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Brisbane, QLD Australia

30 June 2026

Subject: Submission to the 'Triple Zero Legislative and Regulatory Review',

To the Triple Zero Custodian Operations Branch - Triple Zero Custodian Division, DITRCSA

Thank you for opening the submissions for the Triple Zero Legislative and Regulatory Review.

The Triple Zero System and the laws & regulations that underpin its function are of utmost importance and this review is very welcome given recent incidents related to Triple Zero.

As the Department would be aware, I have been closing following matters related to Triple Zero and 4G Device Compatibility since 2023. This included being a witness at the Senate Inquiry into the Shutdown of the 3G Mobile Network in July 2024.

At that Inquiry I spoke at length about device compatibility issues with 4G Calling and Emergency Calling, along with the need for uniform & robust standards when it comes to Voice over LTE on 4G/5G.

I note the within the Terms of Reference of this review and one of the matters for consideration is *'The effectiveness and appropriateness of rules requiring that customer equipment to be capable of contacting Triple Zero'.*

Much of this submission will focus on the technical aspects of this issue, along with the unintended impacts following on from the introduction of the device blocking requirements in the Emergency Call Service Determination in 2024.

This submission will go into detail about what should be done to ensure we have the right policy and regulatory settings in place around these requirements.

I will also touch on a range of other matters related to Triple Zero, including regulations, technical standards and other associated issues.

For completeness, I have also included a copy of the Submission I provided to the Triple Zero Outage Senate Inquiry in November 2025.

That Inquiry submission covers a number of related areas in further detail, however there is some overlap with this submission.

As part of this consultation and review I would also be more than happy to make myself available to the Department & Custodian to discuss my submission and any other matters related to Triple Zero.

I would appreciate the opportunity to provide constructive input on these matters to help ensure fairness for consumers and effective public safety outcomes.

Thank you for your time.

Regards

James Parker
Brisbane, QLD

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Submission Foreword

I will start off by apologising in advance for the length of this submission along with the heavy amounts of very technical content.

A number of sections within this submission will be highly technical in nature and go into extensive detail about technical device compatibility issues, standardisation problems, along with carrier deficiencies & compliance concerns.

However given the importance of these issues I felt it important to include as much relevant detail as possible to ensure that these matters can be thoroughly reviewed as part of this consultation process.

Where possible I have broken down some of these component aspects to be more general and simplified.

With the right regulatory and policy settings in place Australia has the potential to be world leading when it comes to all matters that relate to Emergency Calling & Communications and this review is central to that occurring.

I do earnestly hope this submission makes a valuable contribution in achieving that outcome.

I would also like to say the engagement by the Triple Zero Custodian and Department over the past 12 months around these matters has been very welcome.

The Emergency Call Service Determination & Device Blocking

As the Department would be aware, on 21 August 2024, (then) Communications Minister 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**.

As not all 4G phones that support calling on 4G can make Emergency Calls to 000 on 4G.

ABC - Millions of Devices Caught out by 3G Shutdown - 8 April 2024
https://www.abc.net.au/news/2024-04-08/million-iphone-android-devices-caught-out-3g-shutdown/103673864

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

> 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

Online Petition

As the Department and Custodian may be aware, in response to the direction from the Minister, 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 **10,800 signatures**, over 90% are from Australia.

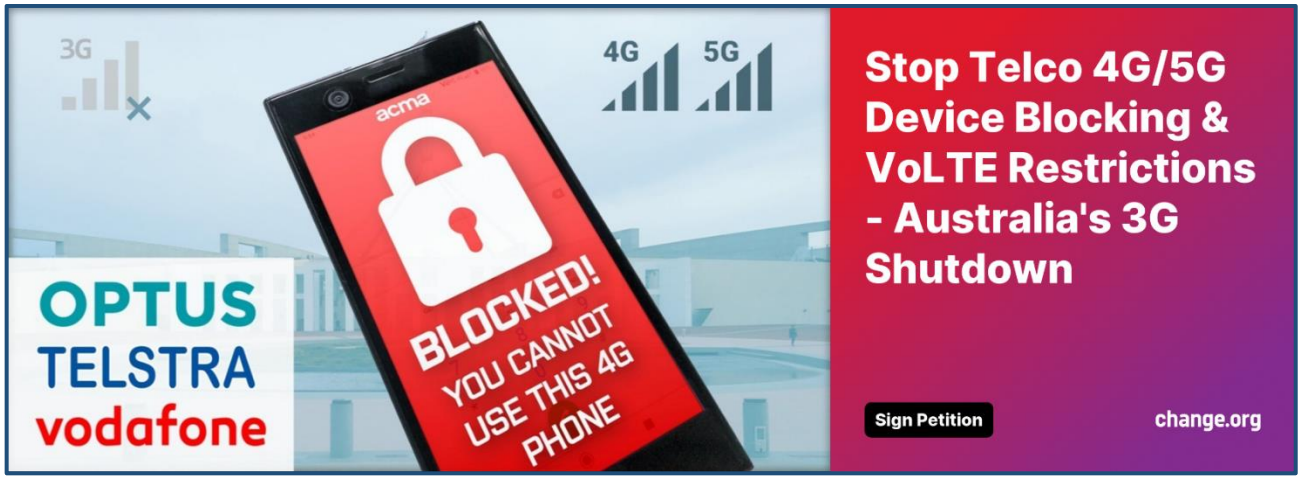
Prior to the blocking taking place on 28 October 2024 the petition had over 6,500 signatures and by 30 November 2024 had **more than 8,900 signatures.**

The core issue at the focus of the petition isn't 4G phones that require 3G for 000 being blocked. That is (in part) quite 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 Custodian 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=RPlTz-3estM

*That September 2024 video now **has over 390,000 Views** and at the time the blocking commenced on 28 October 2024, **that video had amassed 342,000 Views** and thousands of comments.*

The ECS Public Consultation

On Tuesday the 24th of September 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.

The Telcos also 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

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

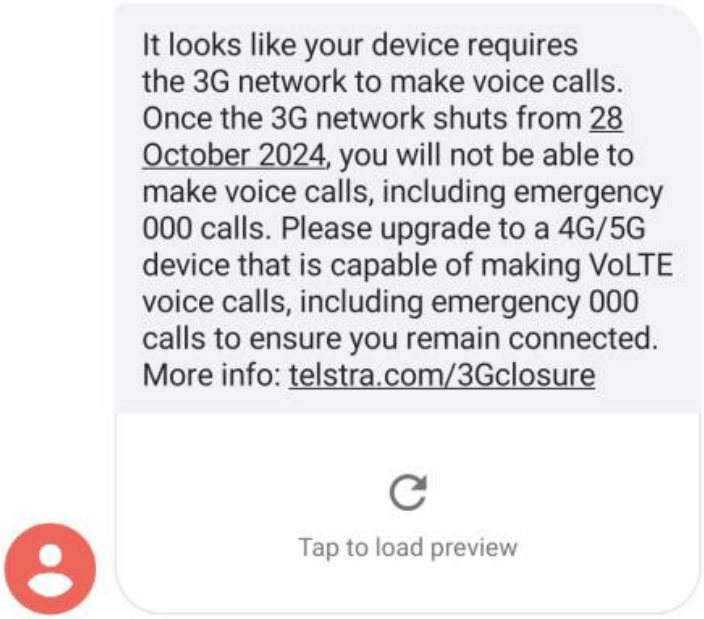
Key input	Value	Source
Total phones in Australia	30,874,000	ACMA data
Phones affected at 1/10/2024	516,875	AMTA data
Percent of phones impacted	1.7%	Calculation based on ACMA data
Number of Mobile Network Operators	3	ACMA data
Carriage Service Providers affected	350	ACMA data

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

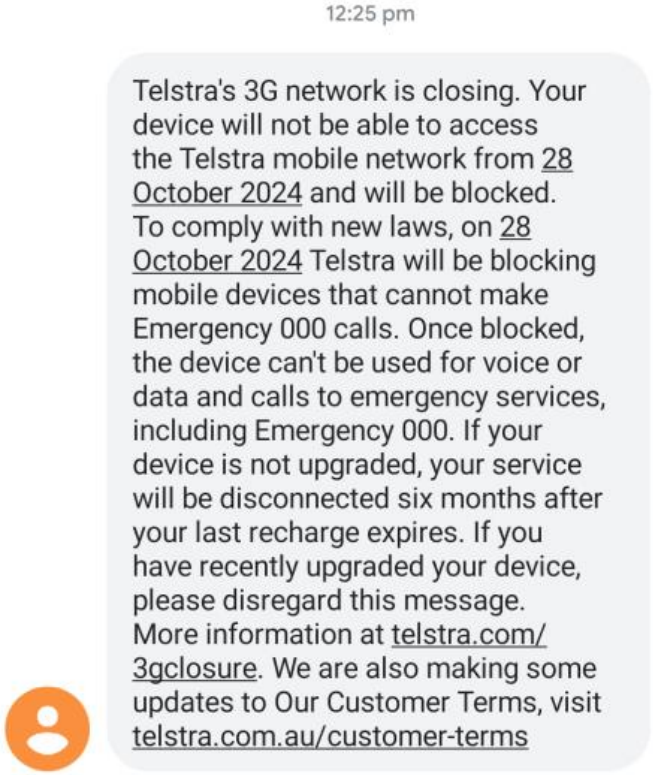
For months up until the shutdown the messaging from the telcos had indicated that older and incompatible devices may lose access to calling as the network was shut down, but at minimum Data & SMS would remain on 4G & 5G devices.



