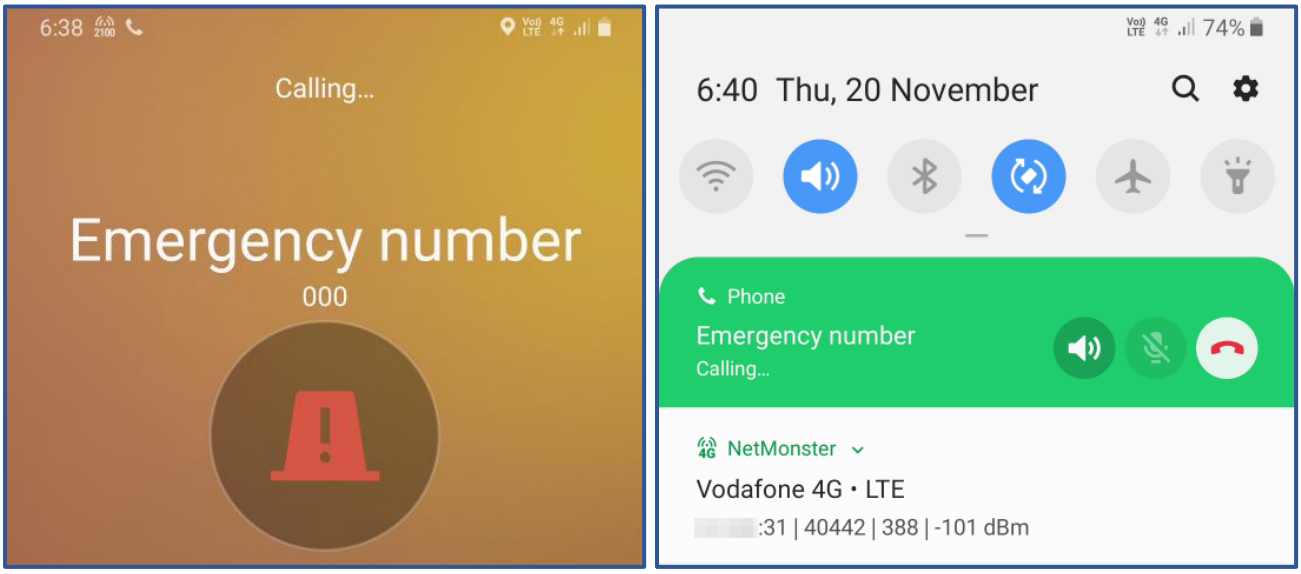

```
{
    "name": "VAU Emergency",
    "mnoname": "Vodafone_AU",
    "representative_plmn": "50503",
    "pdn": "emergency",
    "priority": 0,
    "pcscf_pref": 0,
    "ipver": "ipv4v6",
    "use_precondition": true,
    "enable_rtcp_on_active_call": true,
    "use_pem_header": false,
    "support_ipsec": true,
    "session_expires": 900,
    "reg_expires": 7200,
    "ringing_timer": 90,
    "ringback_timer": 90,
    "emergency_support": true,
    "supported_geolocation_phase": 1,
    "last_pani_header": "P-Last-Cell-ID",
    "support_roaming": true,
  },
```


Sample of the VAU Emergency Calling Profile Settings Added Late 2020/Early 2021 to Samsung Firmware

Samsung Device Testing

I also recently tested a range of models from the Galaxy S8, S9 and Note 8, Note 9 with varying software from 2018-2021. Some of these devices can make emergency calls on the Vodafone Network (with a sim & service) but others cannot.

This includes devices that do not have the latest software and are directly missing the VoLTE Emergency Calling Settings for Vodafone.



Samsung Galaxy Note 8 SM-N950F - Android 9 - Stuck on Calling 000 on Vodafone with VoLTE Registration – CSFB Call July 2022 Patch – OLN (XSA) CSC

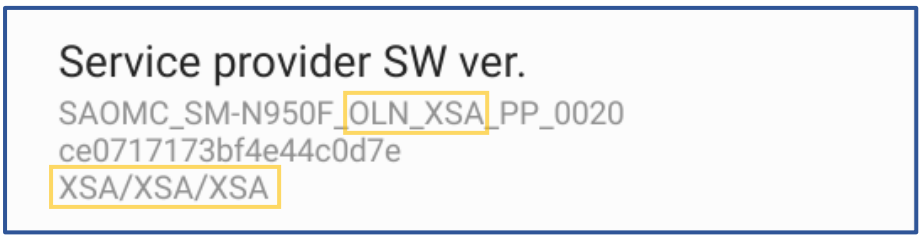
However the compatibility issues based on my testing are explicitly with Vodafone.
Neither Telstra nor Optus sims have the problem.

Samsung's & 000 on Vodafone

Those devices that are working on Vodafone for 000 without the latest software may be utilising another downloaded profile or setting whilst the sim is inserted.

Based on what I tested it seems in part to be a Firmware 'customisation' or CSC issue.

Some older Firmware 'CSC' variants work for Vodafone with Emergency Calling, but others even for model variants sold and designed for the Oceania and South East Asia market, they don't.



Australia (AU):

- **XSA** – Unbranded (Generic Australia)
- **OPS** – Optus
- **TEL** – Telstra
- **VAU** – Vodafone AU

At the very least all of this shows a complete failure of due diligence, which has been a recurrent theme with this issue. And in this case a failure by both the telcos and Samsung.

An important question to ask Vodafone is when they enabled Support for VoLTE Emergency Calling on their entire network and when did they tell Samsung to ensure settings were included on Devices?

Samsung's & 000 on Vodafone

Bean Review Warning

This issue (and all related issues) ultimately go back to what was raised in the Bean Review after the 8 November 2023 Optus Outage. *Not to mention what was raised at the EENA in 2022.*

The review report noted that "The carriers do not test with and/or across each other's networks" and "there is no system for addressing the capabilities of the devices of customers who bring their own"

The full extract is below.

*"Regardless of the technical reasons for the outage, it is clear that **more testing of network interoperability is needed** to ensure problems are identified and anticipated. The complexity of the carriers' mobile networks and the necessity of interoperability to deliver Triple Zero calls demands a more thorough approach to testing than is currently in place. **The carriers do not test with and/or across each other's networks.** While testing the camp on function on their own networks, even if covering all scenarios, **the testing does not guarantee** (as far as practicable) **that calls will be picked up when a competitor's network is unavailable.***

*Current testing regimes **do not cover all devices sold by all carriers**, and **there is no system for addressing the capabilities of the devices of customers who bring their own**. The countless variations in handsets, handset and SIM settings, and the alternative configurations between nodes within each of the networks, **present a significant risk to the certain operation of the camp on functionality** in all (or as many as might reasonably be anticipated) circumstances. **This needs to be addressed.***

***The establishment of cross-carrier end-to-end network and device testing including under the wide range of known scenarios would provide information and insight into potential issues before major outages occur.** Such testing may have gone someway to anticipating the failure of some calls to connect to Triple Zero on the day of the outage."*

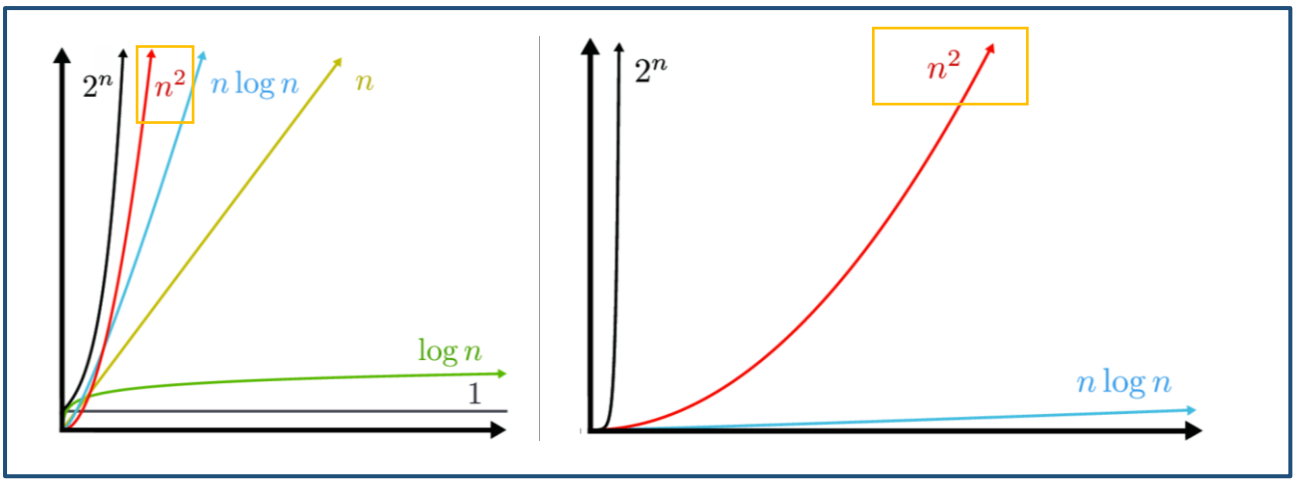
Department of Infrastructure – 'Review into the Optus outage of 8 November 2023 – Final Report' – March 2024 - Pg22
https://www.infrastructure.gov.au/sites/default/files/documents/review_into_the_optus_outage_of_8_november.pdf

Device Testing Difficulties

The Government does have plans with University Technology Sydney (UTS) to operate a controlled device testing facility.