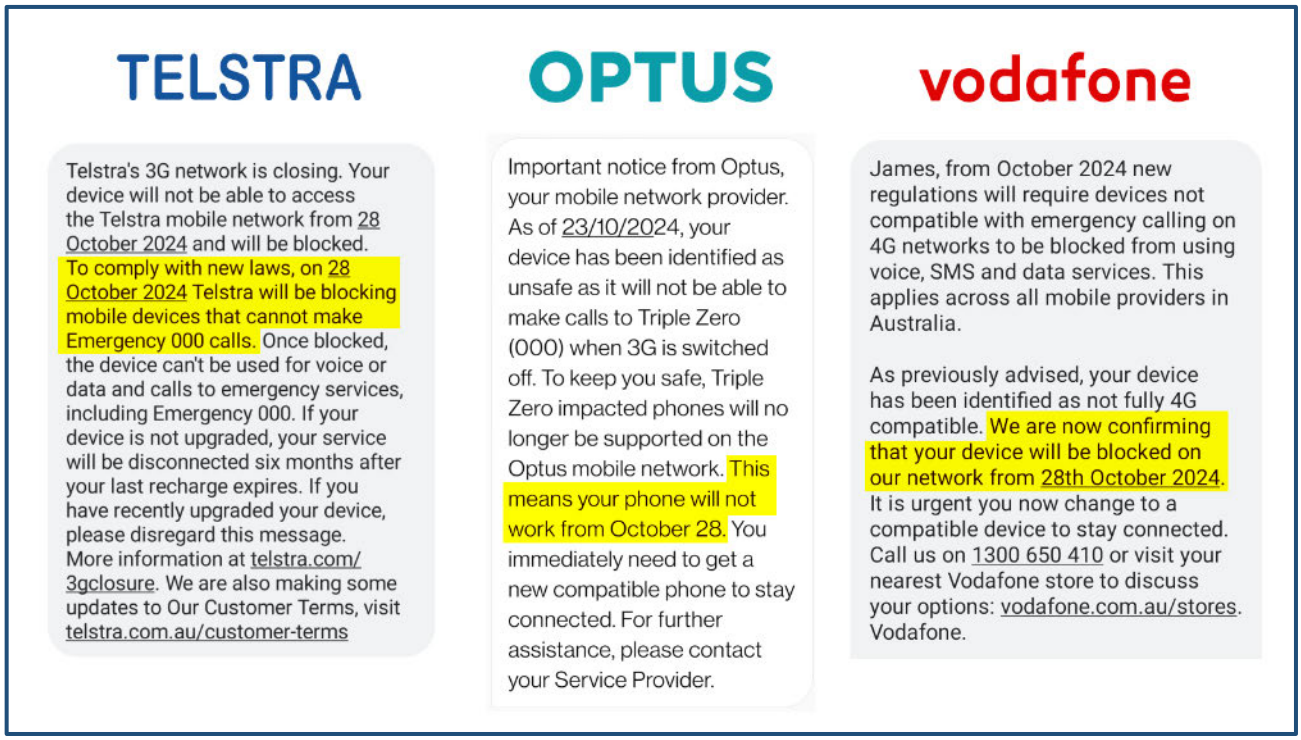
Telstra SMS 3498 System Message

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.*

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.

Blocking Phones Used By Tourists

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

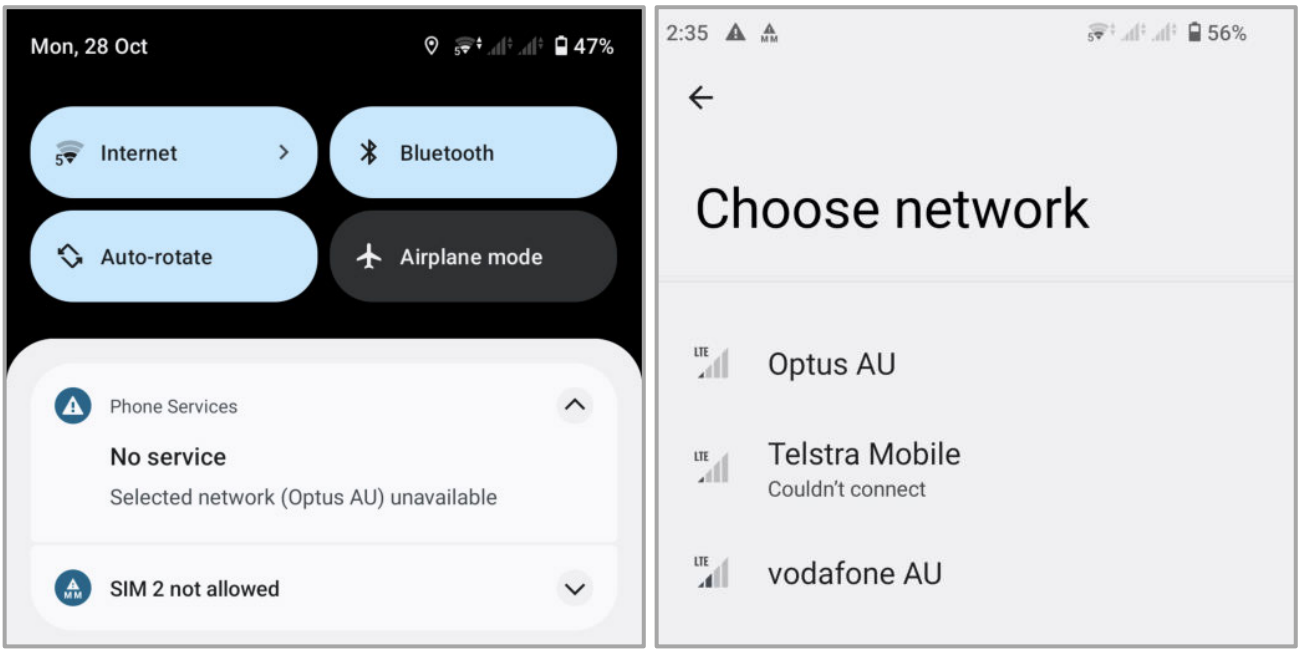
> An exception to some of the obligations is provided for foreign travellers in Australia who intend to remain in Australia for a period of no longer than 90 days. The exception will apply if a CSP sends a notification to the foreign traveller's mobile phone notifying the traveller that the mobile phone 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 many people are not of 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, and many devices still are.

This is despite the intended exemption for travellers 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.

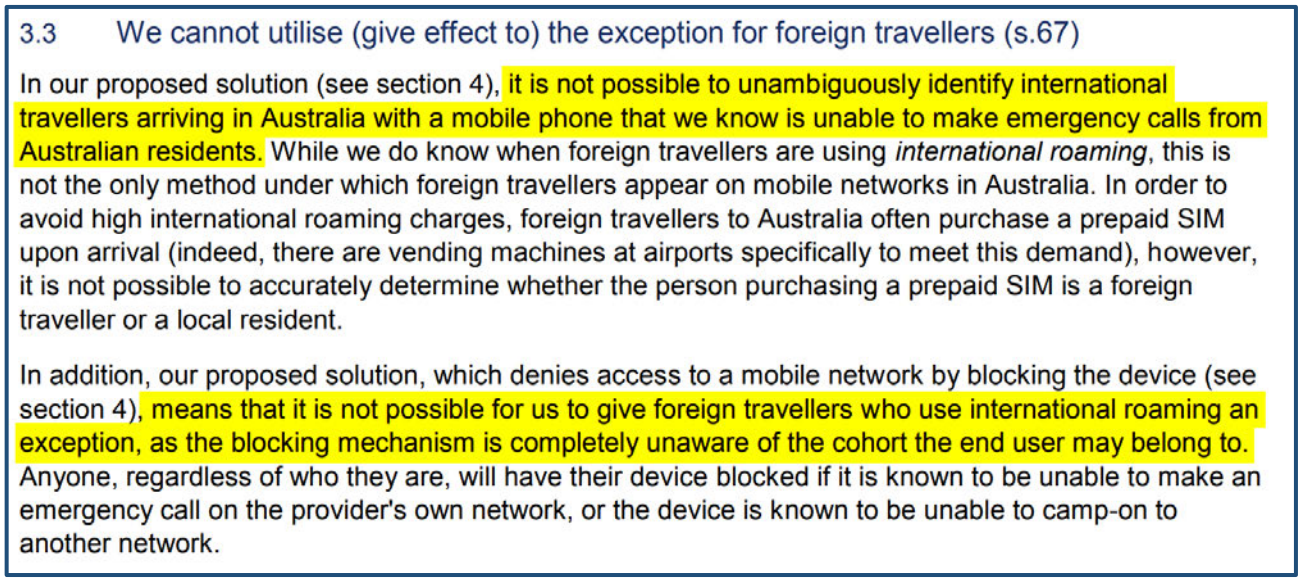
Even Customers Roaming from the US with 5G phones that support VoLTE Calling & VoLTE Roaming.

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 ECS Changes Consultation in 2024 did warn they would struggle to exempt Roamers from the device blocking rules.



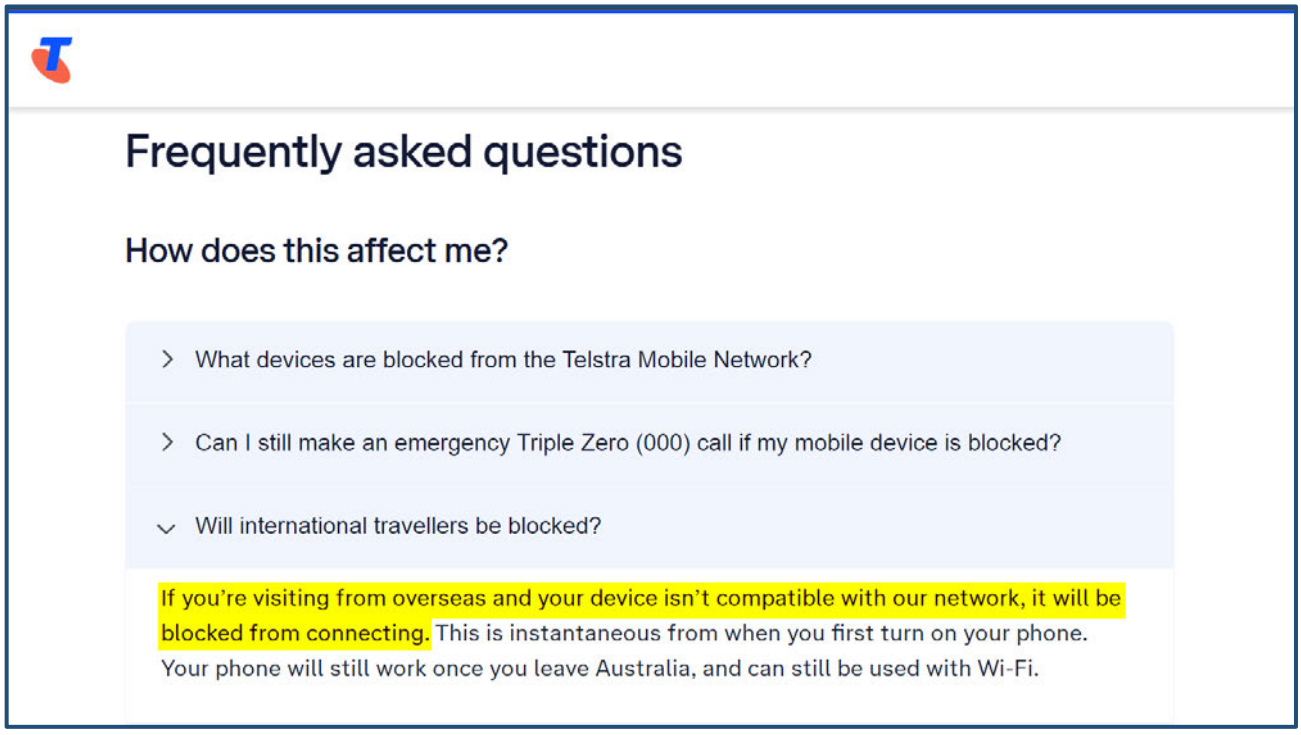
3.3 We cannot utilise (give effect to) the exception for foreign travellers (s.67)