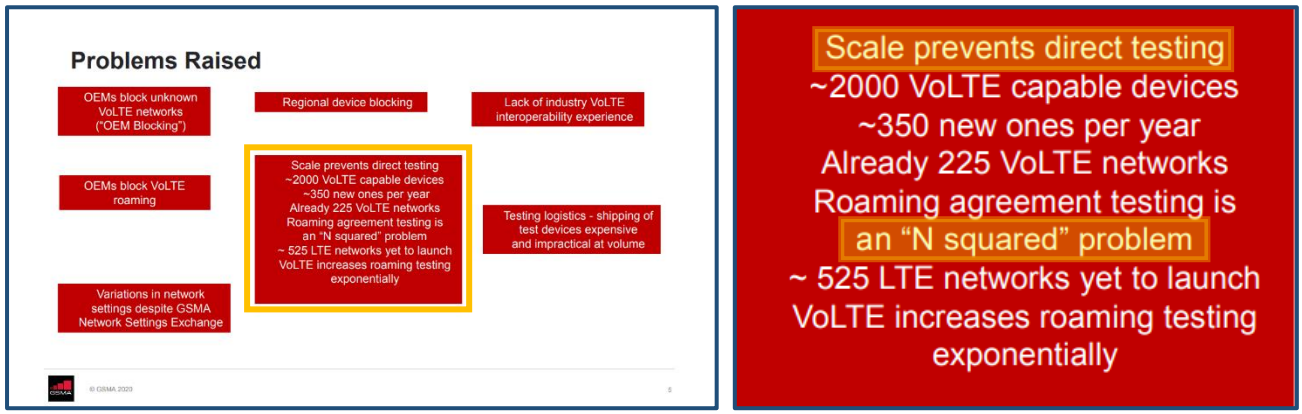
But this problem **cannot** be solved by lab testing devices, **this is an exponential N-squared problem**.

There are too many software versions and variants of devices for the carriers to be able to comprehensively test all known device models & configurations, and that's even ignoring issues with individual devices and carriers not following standards properly.



Exponential n^2 complexity – Visual Example
https://css-tricks.com/computer-science-distilled-chapter-2-complexity

That's not even just my view, that's the view of the GSMA.



GSMA Activities relating to the deployment and interoperability of IMS services - Wayne Cutler (GSMA) – 5 July 2021
https://www.itu.int/en/ITU-T/Workshops-and-Seminars/2021/0705/Documents/Wayne%20Cutler.pdf

The answer here **is not to let the carriers blanket ban devices** in panic, though that appears to be the first impulse, and it certainly isn't to let the carriers be the sole arbiters of what's allowed and what isn't.

There needs to be a system to 'address the capabilities of devices where customers bring their own', just as highlighted in the Bean Review. The carriers should not be allowed to continue to blanket block devices they can't be bothered to confirm, even when they work.

What does scale is user enabled testing, with that you can very quickly and very easily get a lot of valuable **'real-world' data** from customer test calls.

That data combined with formal lab testing can ensure that functionality is validated and any issues resolved. This data can also be used to unblock devices.

A simple solution here would be to explore what was suggested in the Working Group and establish a test RVA for 000 calls. Per FOI 24–353 (Page 57 of 75)

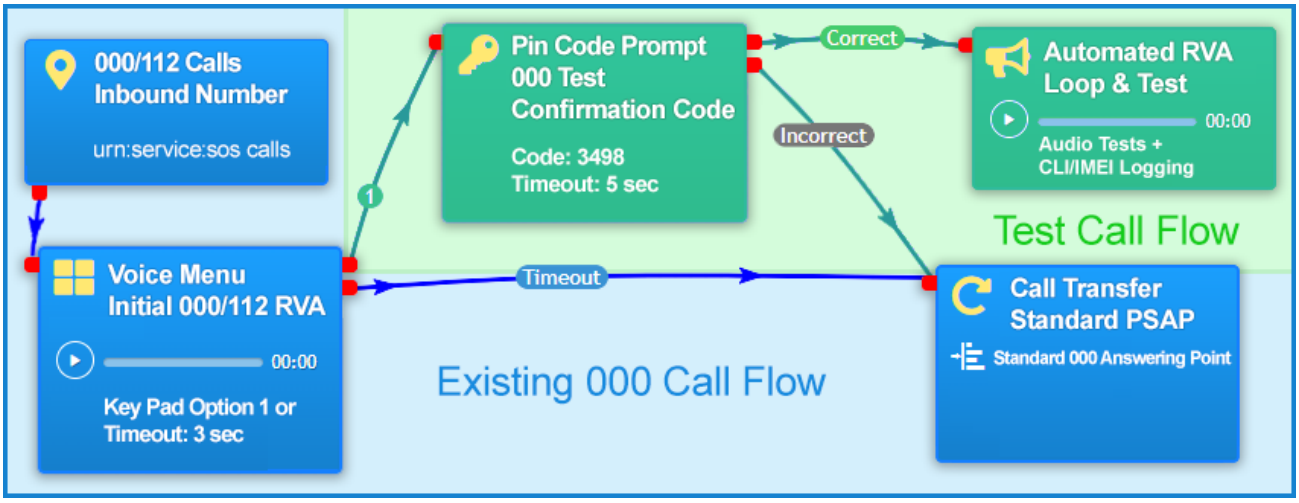
> *4. A Triple Zero "test call" facility may not be feasible*
>
> Telstra indicated that it investigated the possibility of creating a "test call" number that would allow consumers to test their devices before the shutdowns take place. Such a facility would route test calls to a recorded voice announcement (RVA) rather than the Emergency Call Person Answer Point. However, Telstra claimed that it would not be possible to guarantee that genuine Triple Zero calls would not end up at the test RVA. We intend to further discuss the feasibility of such a facility with the MNOs.

FOI 24–353 - Briefs to the Minister on the 3G network switch offs — 27 Mar 23 and 27 March 2024.
https://www.infrastructure.gov.au/sites/default/files/documents/foi-24-353--documents-for-release--pdf.pdf

That proposal was a good idea and would have provided very valuable data, and this should be revisited.

It would be extremely simple to automate this, and it could be designed in such a way to ensure that genuine 000 calls do not end up at the test RVA.

Refer to the example Call Flow below.



Example Call Flow for Emergency Calling & Automated Testing

It's worth mentioning that in the US members of the public can book a time to test call 911, there is no good reason why we shouldn't have that here and yes it **can be entirely automated** and does not require any human operators to be involved at any point.

The simple practical way to fix this is ensure all the networks follow the same internationally recognised 3GPP & ('Open Market Device') GSMA standards and enable individual device testing, just as we do for household fire & smoke alarms and other safety equipment.

It seems Optus only wants to accept AS/CA S042.1:2022 Testing Certification to unblock devices rather than more globally recognised long standing GSMA IR.92 & ETSI (European Telecommunications Standards Institute) Compliance Testing.

ATA - AS/CA S042.1:2022 Requirements for connection to an air interface of a Telecommunications Network
https://www.austelco.org.au/publication/s042-1-2022

The 'AS/CA S042 Standard' from the Communication Alliance simply just references existing ETSI Testing Documentation, which the industry globally already uses, so in a way it's an entirely redundant standard. We should accept and follow international global standards and not try to make our own.

Obviously Optus are doing this to minimise any exposure when it comes to 000 compatibility issues, following on from their major outage in November 2023. However that incident was due to problems with their network not wilting correctly, not directly customer devices.

Same issue largely occurred during the 18 September 2025 failure.

The providers should be responsible for their network and customers responsible for their devices.

To not have a way for the public to test their devices is like buying a smoke alarm that has no test button, the vendor says “oh, well we tested it when it came out of the factory and it was confirmed working and compliant then, so you don’t need a test button”.

That is quite obviously ridiculous.

Even if they then said, “well we test a sample of that model every 6 months and the samples we’ve tested passed, therefore your alarm works, so there’s nothing to worry about and you have no need to test”, is again ridiculous.

Yet that appears to be the current policy approach.

Based on the hundreds of 000 test calls I’ve placed on devices it’s very easy to identify which ones have issues or are likely not to work very well.

Especially Android devices where you have access to built-in settings and diagnostics that can tell you explicitly what network a device is on and how it’s placing the call.

There needs to be a system that allows people to use any device purchased from any provider in the world if it’s known and found to work for Emergency Calling on every network.

Devices that require 3G for Emergency Calls now just get stuck on calling.

The Samsung’s that don’t work on Vodafone also get stuck on calling with a Vodafone sim or settings selected.

Shutdowns & the 900MHz Band

To understand how we got to this position today being entirely reliant on Voice Over LTE with no 3G or 'Circuit Switched' (fallback) Call coverage, I felt it important to include some background about the events leading up to the shutdowns.

To simplify things, around 2019 work began to restructure the 900MHz Band.

900MHz is one of the primary 3G/WCDMA Bands, both Optus & Vodafone used 900MHz for 3G.

The previous 'apparatus licences' were set to be changed to longer 'spectrum licences'.

The spectrum was also going to be divided up into smaller sections/blocks better optimised for 4G/5G network technologies.

The auction approach that would eventually be chosen would clear all existing rights for that spectrum.

As part of this process the ACMA undertook a number of consultation exercises to establish the best approach and other impacts that may need to be considered.

The (then) Communication Minister and ACCC were also involved throughout these processes, as were the telcos and broader industry.

In the April 2019 *'Reconfiguring the 900 MHz band'* paper, the ACMA stated the following about Voice over LTE in regards to the future reconfiguration of the 900MHz 3G Bands and licences.

> "One of the key issues for licensees is the **uncertain timeline for the proliferation of Voice Over LTE** (VoLTE)-enabled devices among consumers. The **ACMA sought information from incumbent licensees** on the expected timing and **speed of consumer migration towards the use of VOLTE** handsets, but **still has no clear indication of intended migration paths**. **In the absence of receiving any further information** to support a more detailed assessment, the **ACMA considers that the proposed timeline outlined in this option** (i.e. **a mid-2024 clearance date** for existing apparatus licences) **provides enough opportunity for carriers to mitigate risks to the continuity of consumer services**."

ACMA – 'Reconfiguring the 900 MHz band - Options paper' - April 2019
https://acma.gov.au/sites/default/files/2019-08/IFC-11-2019-Consultation-paper-Reconfiguring%20the%20900%20MHz%20band.docx

When the ACMA made that assessment in **2019**, Android and iOS didn't even have support for VoLTE (International) Roaming Calling.

That software capability would only later arrive on devices with Android 12 **in 2021/2022** and with iPhones with iOS 15 the same year.

9to5 Google - Pixel 3 and 3 XL unexpectedly get new update with VoLTE roaming support – 2022-06-27
https://9to5google.com/2022/06/27/pixel-3-new-update/

Without VoLTE Roaming devices being used by Tourists can't make Standard Calls when using international roaming unless there are 2G/3G networks available.

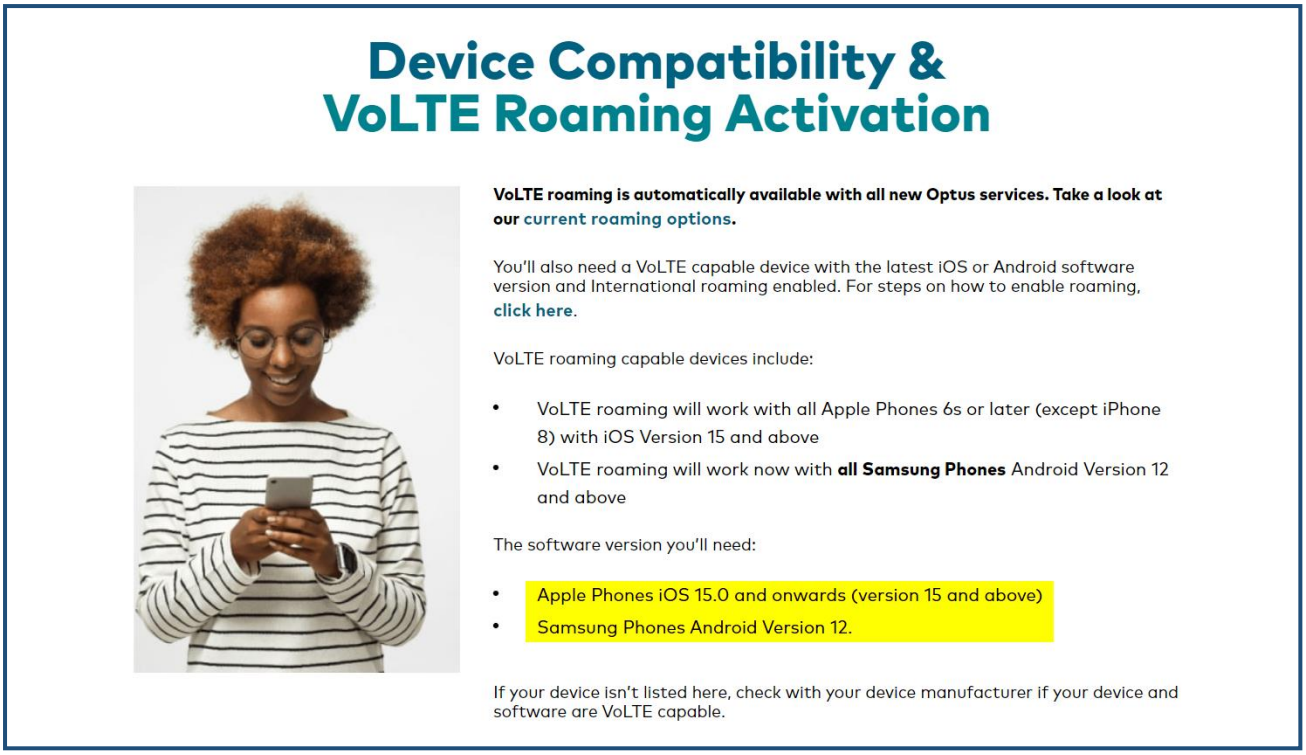


Figure 5 – 'Optus Device Compatibility & VoLTE Roaming Activation' - May 2024
https://www.optus.com.au/mobile/plans/international-roaming/volte

However, despite the roll-out of that feature in 2021/22, in 2023 devices from Android version 4 to 11 (2020) still made **up ~70% of the Global Android Device Market.**

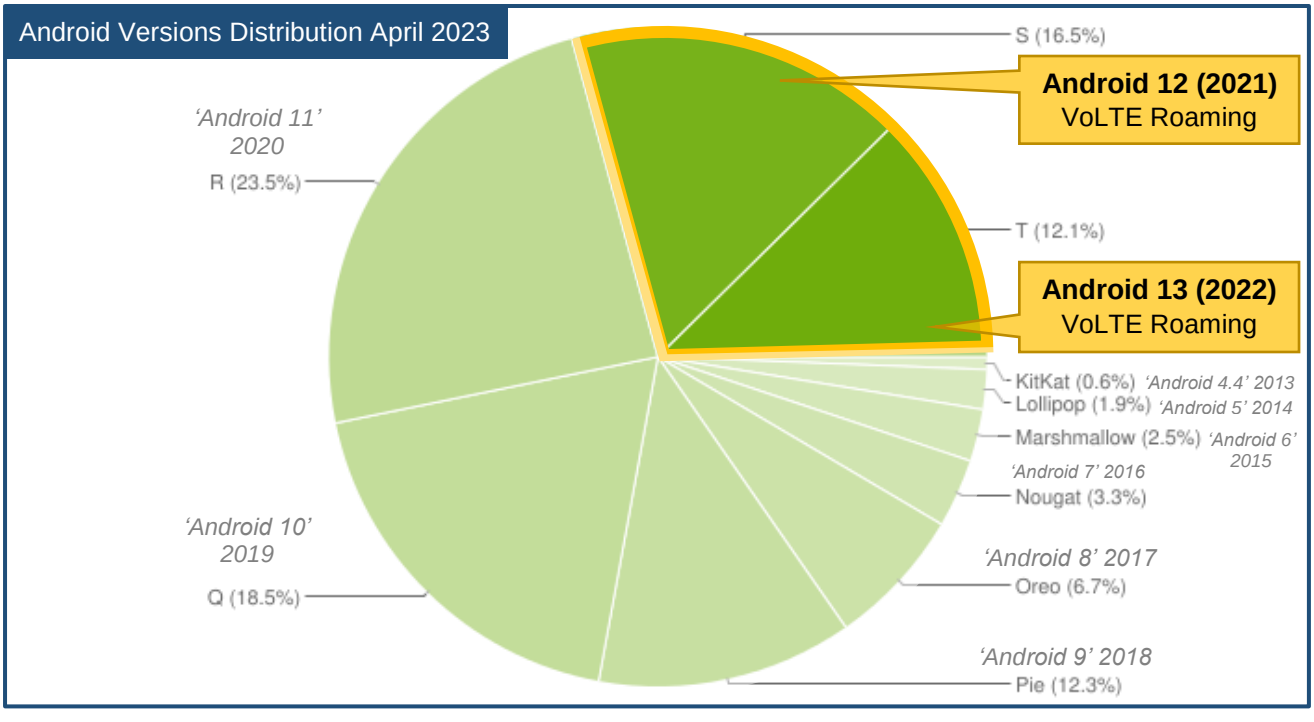


Figure 6 – Android 13 distribution April 2023 – Source: Android Authority & 9to5Google
https://www.androidauthority.com/android-13-distribution-2023-3312803
https://9to5google.com/2023/04/13/android-13-market-share-stats/2803

Yet despite that feature not even being on devices in 2019, mid-2024 was seen to 'provide enough opportunity for carriers to mitigate risks to the continuity of consumer services'.

Shutdowns & the 900MHz Band

Telstra's 3G Shutdown Announcement

In October 2019, 6 months after the release of that paper, Telstra said they would switch off their whole 3G Network in 2024.

The Sydney Morning Herald

Technology Telecommunications

The end is nigh for Telstra's 3G network; termination set for 2024

SMH - The end is nigh for Telstra's 3G network; termination set for 2024 - October 2019
https://www.smh.com.au/technology/the-end-is-nigh-for-telstra-s-3g-network-termination-set-for-2024-20191009-p52z0n.html

Yet only months earlier the ACMA had said:

> "One of the key issues for licensees is the **uncertain timeline for the proliferation of Voice Over LTE** (VoLTE)-enabled devices among consumers."

Along with "no clear indication of intended migration paths"

Telstra already held an existing 800MHz Spectrum license which covered operation of the 850MHz band being used for their 3G Network. That license is not (and was not) set to expire **until 2028.**

ACMA - Expiring spectrum licences
https://www.acma.gov.au/expiring-spectrum-licences

ACMA - Register of Radiocommunications Licences - Spectrum - 800 MHz Band Licences
https://web.acma.gov.au/rrl/browse_licences.licence_list?pSV_ID=85&pSS_ID=868

Telstra for reference used the 850MHz Frequency for their 3G Network, so it was not directly affected by the 900MHz Changes unlike Optus and Vodafone. Despite additional 850MHz also going to be on offer.

3G Band	Frequency	Telstra	Optus	TPG/Vodafone
Band 5	850 MHz	✔		
Band 8	900 MHz		✔	✔

3G WCDMA Band Usage Pre 3G Shutdown 2024

Telstra could have continued to choose to operate 3G on 850MHz beyond 2024 and purchase additional spectrum to provide those services, in addition to 4G/5G.

However for whatever reason instead saw fit to shut down 3G in mid-2024 (same time as the other 900MHz changes) and restructure the use of their existing 850MHz holdings and acquire additional spectrum for 4G/5G.