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+)

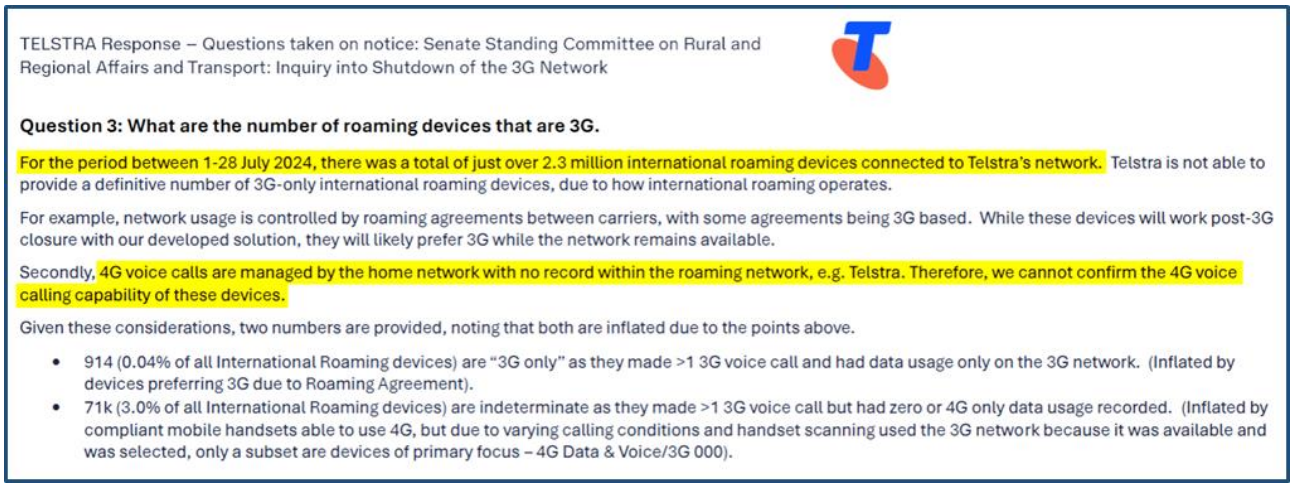
Potential Scale of the Roaming Incompatibility & Blocking

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 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

How devices are blocked

The capabilities & 'compatibility' of devices both prior to and since the 3G shutdown has been broadly determined based on the 'make & model', not based on the individual device and its real capabilities.

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

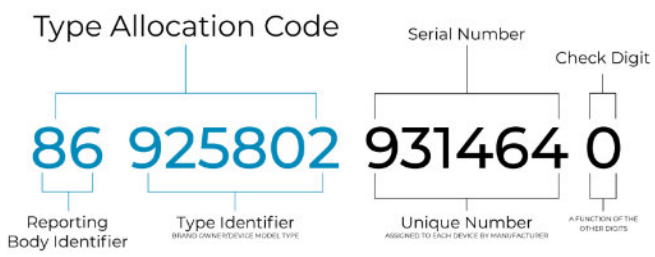
The **IMEI**, or **'International Mobile Equipment Identifier'**, is essentially a unique 15-digit serial number that's used by a device when connecting to mobile networks and using mobile services.

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 maintains 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.

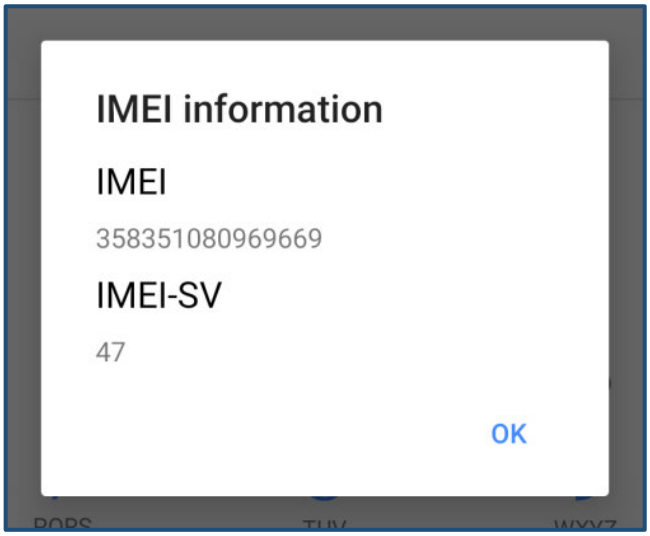
The equivalent analogy would be like determining the roadworthiness of a car based on the make & model and where it was sold rather than if an individual vehicle is actually roadworthy or not.

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.

The IMEI-SV

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 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 <u>not being able to pay their rent</u> and other bills <u>due to having to buy a replacement phone</u>!

Fortunately for some I was able to help them enable VoLTE and switch to a provider where the phone wasn't blocked, even though <u>it was compatible</u> 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 <u>were not</u> 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 have circulated this previously in various submissions, but I want to once again share 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 blocking 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.*

Petition Comments

In addition to comments from my Blocked Devices Survey, I've included a representative sample of the over 400 comments that have been left by impacted consumers who have signed my Petition.

As the vast majority of people impacted by this issue either are not in a position to provide a submission to this review, or are unaware they have been impacted at all.

I felt it important to include their views in this submission.

Gatekeeping which phones we can use is an anti-competition tactic when telcos are able to ignore devices that meet the 4G/5G standards. I'm sick of having my choices limited by an arbitrary restriction that doesn't benefit phone users at all!

Jocelyn - 5 October 2025

It's ridiculous how phones that are meeting all the requirements are being blocked, this screams conflict of interest especially when they are selling phones as well. Telcos need to work out a way to test whether phones meet the requirements rather than just blocking them by default.

Sam - 4 December 2025

Old phone died. So before getting a new one contacted my provider, TPG, and to be safe Optus and Telstra. Got told phone should be fine but can't be sure without IMEI, so I actually got the seller, Australia based to get the IMEI of the phone for me before buying it. All said it would work.

Got it. Worked for about 1 week then got a message saying its not supported. But don't worry they can sell me a new phone. They didn't care I checked first. That it met ALL of the requirements for the Australian network. So had to return my brand new phone. Take a huge hit. And use an ancient old phone I can barely use due to my disability.

Raymond - 15 February 2026

The Telco's shouldn't be allowed to decide on what brand/model and where you purchase your mobile from. Think of all the overseas visitors to Australia that may already own one of the latest mobile phone models available in their country only to arrive in Australia and find it blocked from accessing any network, bit of a cartel move.

A simple notification sent to the handset informing the user that your phone may not work correctly on the 000 service and to have alternative means to contact 000 if needed.

Ryan - 29 May 2026

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12 months ago telcos confirmed my Samsung S7 is supported, and I've since purchased THREE refurbs plus a brand new battery for members of my family, saving E-waste and total cost $300. Now because Vodafone issues which has ZERO coverage in my region, ALL these devices are garbage. Older and less wealthy family now facing having NO phone in 3 weeks where they'll be unable to call 000 if they need to.

Cost to consumers and environment in the millions, no pressure at all on phone makers for fixes, absolutely no one in Canberra concerned or seemingly even aware, and welcome to new USA-style market where all phones are now controlled by telcos. Hundreds of small business refurbers now with $millions in stock absolutely worthless. Bring your own device free market = finished.

Adam - 29 October 2025

I prefer buying my phone outright and have saved thousands over the years doing so. This ruling denies Australian comments a greater variety in device choice, and is anticompetitive. Allowing the telcos to dictate which devices can be used regardless of actual capabilities is a short-sighted and lazy piece of regulation that harms Australians.

Greg - 23 February 2026

My Xiaomi 17 Pro Max is fully VoLTE-capable — yet I'm blocked from using it on Australian networks simply because it doesn't appear on a carrier-approved device list. This is not a technical problem. It's an artificial restriction that serves carrier commercial interests, not consumers.

Richard - 6 March 2026

Illiteracy on the part of our "illustrious" government coupled with telcos' insatiable desire for profit results in toxic landfill, huge losses of money at all levels, and no end of frustration. In my case, my 'phone is a new device (launched six weeks ago) which IS fully compatible, is NOT listed as "blocked" by any of the carriers, yet still it's been disabled - because it's too new?

The icing on the cake is that my older 'phone, two generations old from the same series, works fine.

Bob - 18 January 2026

I've only had my phone for 5 months and it was released in February 2025 (10 months ago) and I got a text message from vodafail telling me my device will no longer be supported by their network. What a bloody joke this is. It costs me $1000 to purchase his phone.

Are they going to reimburse me a perfectly fine phone that still works without any issues that they want to switch off? Shame on you telcos.

Roger - 3 December 2025

After working flawlessly for 2 weeks, my BRAND NEW Nubia z80 Ultra is being blocked because of this bungled 3G shutdown, it's utterly pathetic the way our idiotic mobile providers are handling this and utterly pathetic of our government to leave it in their incapable hands.

Scott - 18 December 2025

My 1 month old Sony Xperia 10 Vii that I bought in November 2025, is receiving warnings that it's being blocked by Vodafone in mid January 2026, even though it works perfectly on VOLTE and 5G. I just bought a 12 month prepaid plan in November, after black Friday from Vodafone, even.