Vodafone & the 900MHz 3G Band

Further to that, in March 2021 Vodafone published in a now deleted article on their website stating:

> Vodafone is aware that in many regional communities across the nation, people will continue to rely on 3G to stay connected. **That's why we are committed to keeping our 3G mobile network operational for years to come in support of regional communities.**

They also went on to say that:

> Vodafone supports the Government's intention to guarantee it can purchase 900MHz spectrum at auction later this year. This will assist us in continuing to provide 3G services to those that rely on our 3G network. **If we are able to purchase the 900MHz spectrum needed, this will be used to ensure our 3G network's continuation.**

In closing the article said:

> Throughout the advancement of our technology, products and services, we have made it a priority to never forget our customer base and the key services mature technologies, like 3G, continue to offer many customers. **Mobile networks are expensive to operate and maintain, but Vodafone is willing to continue making that investment if the spectrum necessary for 3G is available.**
>
> **The incumbent telco is expected to shut down its 3G network in 2024. If a telco wishes to abandon the 3G network before its full lifespan is up, then that is a commercial decision for them.**
>
> But Vodafone believes those mobile carriers still committed to providing 3G services, and all the costs that come with that, should be supported in their efforts to provide quality services for as long as regional consumers and businesses need them.

Internet Archive - Wayback Machine – '3G's continued importance for regional Australia | Vodafone AU' – March 2021
https://web.archive.org/web/20210302145155/https://www.vodafone.com.au/red-wire/3gs-continued-importance-for-regional-australia

Shutdowns & the 900MHz Band

The December 2021 Spectrum Auctions

However TPG **did not bid** for any of the 900MHz spectrum later that year, despite it being available to them which meant their existing license to use that spectrum was set to expire in June 2024.

*With new licences for Optus and Telstra for that auctioned Spectrum to start **from 1 July 2024**.*

IT News - Optus and Telstra pay $2.1bn for low-band 5G spectrum - After TPG Telecom elects not to bid – 8 Dec 2021
https://www.itnews.com.au/news/optus-and-telstra-pay-21bn-for-low-band-5g-spectrum-573727

Licence period	**850/900 MHz band (excluding downshift spectrum):** 20 years commencing 1 July 2024, expiring 30 June 2044. **Downshift spectrum:** Commencing 1 July 2024, expiring 17 June 2028.

ACMA - Spectrum allocation and auction summary – 850/900 MHz band (2021)
https://www.acma.gov.au/spectrum-allocation-and-auction-summary-850900-mhz-band-2021

Optus acquired the entirety of the 900MHz on offer to them, and Telstra acquired additional 850MHz.

Product name	No of lots allocated	
	Optus	Telstra
850 major population	0	2
850 regional	0	2
900 lower major population*	1	0
900 lower regional**	1	0
900 upper major population	3	0
900 upper regional	3	0

ACMA - 850/900 MHz band auction results – 8 December 2021
https://www.acma.gov.au/850900-mhz-band-auction-results-0

TPG/Vodafone's 3G Shutdown Date

Then in **September 2022** TPG/Vodafone confirmed their 3G Shutdown start date of **15 December 2023**.

TPG Telecom confirms 3G switch off date – ARN Net – 27 September 2022
https://www.arnnet.com.au/article/1264293/tpg-telecom-confirms-3g-switch-off-date.html

TPG/Vodafone stated with that announcement that:

> "The retirement of older network technologies like 3G is part of an important industry-wide move to provide customers with better speed and greater functionality with today's modern smartphones and devices."

With their earlier '3G's continued importance' blog post deleted earlier that same year.

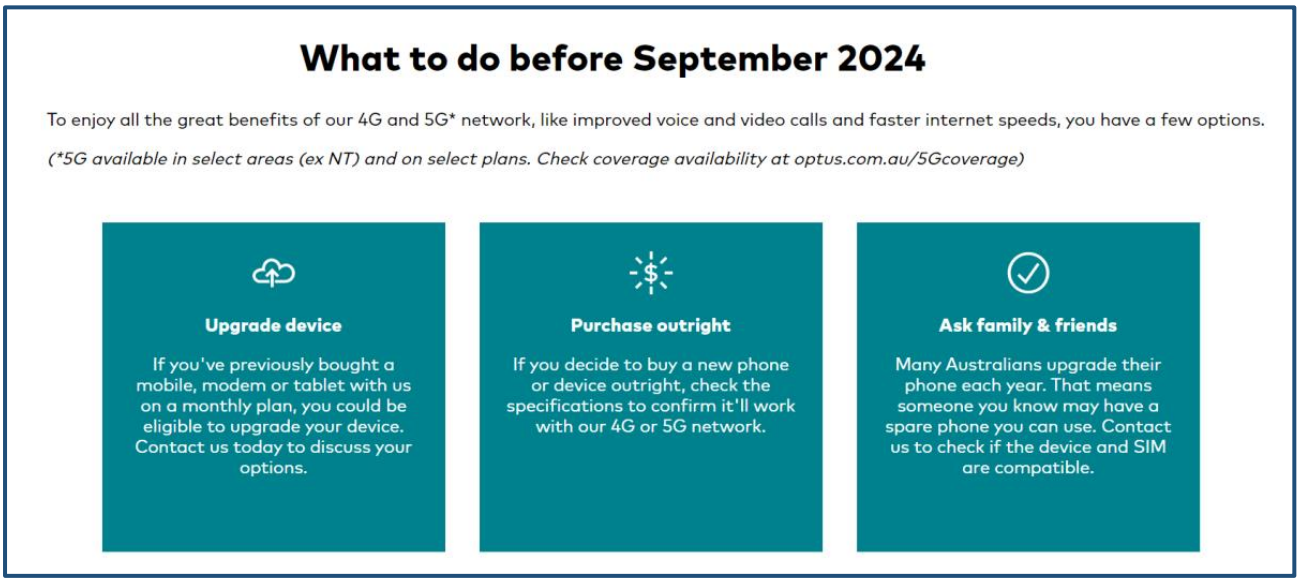
Replaced with articles about "*How 5G can help optimise agriculture"* and *"How 5G can help improve regional healthcare".*

https://web.archive.org/web/20221006100621/https://www.vodafone.com.au/red-wire/category/regional

Shutdowns & the 900MHz Band

Optus's 3G Shutdown Date

Then by early 2023 Optus had (quietly) posted on their website they would be phasing out 3G (900 MHz) by September 2024.



Web Archive – archive.org - Optus - Important Changes 3G – 2023-02-16
https://web.archive.org/web/20230216221601/https://www.optus.com.au/support/mobiles-tablets-wearables/important-changes-3g

There appears to have been no media release to go with those website changes, except for a Media Release from 2021 about the 're-farming' the 2100MHz 3G Band.

Which did not impact a large number of devices or Emergency Calling over 3G.

Optus Media Releases
https://www.optus.com.au/about/media-centre/media-releases

Optus – 'Optus to commence network technology refresh from April 2022' - 2100MHz 3G Re-farming Notice – 2021-04-30
https://www.optus.com.au/about/media-centre/media-releases/2021/04/Optus-to-commence-network-technology-refresh-from-April-2022

Therefore it seems mainstream reporting on a full shutdown by Optus wouldn't occur until August 2023.

ABC - 3G networks are being switched off across Australia but some still rely solely on the service - 2023-08-10
https://www.abc.net.au/news/rural/2023-08-10/3g-switch-off-looms-australia-telstra-optus-vodafone/102706118

Yet only a few years prior in late 2019 Optus said to the ACCC the following:

> *"30. Optus' 3G mobile network covers 98.5% of the population. The **3G network** is the network over which voice services are provided for the majority of Optus' 10 million mobile customers. While voice services can be provided over LTE through Voice over LTE (VOLTE) technologies, **VOLTE cannot be the sole technology relied upon to provide voice services**. There are several reasons for this including:*
>
> *(a) **Low VOLTE handset penetration**, **especially in regional areas**. As a result, **even if VOLTE were available over the whole network, end-users would be unable to use the technology due to incompatible handsets.***
> [....]"

Opus - 'Optus submission to the MTAS FAD discussion paper' ACCC - September 2019 - PG5
https://www.accc.gov.au/system/files/Optus%20submission%20to%20the%20MTAS%20FAD%20discussion%20paper.pdf

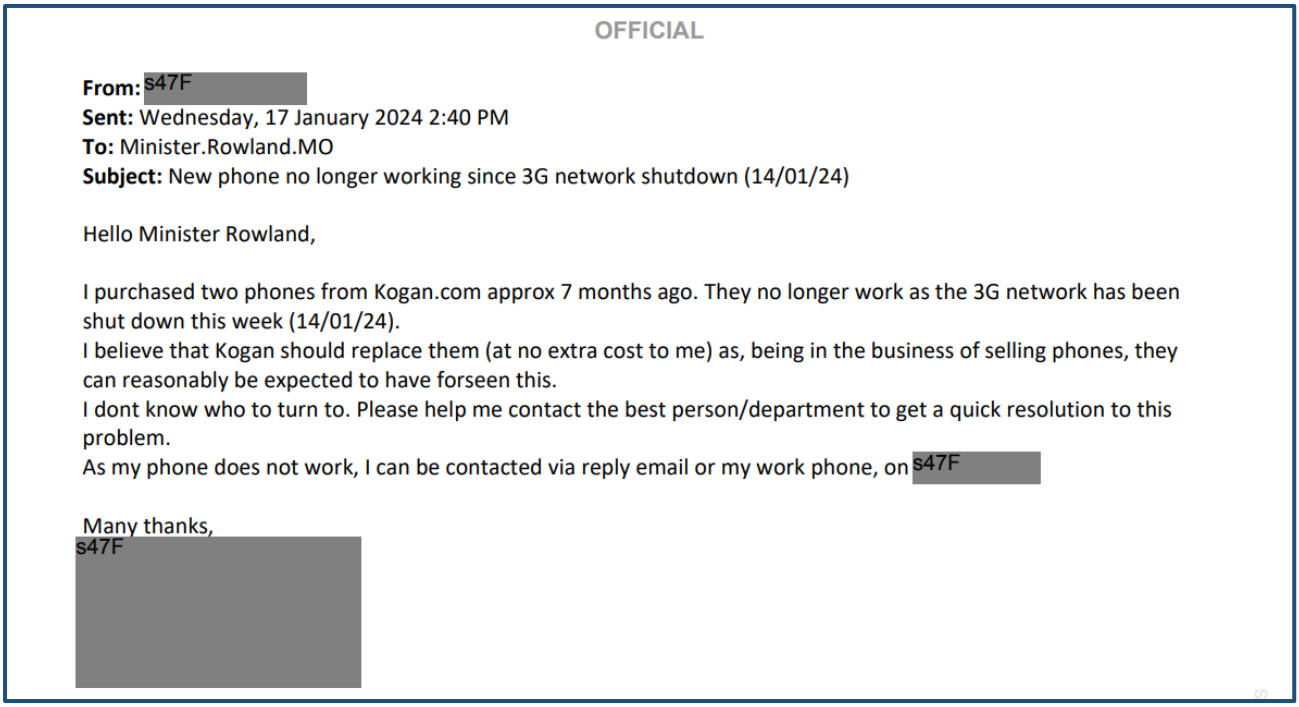
Post Shutdown issues with Vodafone

Again for reference the Department & Government did advise at the Inquiry last year (and in estimates) they weren't made aware of the scale of the problem of 4G phones that can call on 4G but not to 000 until early 2024.

Which was unfortunately after Vodafone shutdown their 3G Mobile Network.

Though there was awareness about 4G phones being unable to call on 4G post shutdown prior to then.

As shown in FOI emails released prior to the July 3G Inquiry Hearings, in early January/February 2024 Vodafone customers started writing to the (then) Minister complaining they lost Call Service on Brand new 4G/5G Phones



OFFICIAL

From: s47F
Sent: Wednesday, 17 January 2024 2:40 PM
To: Minister.Rowland.MO
Subject: New phone no longer working since 3G network shutdown (14/01/24)

Hello Minister Rowland,

I purchased two phones from Kogan.com approx 7 months ago. They no longer work as the 3G network has been shut down this week (14/01/24).
I believe that Kogan should replace them (at no extra cost to me) as, being in the business of selling phones, they can reasonably be expected to have forseen this.
I dont know who to turn to. Please help me contact the best person/department to get a quick resolution to this problem.
As my phone does not work, I can be contacted via reply email or my work phone, on s47F

Many thanks,
s47F

FOI 24–354 — Document 19
https://www.infrastructure.gov.au/sites/default/files/documents/foi-24-354--documents-for-release--pdf.pdf

Shutdowns & the 900MHz Band

RequestUrl	http://www.michellerowland.com.au/Umbraco/Api/GenericForm/Submit
IP	s47F
Created	2/2/2024 1:15:03 AM
Comments	Hi Michelle, I'd like to know why the 3G networks can be turned off (Vodafone especially) when there hasn't been enough warning. s47F because I'm unable to make or receive calls - even though I have a 4G phone manufactured in 2021 with VoLTE turned on. s47F I only received ONE generic notification via SMS on January 18 that the network would be shut down on January 21! s47F this is TOTALLY UNACCEPTABLE!!! I don't have enough money to buy another phone s47F ! I would really appreciate a response. I'd love to chat but my phone doesn't make or receive calls. Email, SMS and Zoom are still working though. THE GOVERNMENT AND SYSTEM HAS FAILED ME! Kindest regards, s47F

FOI 24–354 — Document 25
https://www.infrastructure.gov.au/sites/default/files/documents/foi-24-354--documents-for-release--pdf.pdf

The response to those customers at the time was to advise their device 'may be malfunctioning in some way' and to contact the manufacturer or retailer.

All major carriers have announced their intention to shut down their 3G networks in Australia. In September 2022, TPG Telecom announced that it would shut down its 3G network by 31 December 2023. Optus and Telstra also announced similar shut down plans. The shutdown will allow the carriers to redeploy the radiofrequencies currently used for 3G to the delivery of 4G and 5G services. This is similar to when the carriers shut down their 2G networks between 2016 and 2018. Consumers and suppliers of 3G-enabled mobile phones and other devices will need to migrate to a 4G compatible device.

In your correspondence, you indicated that your phone has 4G and VoLTE capability and can currently use internet services like email and Zoom, which indicates that your phone is capable of, and is, receiving internet access. It is therefore unclear whether the 3G shutdown is the cause of the issues you are facing. For instance, it may be that the device is malfunctioning in some way.

GPO Box 594, Canberra ACT 2601, Australia
• telephone 1800 075 001• websites infrastructure.gov.au | arts.gov.au
• ABN: 86 267 354 017

FOI 24–354 — Document 26
https://www.infrastructure.gov.au/sites/default/files/documents/foi-24-354--documents-for-release--pdf.pdf

Shutdowns & the 900MHz Band

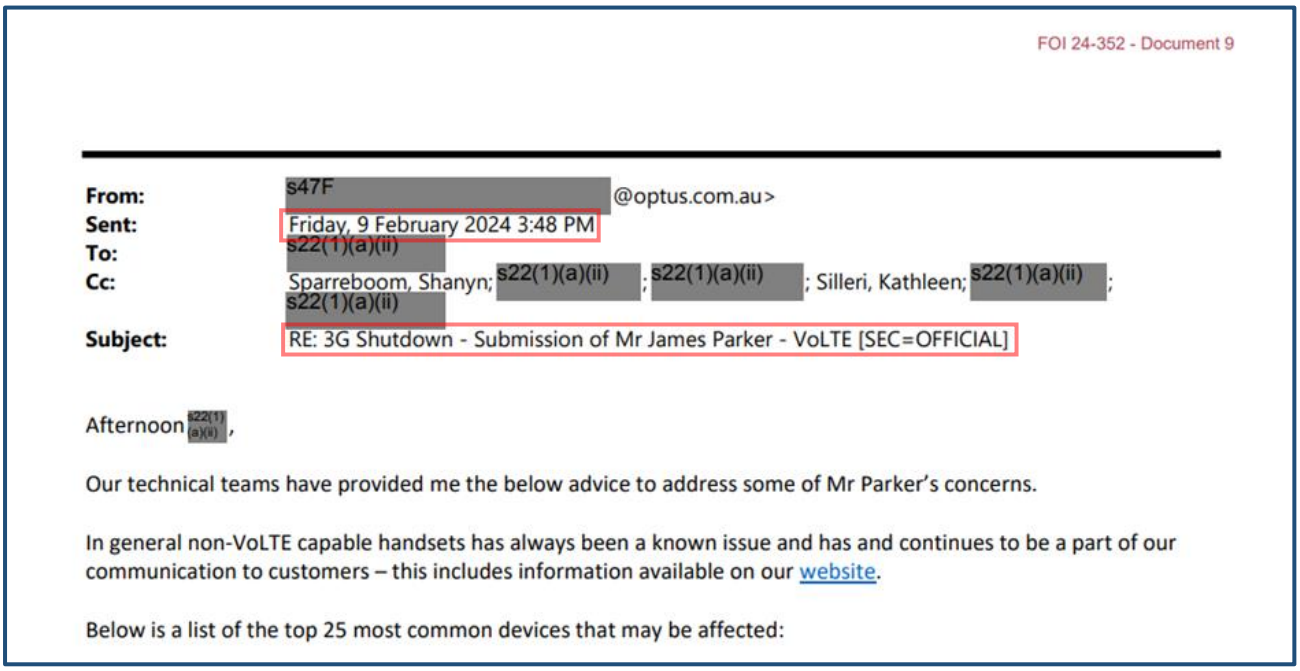
It also may not be known to this Committee but for reference, (as shown in those FOI emails) it appears I was the only member of the public in the entire country prior to February 2024 to warn the (then) Minister and Government about the unintended consequences of switching off 3G and 4G devices being unable to make calls and Emergency Calls on all networks due to issues with VoLTE.

FOI 24-354 - Document 2 – 6 June 2023 Email to (then) Minister Rowland regarding VoLTE & 3G Switch-off Impacts
https://www.infrastructure.gov.au/sites/default/files/documents/foi-24-354--documents-for-release--pdf.pdf

Further to that, on the 9th of February 2024 the Department of Infrastructure was talking to Optus regarding my 16 November 2023 'Optus Inquiry Submission', which is the same day the Optus Inquiry hearing was set to sit again.

Optus Network Outage - Public Hearings - Past Public Hearings and Transcripts
https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/OptusNetworkOutage/Public_Hearings

(That hearing was cancelled on the 8th of February, reportedly due to an illness within the Committee.)



FOI 24-352 - Document 9

From: s47F @optus.com.au>
Sent: Friday, 9 February 2024 3:48 PM
To: s22(1)(a)(ii)
Cc: Sparreboom, Shanyn; s22(1)(a)(ii); s22(1)(a)(ii); Silleri, Kathleen; s22(1)(a)(ii); s22(1)(a)(ii)
Subject: RE: 3G Shutdown - Submission of Mr James Parker - VoLTE [SEC=OFFICIAL]

Afternoon s22(1)(a)(ii),

Our technical teams have provided me the below advice to address some of Mr Parker's concerns.

In general non-VoLTE capable handsets has always been a known issue and has and continues to be a part of our communication to customers – this includes information available on our website.

Below is a list of the top 25 most common devices that may be affected:

FOI 24–352 - Quarterly reports from Telstra & Optus RE 3G network switch offs - 27 Mar 2023 to 27 Mar 2024 – Doc 9
https://www.infrastructure.gov.au/sites/default/files/documents/foi-24-352--documents-for-release--pdf.pdf

It appears the Department rightfully wasn't satisfied with the answers from Optus and the new complaints from Vodafone customers.

Then on **26 February 2024** the providers briefed the Government about the issue of 4G VoLTE enabled phones being unable to call 000.