Hardev - 18 December 2025

These changes are being rushed through for commercial reasons without looking at the global picture. Phones are being deemed incompatible with no avenue for full testing to be done to ascertain whether they truly are incompatible. In the cost of living issues people are facing at the moment this is yet another blow, especially for larger families where communication is essential.

Jason - 30 October 2024

Vodafone have blocked my perfectly working on LTE/5G Redmi phone. This is ridiculous and arbitrary with seemingly no rhyme or reason behind it. The telcos should be refunding us the cost of the phone they blocked, particularly as we are in a cost of living crisis!

Nae - 2 January 2026

Harms to Consumers

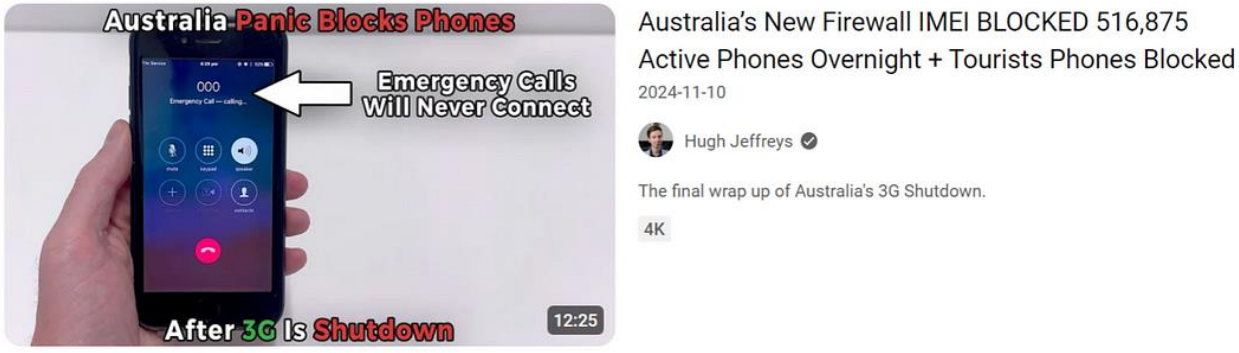
In the days following on from the shutdown and artificial device blocking, there were a number of stories reporting on the consumer experience.

Two of which from the ABC in early November 2024, 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.

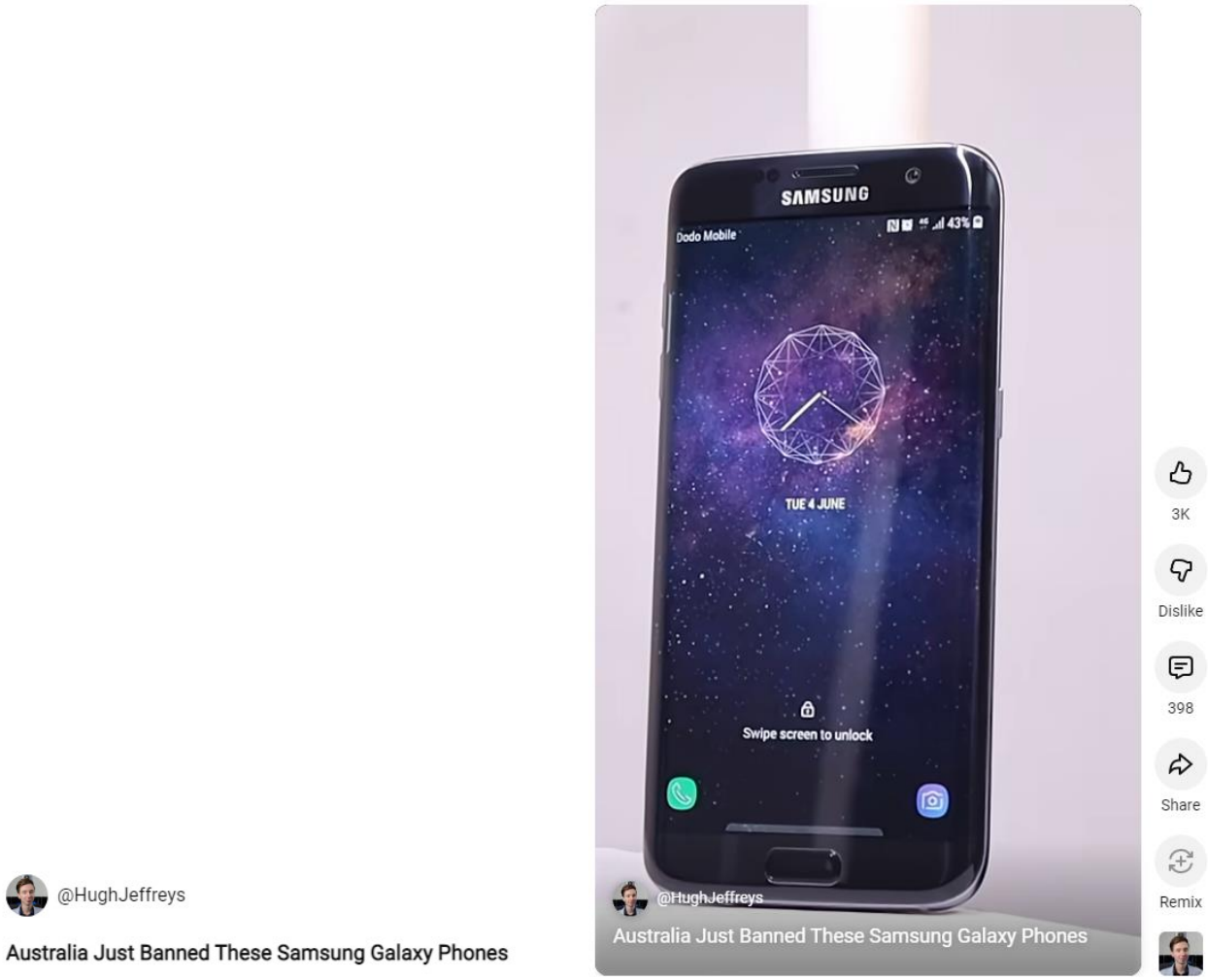
Despite Optus saying that model is 'supported'.

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+.

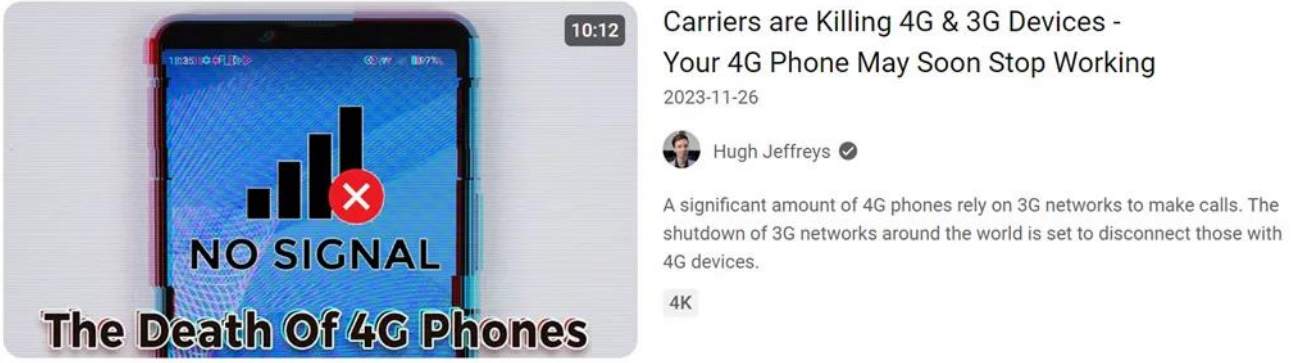
By December 2024 that video had achieved over **188,000 views** and presently has **more than 217,000.**

A YouTube short published on 11 November 2025 by Hugh about the Samsung devices being blocked currently has **over 96,000 views** and over 500 comments.



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, to date there have been **<u>over 915,000 Views</u> on this issue 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

While I fully support the core policy intent and objective that phones in use by consumers are able to reliably call 000, the problem is complex technical issues cannot be resolved with blunt legal instruments.

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 as enacted by the ACMA was not (and is not) a real technical solution or effective policy.

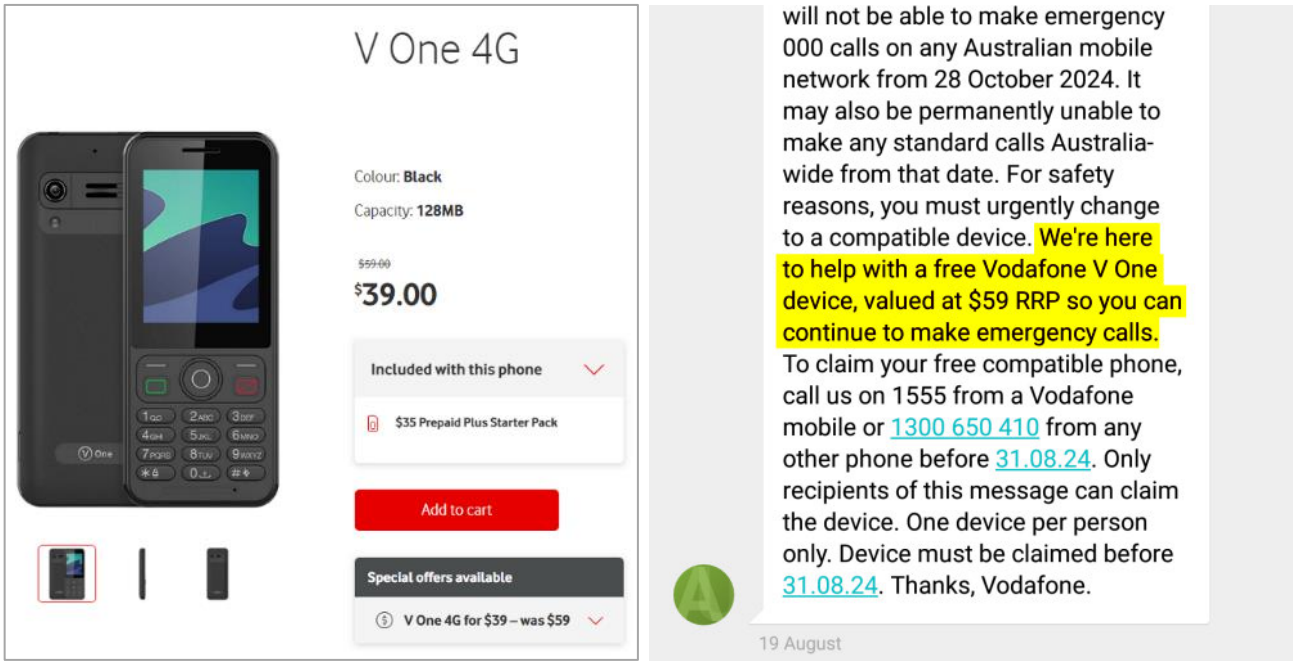
The carriers have been left to determine themselves what phones people should be allowed to use, which is a clear conflict of interest and is being misused by the carriers.

Both the direction and determination lack any real protection for consumers, nor are there any methods of recourse for consumers should the carriers get it wrong. (Which they have, at significant scale)

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.

Any view that only people with very old 3G and 4G handsets would be impacted, not people with brand new 5G phones, was entirely misinformed.

The blocking even impacted some brand new devices being sold in retail stores.
(That were later blocked, then unblocked by Optus.)

The impacts of the blocking changes have been incredibly damaging for consumers, generated unnecessary e-waste & new device sales, and all during a time of extreme cost of living pressures.

The Issues & Technical Basics with 4G Calling

As the Department & Custodian are likely aware, issues around 4G VoLTE device compatibility were covered in depth by Telecoms Policy Expert Rudolf van der Berg at the 2022 EENA (European Emergency Number Association) 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

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

EENA calls for delay of the 2G/3G shutdown until emergency communications issues are resolved – 2026-01-29
https://eena.org/press-releases/eena-calls-for-delay-of-the-2g-3g-shutdown-until-emergency-communications-issues-are-resolved

Despite Voice over LTE having broad chipset support from major chipset vendors like Qualcomm since 2013/2014, the implementation of VoLTE across devices and networks has not been uniform or consistent.

In that presentation he covered the wide ranging device compatibility and standardisation problems with Voice over LTE.

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..'***

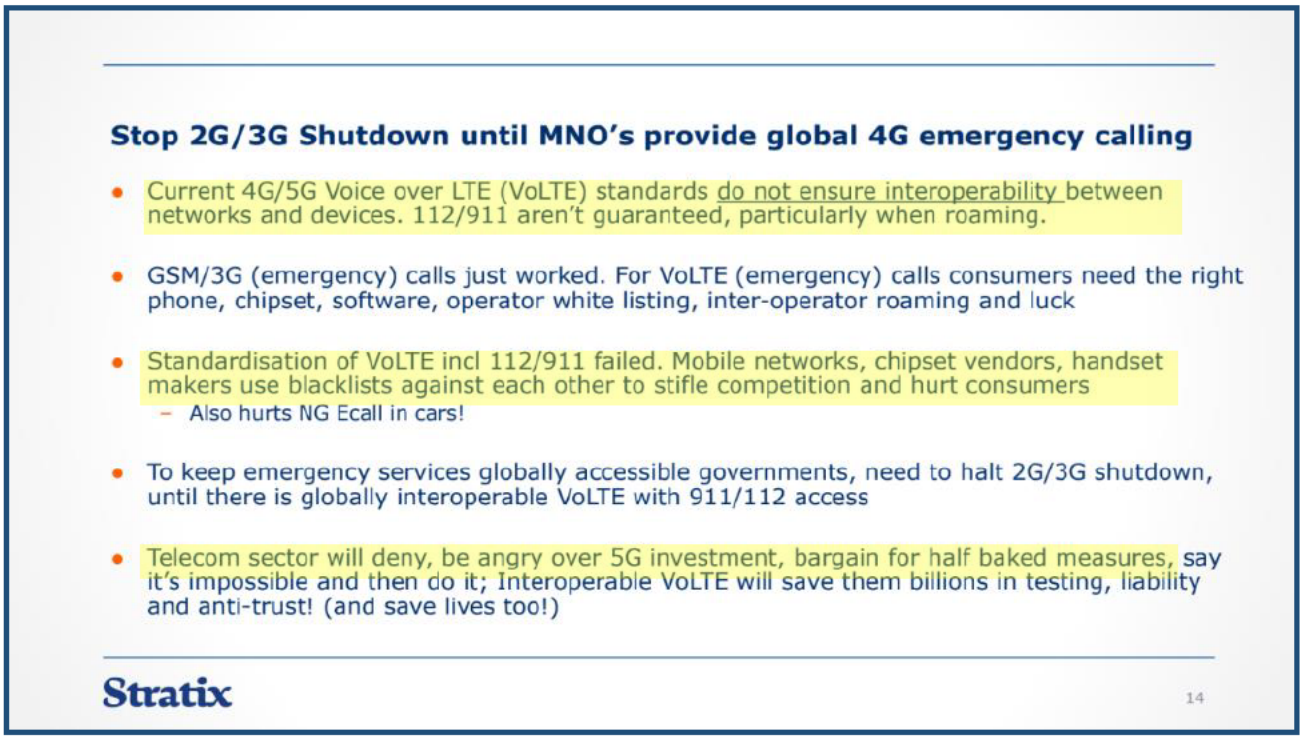


Figure 1 – 'Should we stop the shutdown of 2G/3G to save lives??' - Slide 14 - Rudolf van der Berg – Stratix – EENA 2022
https://drive.google.com/file/d/1WC16k8C1gpeFRJif23yDIuLSRg1OJOnZ/view

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

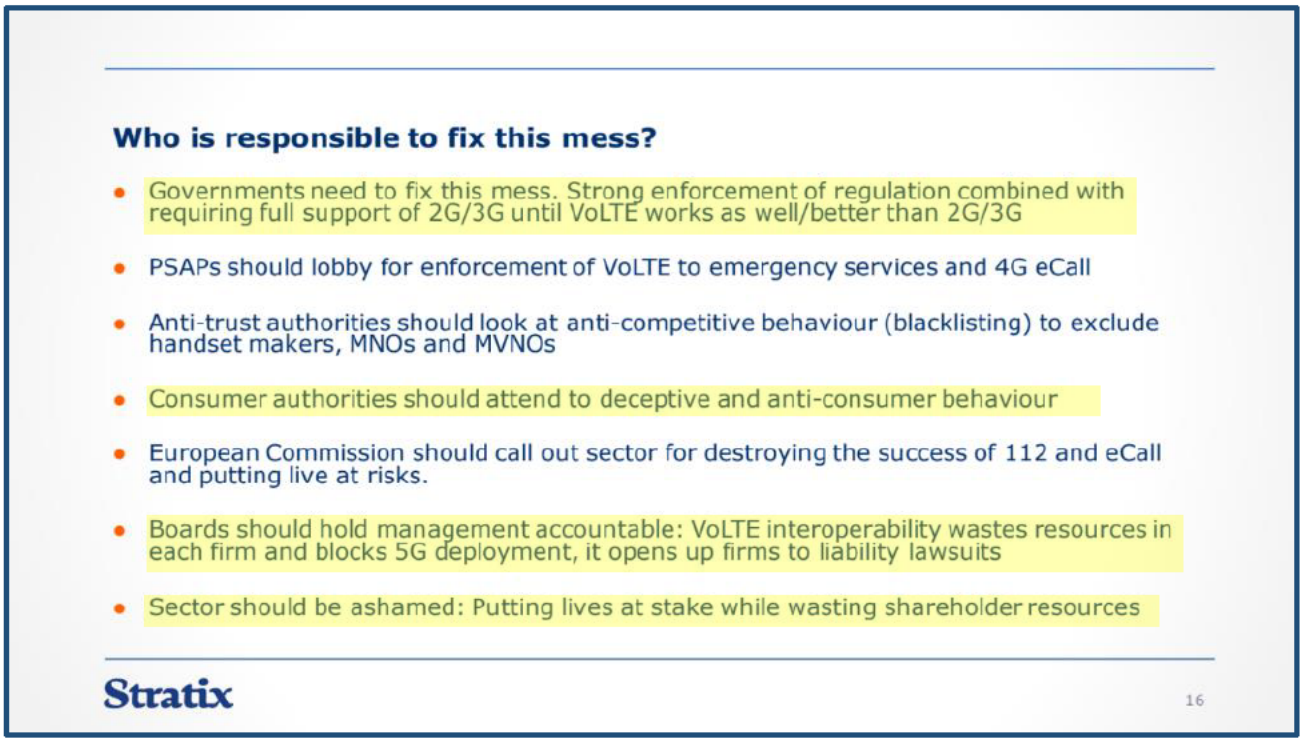


Figure 2 – 'Should we stop the shutdown of 2G/3G to save lives??' - Slide 16 - Rudolf van der Berg – Stratix – EENA 2022
https://drive.google.com/file/d/1WC16k8C1gpeFRJif23yDIuLSRg1OJOnZ/view

What's actually required on Android for VoLTE

But as Australia has now entirely transitioned away from 2G & 3G Mobile Networks, it's important to explain in broad terms what is actually required for VoLTE (Voice over LTE) to work on Android (and other) devices.

As these details are important to ensure the right regulatory and policy settings are in place for Triple Zero and mobile communications more broadly.

- **Device Hardware must support VoLTE**
  The device (chipset) & modem must be capable of VoLTE on the LTE bands used by the carrier.
- **SIM and Carrier must support VoLTE**
  The carrier must allow VoLTE for the device and the sim/service must be VoLTE enabled & capable.
- **A VoLTE Capable modem configuration must be active**
  Device must have a VoLTE compatible modem configuration or carrier profile loaded.
- **VoLTE must be provisioned on the device**
  VoLTE must be 'Provisioned' (enabled) in firmware, or forced on via diagnostics or system settings.
- **VoLTE must be switched on in settings**
  Any user-visible VoLTE toggle must be ON or otherwise forced on by the device.
- **IMS must successfully register**
  Within Android IMS Status must show **"Registered"** and **"Voice over LTE: Available"**.

If any of the above is not configured correctly VoLTE won't work on the device for normal phone calls.
Note: *VoLTE Emergency Calls do not require IMS Registration to work or VoLTE to be switched on.*

The above requirements are also device-side factors.

Network side the carrier must allow that device to register for VoLTE and the network must be compatible with the Modem Configuration running on the device.