Then in March it was reported that more than 740,000 4G enabled phones wouldn't be able to call 000.

ABC - More than a million older mobile phones at risk of being blocked from making triple-0 calls – 2024-04-08
https://www.abc.net.au/news/2024-04-08/million-iphone-android-devices-caught-out-3g-shutdown/10367386410

However that was **one tiny part of the problem**.

That didn't include all of the 4G/5G devices that wouldn't be able to make any calls, including Emergency Calls. Or only Calls or Emergency Calls on some networks post shutdown.

By this point Vodafone had shutdown, so rather than delaying the shutdown entirely a 'working group' was established. Which honestly to some extent made things worse.

Awareness by Optus that not all VoLTE enabled Phones Support Emergency Calling

However as early as 2018 the Optus Website had information regarding devices that support (4G) VoLTE calls on Optus but not to Emergency Services.

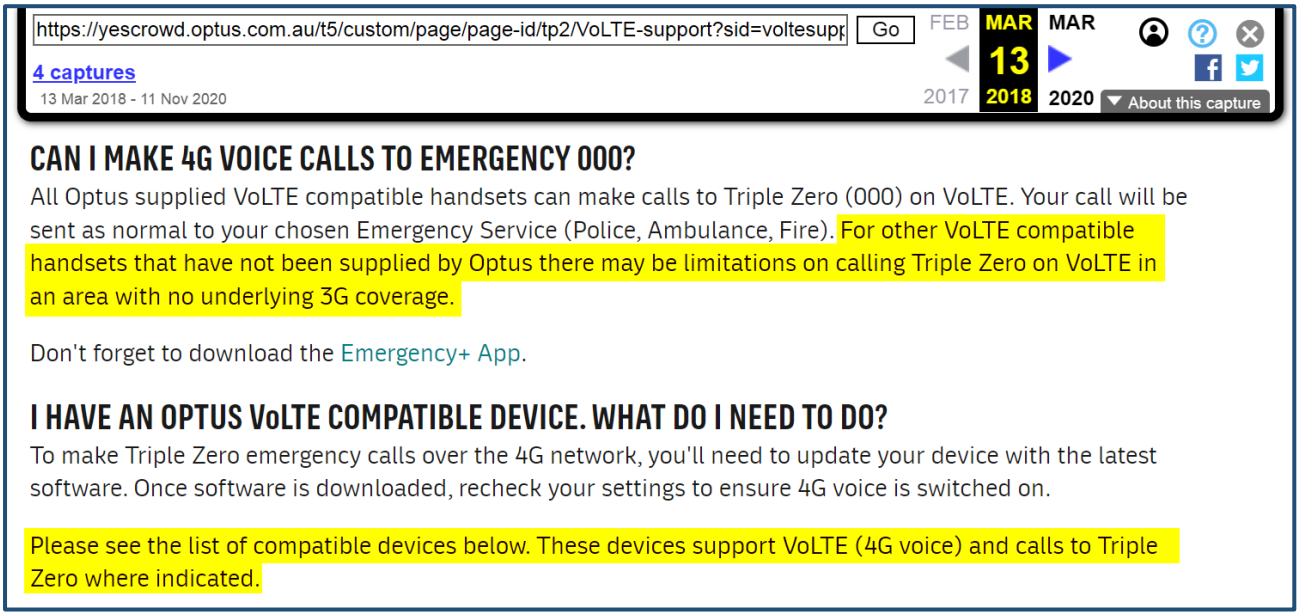
It does bring into further Question how Optus (and by extension regulators) were not aware of the scale of this "fourth category" of device until late 2023/early 2024.

In the documents obtained under FOI and tabled at the 3G Inquiry it states the following:

*"**Devices impacted by the 3G shutdowns***
There are four broad categories of mobile devices that will be impacted:"

> 4. *4G devices with VoLTE capability, but are unable to make emergency calls:* On 26 February 2024, the MNOs briefed the department on this fourth category of 4G phones that support 4G VoLTE, but rely on 3G Circuit Switched fallback for emergency calls. The department understands these devices will continue to make and receive regular calls following the 3G shutdowns, but must use a 3G network to make emergency calls. These devices were commonly released to the market between 2014 and 2016, but some as recently as 2019.

FOI 24-353 - Briefs to the Minister for Communications on the 3G network switch offs – 27 March 2023 - 27 March 2024
https://www.infrastructure.gov.au/sites/default/files/documents/foi-24-353--documents-for-release--pdf.pdf



Optus – VoLTE Support Page – 2018-03-13
https://web.archive.org/web/20180313194746/https://yescrowd.optus.com.au/t5/custom/page/page-id/tp2/VoLTE-support?sid=voltesupport:from:4gplus:fy2018

As I wrote in my Supplementary 3G Inquiry Submission, I originally read this information from the Optus website a number of years ago and assumed this issue was well known by industry & regulators.

It does raise the question how this issue was not thoroughly looked into until early 2024.

Shutdowns & the 900MHz Band

Optus advised at the 24 July 2024 3G Shutdown Inquiry hearing they only became aware of the problem in the second half of 2023 'trying to understand the issues'

Mr Sheridan (Optus): I'm happy to answer that question and then hand over to Telstra. There were technical discussions with the operators in the second half of 2023, trying to understand the issues.

We then went through a very detailed exercise of analysing specific devices, and my colleagues can talk to some of the work that has been done.

We were only able to provide a view in terms of the size of the impact **in late February 2024**.

Rural and Regional Affairs and Transport References Committee - 24/07/2024 - Shutdown of the 3G mobile network
https://www.aph.gov.au/Parliamentary_Business/Hansard/Hansard_Display?bid=committees/commsen/28168/&sid=0000

Senate Rural & Regional Affairs & Transport References Committee | 3G Inquiry - 24/07/2024 (Section at 24mins)
https://www.youtube.com/live/HvDvnfWTou0?t=1465s

Again, yet in 2019 said the following to the ACCC.

*"30. Optus' 3G mobile network covers 98.5% of the population. The **3G network** **is the network over which voice services are provided for the majority** **of Optus' 10 million mobile customers**. While voice services can be provided over LTE through Voice over LTE (VOLTE) technologies, **VOLTE cannot be the sole technology** **relied upon to provide voice services**. There are several reasons for this including:*

*(a) **Low VOLTE handset penetration**, **especially in regional areas**. As a result, **even if VOLTE were available over the whole network, end-users would be unable to use the technology due to incompatible handsets.***
[....]"

Opus - 'Optus submission to the MTAS FAD discussion paper' ACCC - September 2019 - PG5
https://www.accc.gov.au/system/files/Optus%20submission%20to%20the%20MTAS%20FAD%20discussion%20paper.pdf

The only reason why I want to draw any attention to all of this is to provide some much needed context in how the Shutdowns even went ahead and why we now face significant issues with device interoperability between networks and with Emergency Calls.

This is **not** normal, this is **not** how things are supposed to work, nor how things have worked for the last 20-30 years with 2G and 3G.

Letters to Government & Regulators

Following on from the release of the Final 3G Shutdown Senate Inquiry Report and a lack of resolution to the issues faced by consumers with the blocking & shutdown (along with the unaddressed safety issues), I wrote to both Communications Minister Rowland and the ACMA about the various issues.

March Submission to the ACMA's 'Compliance Priorities' Consultation

For the ACMA, in February this year they opened their annual compliance priorities consultation.

ACMA - Compliance priorities 2025–26
https://www.acma.gov.au/consultations/2025-01/compliance-priorities-2025-26

One of the listed priority areas was "Safeguarding Triple Zero emergency call services"

> **Safeguarding Triple Zero emergency call services**
> We are focused on the compliance of carriers, carriage service providers and Emergency Call Persons so that calls are successfully carried to emergency services. We have also been working to implement the tasks that fall to us within the Australian Government's response to the recommendations of the Bean Report into the Optus outage.

ACMA - Compliance priorities 2025–26 - Consultation paper – February 2025
https://www.acma.gov.au/sites/default/files/2025-03/Compliance%20priorities%202025-26_consultation%20paper.pdf