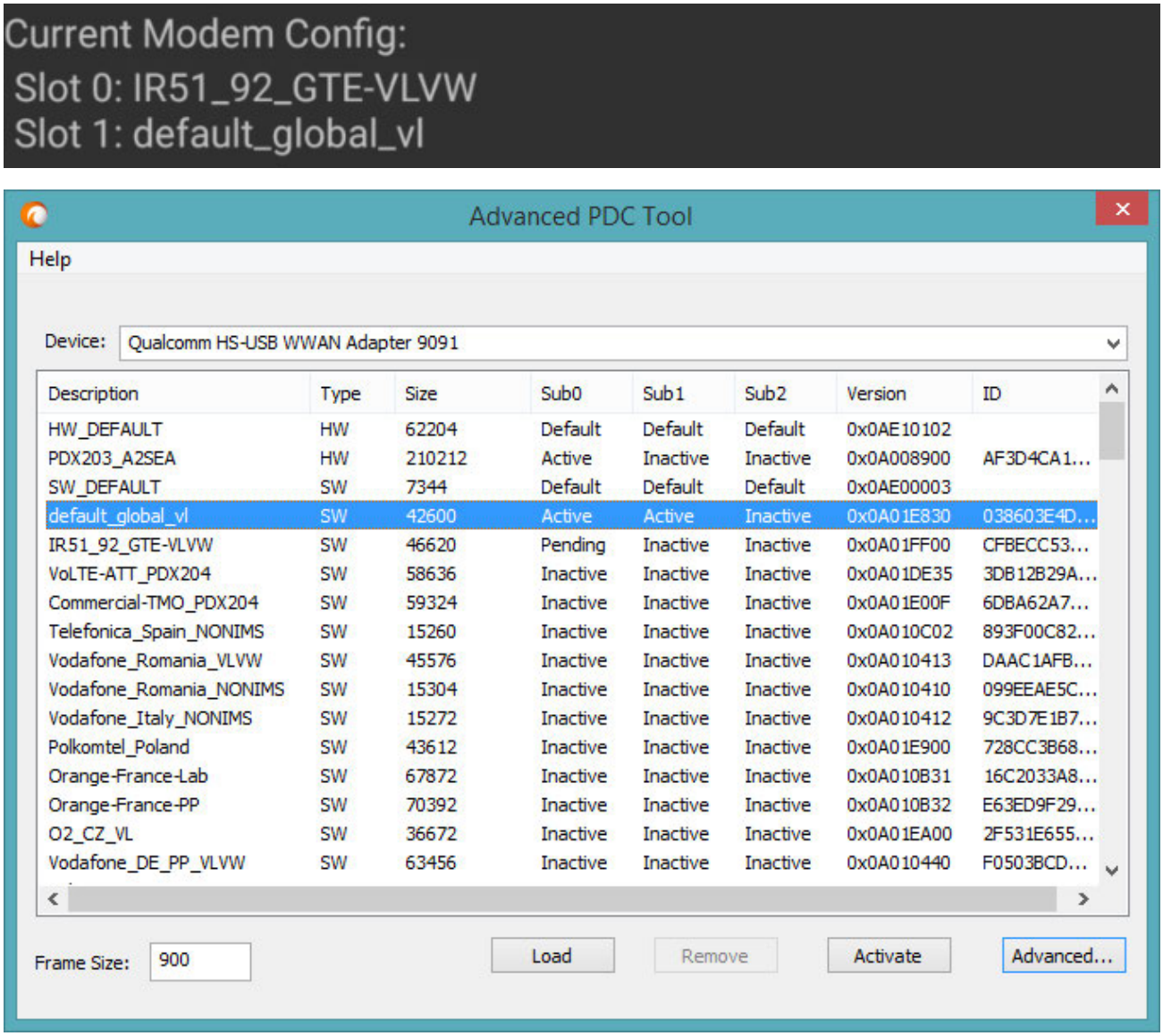
(Either be a carrier specific Modem configuration or a compatible generic profile/config)

By contrast Circuit Switched calling on 2G/3G (CSFB) doesn't require any specific software or device settings to work, it's a built-in function of all 2G/3G devices ever sold.

Any 2G/3G capable device can work on any 2G/3G network for calls and emergency calls, the only thing necessary is that the device must support the 2G/3G network bands offered by the carrier.

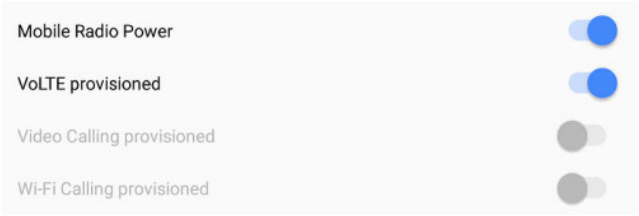
The most common of which are 850MHz and 900MHz.

Modem Configurations (Carrier Profiles)

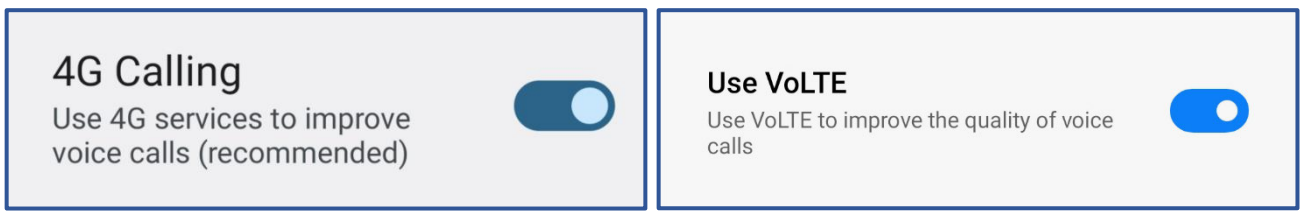


Qualcomm QPST – PDC Tool – Modem Configurations – Xperia XQ-AT52

VoLTE & WiFi Calling Provisioning (Android)



4G Calling/VoLTE Settings Toggles



Android – VoLTE/4G Calling Settings Toggles

Uniform Standardisation & Implementation

The most important aspect to ensuring reliable and consistent operation between devices and networks is to require all carriers to follow and implement global industry standards and to do so in a broadly interoperable and consistent way.

This principle is true regardless of the generation of technology, and applies across all sectors related to networking, personal computers and electronics.

2G/GSM (Global System for Mobile Communication) and **3G/UMTS** (Universal Mobile Telecommunications System) were developed to ensure universal and global interoperability across networks and devices.

For the last 20-30 years those technologies have been very well tested & standardised, and they have provided the backbone of universal interoperability for all devices and networks.

Interoperability that consumers expect and should be entitled to.

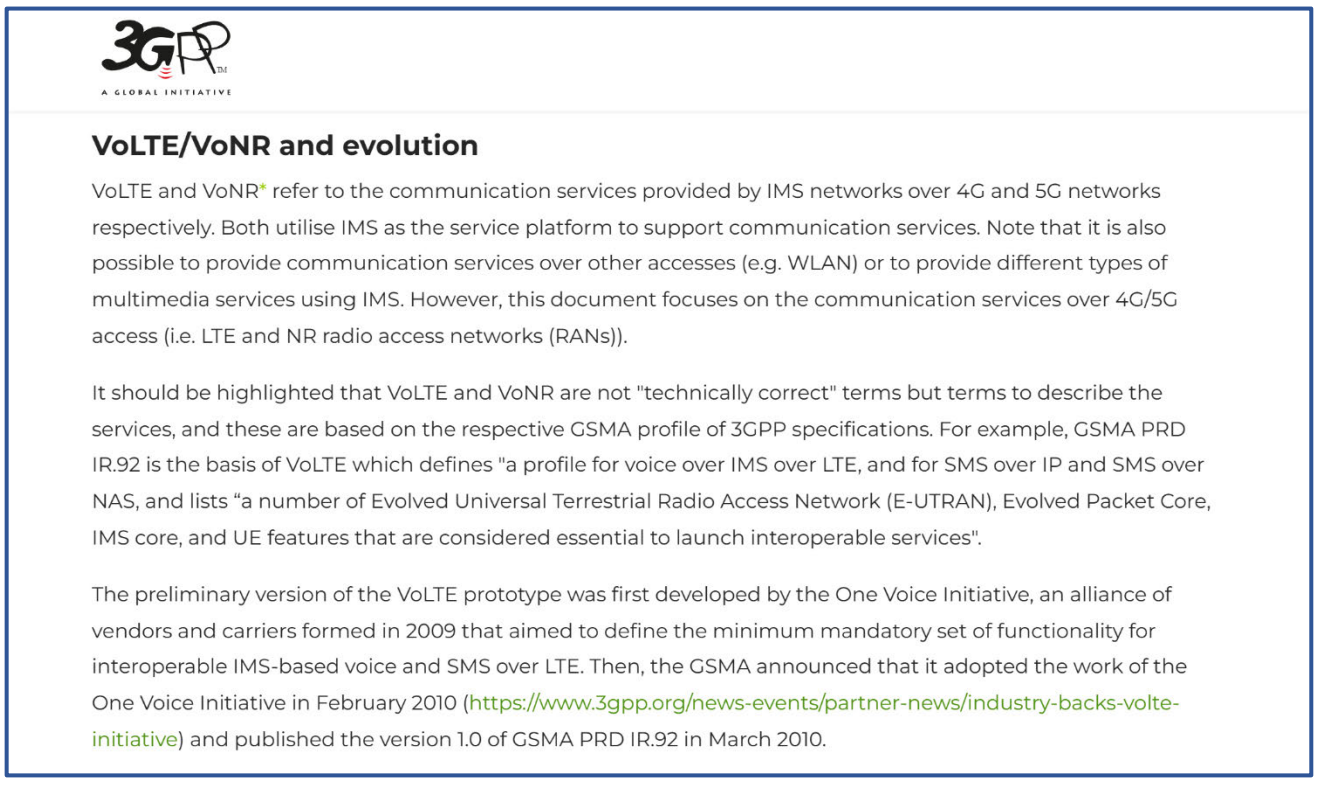
This seamless interoperability has greatly enhanced competition in the mobile sector and ensured that anyone can make a call or emergency call regardless of the device or network, and wherever they might be in the world.

4G VoLTE calling by contrast is not as well tested, standardised or as interoperable as the 2G/3G Circuit Switched calling which preceded it.

However there are common settings and parameters available that are designed to provide the same or better compatibility and interoperability between devices & networks.