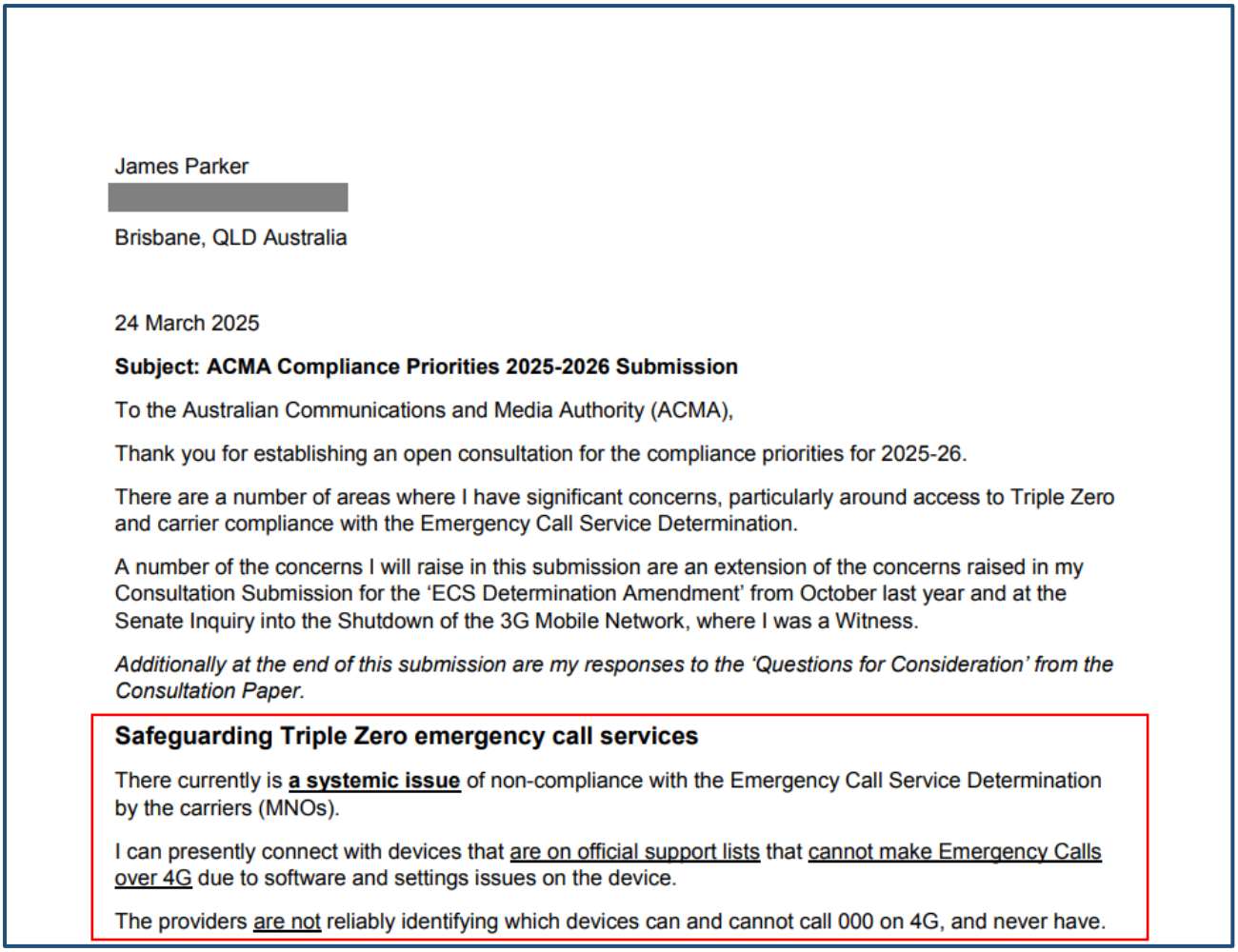
The ACMA also outlined target areas that are

- That are of significant public interest or concern, including those that cause harm to consumers.
- Where we have identified risks of non-compliance, and where our work can encourage compliant behaviour or deter non-compliance.
- Where we can clarify the application of the law, or potentially increase consumer confidence.
- That are the subject of new legislation or regulation, or other important developments.

In late March I provided a 19 page submission to that Annual Compliance Priorities consultation.

Within that submission I outlined there was systemic non-compliance of the Emergency Call Service Determination by the Carriers and that I could connect with devices that are on official support lists that **cannot call 000**.

Letters to Government & Regulators



James Parker
[redacted]
Brisbane, QLD Australia

24 March 2025

Subject: ACMA Compliance Priorities 2025-2026 Submission

To the Australian Communications and Media Authority (ACMA),

Thank you for establishing an open consultation for the compliance priorities for 2025-26.

There are a number of areas where I have significant concerns, particularly around access to Triple Zero and carrier compliance with the Emergency Call Service Determination.

A number of the concerns I will raise in this submission are an extension of the concerns raised in my Consultation Submission for the 'ECS Determination Amendment' from October last year and at the Senate Inquiry into the Shutdown of the 3G Mobile Network, where I was a Witness.

Additionally at the end of this submission are my responses to the 'Questions for Consideration' from the Consultation Paper.

Safeguarding Triple Zero emergency call services

There currently is **a systemic issue** of non-compliance with the Emergency Call Service Determination by the carriers (MNOs).

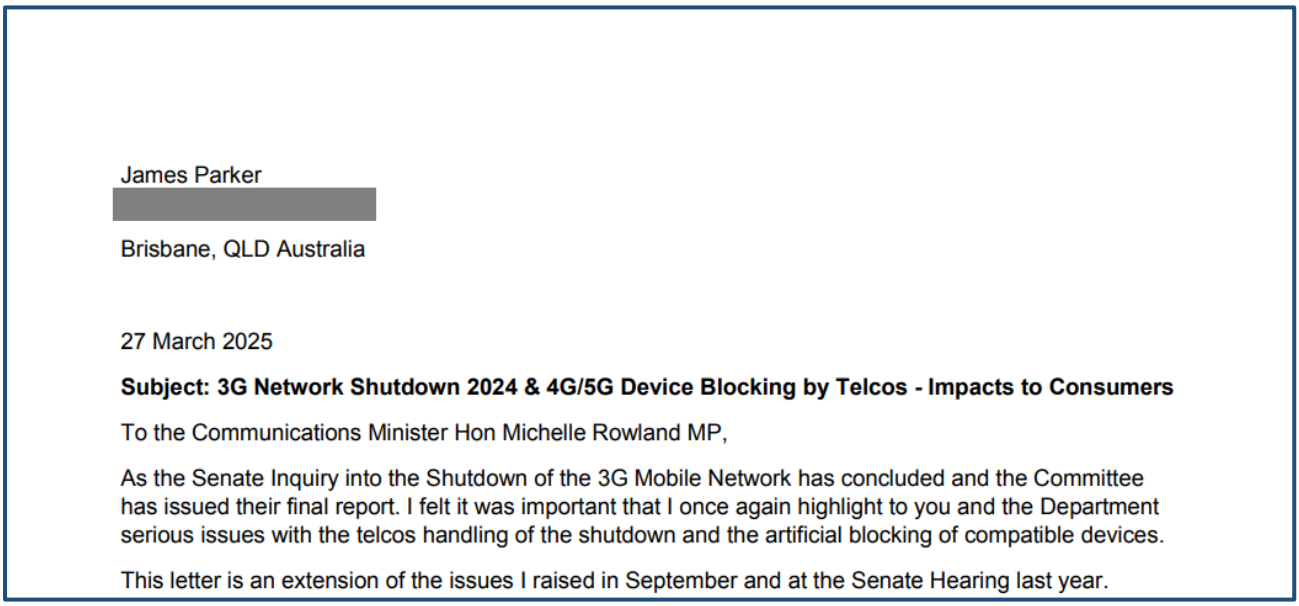
I can presently connect with devices that are on official support lists that cannot make Emergency Calls over 4G due to software and settings issues on the device.

The providers are not reliably identifying which devices can and cannot call 000 on 4G, and never have.

ACMA - Compliance priorities 2025–26 – Consultation Submission Extract – James Parker - 24 March 2025
(The ACMA's Compliance Priorities originally closed on 24 March but a few days later was extended to 11 April 2025.)

March Letter to Communications Minister Rowland

Then a few days later I wrote a similar longer (42 page) letter to Minister Rowland about the issues.



James Parker
[redacted]
Brisbane, QLD Australia

27 March 2025

Subject: 3G Network Shutdown 2024 & 4G/5G Device Blocking by Telcos - Impacts to Consumers

To the Communications Minister Hon Michelle Rowland MP,

As the Senate Inquiry into the Shutdown of the 3G Mobile Network has concluded and the Committee has issued their final report. I felt it was important that I once again highlight to you and the Department serious issues with the telcos handling of the shutdown and the artificial blocking of compatible devices.

This letter is an extension of the issues I raised in September and at the Senate Hearing last year.

Letter to (then) Communications Minister Rowland – 27 March 2025 - Attachment

Letters to Government & Regulators

Responses

Those letters understandably received the standard auto-replies.
After writing to the Minister the election was subsequently called the following day on 28 March.

I then received a standard under 'caretaker conventions' response letter from the Department of Infrastructure 'Competition and Spectrum Branch' on 28 April 2025.

That letter also confirmed that my March letter to the Minister had also been sent to the ACMA.

In May I received further correspondence from the Department of Infrastructure regarding my letter.

Since May I've provided additional information to the Department about various issues and concerns including the OpenSIPS issue.

August Letter to Minister Wells

On 21 August 2025 I wrote a letter to Minister Wells regarding the same issues I raised in my March 2025 letter to her predecessor, and to the ACMA.

Along with further detail regarding the website I developed and the continued consumer harms due to systemic **non-compliance** by the carriers.

James Parker
[redacted]
Brisbane, QLD Australia

21 August 2025

Subject: 3G Network Shutdown 2024 & 4G/5G Device Blocking by Telcos - Impacts to Consumers

To the Communications Minister and Member for Lilley Hon Anika Wells MP,

Firstly I would like to congratulate you on your re-election as the member for Lilley and your appointment to the role of Communications Minister.

In late March I wrote to your predecessor the Hon Michelle Rowland regarding the impacts to consumers following on from the 3G Shutdown and the harms to consumers that resulted from the changes to the Emergency Call Service Determination. Along with the failure of the network carriers (MNOs) to use accurate methods to determine the 000 calling capabilities of devices.

A copy of that original letter has been enclosed for your reference, it contains additional information.

Letter to Communications Minister Wells – 21 August 2025 - Attachment

In that letter I requested an opportunity to speak to her to discuss these issues, as Minister Wells while also the Communications Minister, is also my Local MP for the electorate of Lilley in Brisbane.

I also indicated I appreciated the contact I received earlier in the year from the Department about my concerns and looked forward to engaging further about these issues.

September Meeting with the Communications Minister

Again as this submission is about transparency.

I had an opportunity to meet with the Communications Minister Anika Wells about my concerns on Wednesday the 17th of September at 1PM at her Lilley Electorate Office.

Two Senior Department Officials and an advisor to the Minister were also in attendance.

I raised a number of things during that half hour meeting including issues around inaccurate device classifications, standardisation problems with the carrier's networks, along with device compatibility issues when it comes to calling 000.

In addition to the impacts to consumers with inaccurate blocking and associated competition issues.

I didn't entirely expect something to go wrong (again) with 000 less than 12 hours later, *(nor the crises that have unfolded since).*

But given the issue I was there to discuss and some of the content of that meeting, it may not have come as a complete surprise to those in attendance.