Open Market Device (OMD) IR.92 Modem Profile for VoLTE

In essence, VoLTE (Voice over LTE) aka ‘4G Calling’ is a simplified version of IMS (IP Multimedia Subsystem) based on 3GPP technical specifications.



3GPP A GLOBAL INITIATIVE

VoLTE/VoNR and evolution

VoLTE and VoNR* refer to the communication services provided by IMS networks over 4G and 5G networks respectively. Both utilise IMS as the service platform to support communication services. Note that it is also possible to provide communication services over other accesses (e.g. WLAN) or to provide different types of multimedia services using IMS. However, this document focuses on the communication services over 4G/5G access (i.e. LTE and NR radio access networks (RANs)).

It should be highlighted that VoLTE and VoNR are not "technically correct" terms but terms to describe the services, and these are based on the respective GSMA profile of 3GPP specifications. For example, GSMA PRD IR.92 is the basis of VoLTE which defines "a profile for voice over IMS over LTE, and for SMS over IP and SMS over NAS, and lists “a number of Evolved Universal Terrestrial Radio Access Network (E-UTRAN), Evolved Packet Core, IMS core, and UE features that are considered essential to launch interoperable services".

The preliminary version of the VoLTE prototype was first developed by the One Voice Initiative, an alliance of vendors and carriers formed in 2009 that aimed to define the minimum mandatory set of functionality for interoperable IMS-based voice and SMS over LTE. Then, the GSMA announced that it adopted the work of the One Voice Initiative in February 2010 (https://www.3gpp.org/news-events/partner-news/industry-backs-volte-initiative) and published the version 1.0 of GSMA PRD IR.92 in March 2010.

3GPP – Technologies - Communication services (VoLTE/VoNR)
https://www.3gpp.org/technologies/volte-vonr

How does VoLTE/VoNR work?

3GPP Specifications and Profiles

As described above, VoLTE/VoNR is based on GSMA profile(s) of 3GPP specifications. Depending on the local market, there can be further adaptations of the GSMA profile(s). For example, there is a TTA VoLTE standard (TTAK.KO-06.0357) that is based on GSMA PRD IR.92. Whilst there are a few deviations from the GSMA profile, the standard nevertheless follows IR.92 to great extent and sometimes further tightens the features to be used. The Figure below provides a graphical overview of the relationship among these documents.

3GPP specifications, GSMA profiles and (possible) local adaptations

3GPP – Technologies - Communication services (VoLTE/VoNR)
https://www.3gpp.org/technologies/volte-vonr

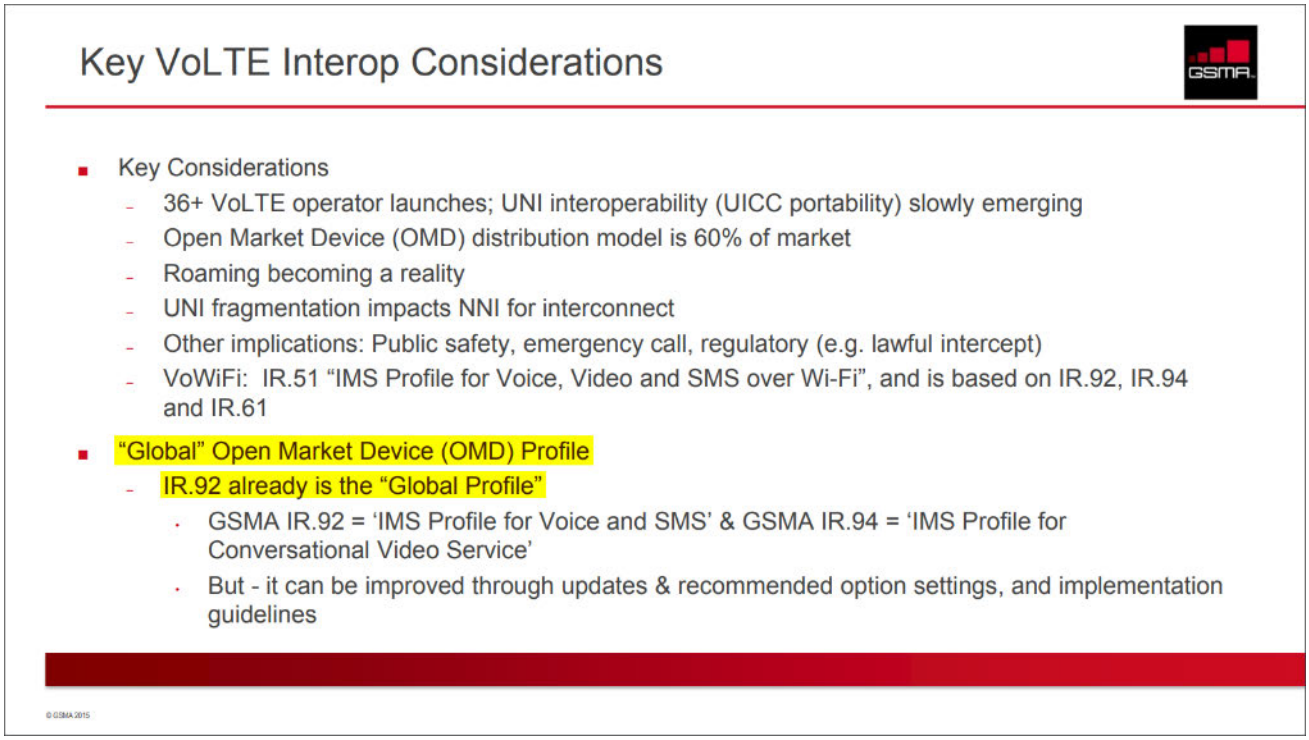
From the 3GPP technical features and specifications for IMS, the GSMA *(Global System for Mobile Communications Association)* created the 'IR.92' VoLTE profile which is intended to be a Global/Generic (baseline) Configuration that can work with 'Open Market Devices' (non-carrier devices) sold globally.

GSMA

New VoLTE Specification

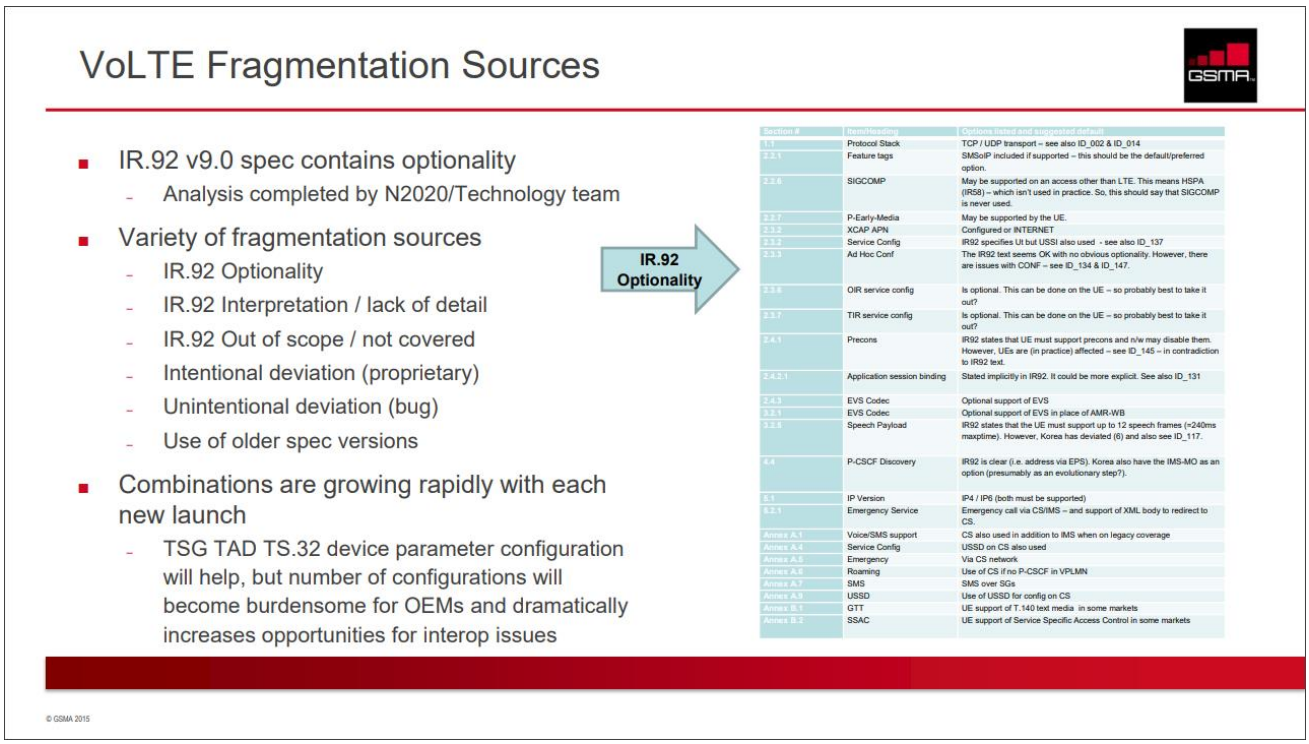
To address these issues, the GSMA released IR.92 Version 10, an updated version of the VoLTE technical specification which now provides default options and parameter values and a minimum functionality set for all IP-based voice and SMS communications over LTE. The updated specification draws on an industry-wide effort led by the GSMA to address the specification options and differences that led to interconnect issues. It captures the lessons learned from over 70 VoLTE deployments as well as feedback from mobile operators, OEMs and other vendors. Over 550 issues were captured and organized into the GSMA Network 2020's IP Communications Shared Solutions Registry (IPSSR) and can be accessed via Technical Support. The updated specification will optimise VoLTE and provide a high degree of commonality and interoperability, as well as giving flexibility to MNOs to deal with unique and regional needs. It also covers Open Market Devices, which represent approximately 60% of the handset market. Several markets including China, Korea, Russia and Germany have already committed to supporting the latest specification and have developed regional profiles for both the device interface (UNI) and inter-operator interconnection (NNI).