The systemic issues at Optus I think have been obvious for some time, and I hope with this submission the various issues are now abundantly clear.

Again I am including this information in this submission to provide a full picture of events and my involvement on this issue to date.

Entirely in the interests and the pursuit of transparency, and particularly for the more than 10,000 people that have signed my petition.

I feel this Inquiry submission is the right place to share this information with the public.

Technically speaking, given the type of failure that occurred with Optus, there isn't anything directly that could have been done to prevent what happened during the upgrade only 12 hours later.

Along with the mismanagement of them not detecting the problem and fixing the issue.

But the follow-on effects of people using phones that don't work properly or reliably for Emergency Calling has been occurring for some time.

This was (and is) preventable and I've been warning about it for more than a year.

Along with perfectly compatible 4G and new 5G phones being incorrectly blocked by some or all of the providers and consumers being left out of pocket.

One of the outcomes from that meeting and 'first steps' was to meet with the ACMA to discuss the issues further as they are the technical regulator in charge of the Emergency Call Service Determination.

Letters to Government & Regulators

Meeting with the ACMA

I was initially going to speak to the ACMA on the following Wednesday the 24th of September, but understandably it had to be delayed a week until 1 October 2025.

Meeting - 3G network shutdown [SEC=OFFICIAL]

Mon 15 Sept, 15:12

to me

OFFICIAL

Dear Mr Parker, I understand you met with the Department of Infrastructure, Transport, Regional Development, Communications, Sports and the Arts last week to discuss mobile phones impacted by the 3G network shutdown. I understand you may like to meet with us at the Australian Communications and Media Authority too. If you are keen to meet I am available at the following times next week. Please let me know if one of these dates/times suits you.

- Monday 22 September – 230-330-pm
- Tuesday 23 September – 230-330pm
- Wednesday 24 September – 3-4pm

Regards

[redacted]
Manager National Interests

Australian Communications and Media Authority

I had that meeting with two representatives from the ACMA on the 1st of October.

A number of items were discussed and the meeting was quite constructive.
Though at the time of writing a follow-up meeting is yet to be arranged.

I raised many similar points to what I raised previously with the Minister and in my previous letters.

I would like to discuss these issues further with the ACMA and I'm happy to engage with anyone on these matters to find solutions that both ensure public safety and trust in the Triple Zero system, whilst ensuring that consumers are fairly protected.

Solutions & What Needs To Be Done

There are a wide variety of ways to resolve this issue, this problem is entirely fixable.
But most of it starts with public transparency of information to ensure the telcos can be held accountable.

I believe there should be the following:

1. **Full Public Data Disclosure**
   Immediately require all of the MNOs to publicly publish (in a downloadable Spreadsheet format) their current device blocking and support lists, including all of the historical blocking and compatibility lists from prior to the shutdown (and to date).
   That data **must** also include what they categorised each device as and the observed call volumes for each model that led to them determining if something should be blocked or not.
   The carriers **need to prove why** a certain model should be blocked.
   That data needs to be public.
   Categories at minimum need to specify '3G Only, 4G but 3G for calls, 4G for Calls but 3G for 000' etc.

2. **Real World Triple Zero Call Data for Models**
   The providers must provide a public list of all the device TACs (Makes & Models) that have placed anonymous 'camp-on' Emergency Calls on their network both for the year prior to the shutdown and since the shutdown (including to date).
   That list will include a large number of VoLTE 000 Capable phones that have been blocked in error.
   This information and the list of TACs must be public.

3. **An Automated Public 000 Test Line**
   Consumers must have the right and ability to carry out an automated 000 call test on their device.
   Telco customers can be provided information and instructions from their carrier that allows them to carry out an automated 000 'call quality and audio test' on their device.
   This would allow for better identification of both device issues and coverage issues, particularly in regional areas with limited mobile coverage.

4. **Standardisation & Compliance with Global Standards**
   Immediately ensure that all carriers are following best practice standards for VoLTE Emergency Calling, including support for both IPv4 and IPv6 and any other settings required to ensure maximum interoperability with as many devices as possible.

5. **Publish Device Testing Results**
   Both carrier and device testing facility data should be made public so consumers can be better informed about the capabilities of their devices in given failure situations. Various makes and types of devices should be tested to ensure a representative sample.

6. **Requirement to ensure the carriers supply like-for-like free replacements**
   The Determination should be modified to ensure not just 'low or no cost' handsets are available for impacted consumers but consumers can obtain devices that are fit for purpose for their needs.

There are other solutions available as well that could be implemented such as IMSI whitelisting for specific Sim Cards for testing purposes. Not blocking devices but instead forcing 30-60 long outbound call messages to deter/prevent use as a mobile phone etc.

Summary/Closing

In summary the recent issues we've seen with Optus & telcos and around Emergency Calling are now the new normal, and it shouldn't be.

It's clear whatever regulatory arrangements that are in place and have been since the shutdown are not delivering the outcomes Australians expect and deserve, nor are they keeping the telcos accountable.

Consumers have been harmed and **are being harmed at an industrial scale** entirely in the pursuit of cost cutting and maximising profits, and clearly at any cost, including public safety.

It's clear there needs to be proactive regulation of the sector.

At the core, this is an issue of fairness and it's a situation where the interests of the carriers have been placed above and at the expense of the public and public safety.

That is absolutely undeniable.

It's very much another instance of privatised gains and socialised losses.
Profits flow to carriers & industry, while the public bears all the burden for this transition.

All while lives are put at risk.

As I warned to the Minister and ACMA last year, the changes to the Emergency Call Service Determination and the 3G Shutdown did result in significant financial impacts to people, and during a cost of living crisis.

In the tens to hundreds of millions of dollars.
Whilst not actually addressing any of the technical issues or anticompetitive conduct by the telcos.

People have not been made whole by the telcos and are still individually out of pocket hundreds to thousands of dollars.

This was entirely foreseeable and entirely preventable. The previous actions and inaction of the Department, ACMA, ACCC and (then) Minister resulted in this happening.

Though unintended it may be.

For the Government & Regulators to not intervene on this issue even back in 2023 is a clear policy failure when it comes to dealing with cost of living.

Not to mention the issues around network reliability, public safety and competition

There are a number of issues I highlighted here in my submission which raise serious concerns around the carrier compliance with the Emergency Call Service Determination, including notification to customers and the reported lack of low or no cost replacements being provided.

All of these concerns need to be taken seriously and properly investigated.

Vodafone also managed to shut down their 3G Network entirely before there was sufficient scrutiny over this issue, or it seems even proper awareness.

It appears Vodafone was well aware of the problem and despite their network arguably having more issues with older device compatibility, they proceeded with the shutdown regardless.

Not warning customers or the public.

I believe the events around their shutdown do need to be thoroughly examined as well, as we might not be in this situation today had they, along with the rest of the industry, been open about the problems.

It seems that had it not been for the 2023 Optus Outage Inquiry and public scrutiny about Emergency Calling, that Telstra and Optus may have switched off with these issues being entirely unaddressed.

Summary/Closing

Little if any real consideration was given to ensure handsets were compatible before allowing the providers to announce switch-off dates. Let alone proceeding with it when they did.

The telcos need to take direct responsibility for the problems they caused and need to be held accountable.

This is a situation where people did **nothing wrong**.

They did what they were told and upgraded to phones that work perfectly on 4G, including for 000, and they should be entitled to use the devices they own that work.

The telcos will always try to paint this situation in the best possible light for themselves, pushing the blame onto their customers, retailers or handset vendors and not taking any responsibility.

Like everyone I hope to see all of the issues with Triple Zero resolved, though that remains to be seen and there is a lot of work ahead if that's going to be achieved.

I want the situation to improve, and for telco customers to be treated fairly and for the public to have faith with Triple Zero & and their devices.

But given events to date and the previous track record with the handling of these issues,
We may instead see rushed panic responses, rather than a measured, considered response.

We need proportionate responses and appropriate fact-based solutions.
I would ask that that is kept at the forefront of considerations.

There must be a consumer first focus and mindset to these issues.
The public **must not** be unfairly impacted and the telcos must do the right thing.

I hope my submission has been of benefit to the Committee & Public, and I hope this issue gets the level of scrutiny that is desperately needed.

Once again, I would also be more than happy to answer any questions the Committee may have about this submission and related attachments, as I have done previously for the 3G Shutdown Senate Inquiry.

This is an issue I care deeply about and want to see resolved.

Regards

James Parker

Attachments List

PDF Documents provided separately to this Submission.

Merged Documents Table of Contents

1) **Senate Inquiry Submissions by James Parker**
   a) 3G Shutdown Senate Inquiry Submission #32 - 30 May 2024
   b) 3G Shutdown Senate Inquiry Supplementary Submission #32.1 - 1 August 2024
   c) Email Submission to the RRAT 3G Shutdown Inquiry Committee - 28 November 2024
   d) Email Submission to the RRAT 3G Shutdown Inquiry Committee - 4 February 2025

2) **Letters to the Communications Minister & Regulators (& Responses)**
   a) Letter to Communications Minister Rowland RE the ECS Determination - 19 Sep 2024
   b) Letter from (then) Senator Rennick to Minister Rowland RE 19 Sep 24 Letter - 20 Sep 2024
   c) Response from Minister Rowland to (then) Senator Rennick RE 19 Sep 24 Letter - 29 Oct 2024
   d) Submission to the ACMA - RE Compliance Priorities 2025-2026 - James Parker - 24 March 2025
   e) Letter to the Minister Rowland - RE 3G Shutdown & 4G Device Blocking - 27 March 2025
   f) Response from the Department of Infrastructure RE Caretaker Mode & Letter - 28 April 2025
   g) Letter to the Minister Wells - RE 3G Network Shutdown - 4G/5G Device Blocking - 21 Aug 2025

3) **Petition Survey Results**
   a) 3G Shutdown & Device Blocking Consumer Survey Results & Comments