GSMA New VoLTE Specification to remove Market Fragmentation (07/2016)
https://www.gsma.com/futurenetworks/digest/new-gsma-volte-specification-removes-market-fragmentation

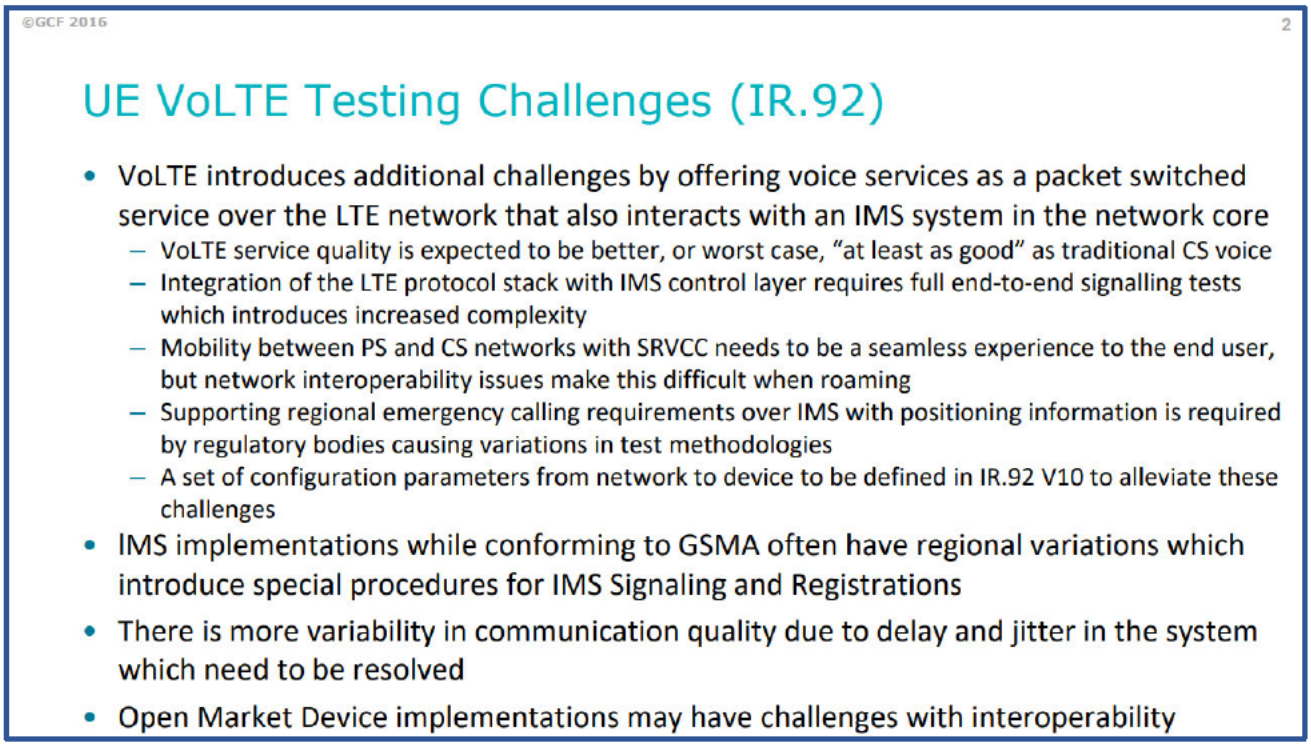


However given the implementation variations in the 3GPP technical standard and previous revisions to the GSMA IR.92 Profile, there is optionality which can impact interoperability between devices and networks.

This can result in a device only working for Voice over LTE on some networks or inconsistent IMS functionality between carriers.



Doug Makishima, GSMA - ITU Workshop on "Voice and Video over LTE" - (12/2015)
https://itu.int/en/ITU-T/Workshops-and-Seminars/conformity-interoperability/20150112/Documents/Abstracts%20and%20Presentations/S3P5_Doug_Makishima.pdf



GCF - VoLTE Challenges - LTE Workshop, 7 September 2017
https://www.globalcertificationforum.org/static/uploaded/c1683a68-b94c-4c75-a6470136dfed73a9.pdf

Telstra VoLTE Issues with 'Open Market Devices'

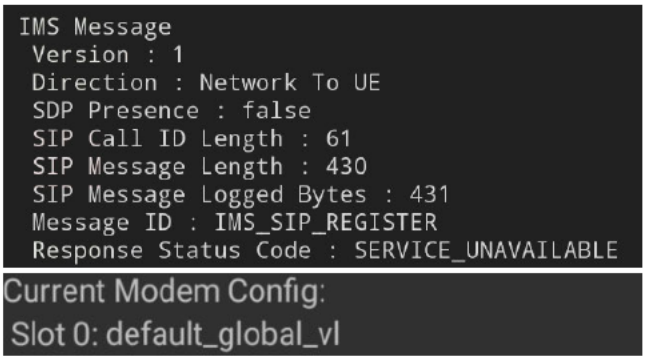
As an example of this, prior to the 3G shutdown in 2024, Telstra's network did not support and work with the most widely used 'Open Market' (Global) 4G VoLTE Calling Profiles and Settings on 4G/5G devices.

Those devices did work with Optus & Vodafone, including for both 4G (IMS) calls and (SOS) 000 calls.

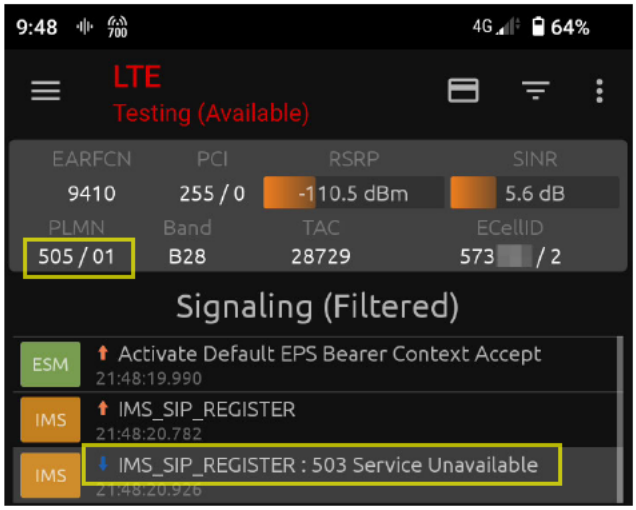
MBN Modem Configurations Qualcomm SD 820 Chipset (2016)	Network Name	Country	4G VoLTE Emergency Calls (112/000)	Optus VoLTE (IMS)	Vodafone VoLTE (IMS)	Telstra VoLTE (IMS)
ir51_ir92_ims_gte_tar.mbn	VoLTE + WiFi Call	GSMA Open Mkt	Yes	Yes	Yes	No
ir92_ims_gte_tar.mbn	GSMA IR.92 VoLTE	GSMA Open Mkt	Yes	Yes	Yes	No

Tested Q2 2024 *Test Device: Sony Xperia XP - 2018 Android 8.0 Firmware*

All VoLTE (IMS) Registration attempts with Generic 'IR.92' Profiles on the Telstra network were rejected with an **'IMS_SIP_REGISTER: 503 Service Unavailable'** Message. *As shown below.*



IMS SIP Register 503 Unavailable - IR.92 VoLTE - Telstra



Network Signal Guru – Signalling Log – Telstra Oct 2024

Devices with Generic IR.92 VoLTE profiles could only make 4G (SOS) Emergency Calls on Telstra.

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.

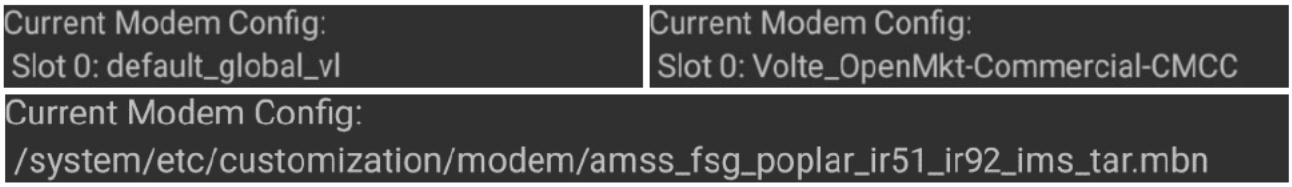
A device can successfully register for VoLTE Calling & IMS (which the telcos can see in real time and have large amounts of data for), but Emergency Calls over 'SOS' can fail to connect when calling 000.

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

The Blocking of Open Market Devices

As a result of this VoLTE profile issue and the determination changes, Telstra was then enabled to block VoLTE capable 4G & 5G devices they didn't sell that work perfectly (including for 000) simply because they used 'generic' IR.92 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

Modem Config Testing Results 2024

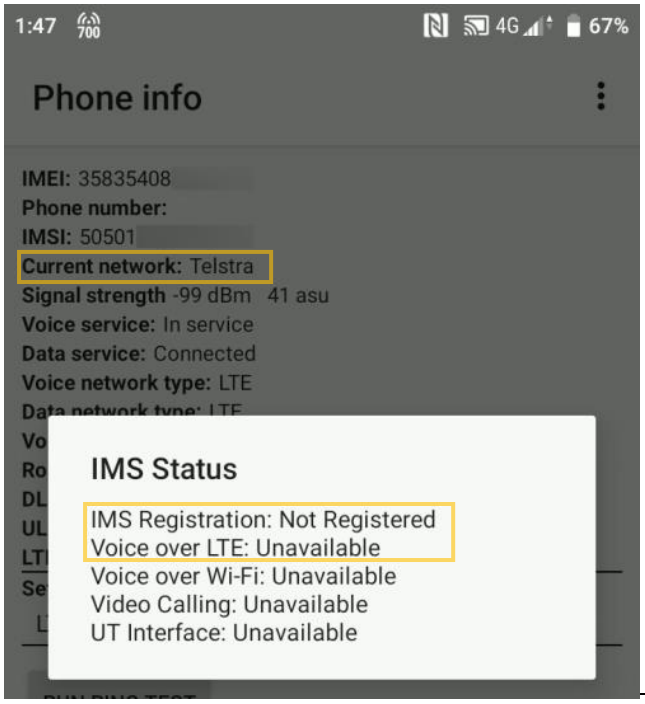
MBN Modem Configurations Qualcomm SD 820 Chipset (2016)	Network Name	Country	4G VoLTE Emergency Calls (112/000)	Optus VoLTE (IMS)	Vodafone VoLTE (IMS)	Telstra VoLTE (IMS)
bell_ims_tar.mbn	Bell CA	Canada	Yes	No	*No* *	No
china_mobile_hk_ims_tar.mbn	China Mobile HK	China/HK	No	No	*No* *	No
ee_ims_tar.mbn	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

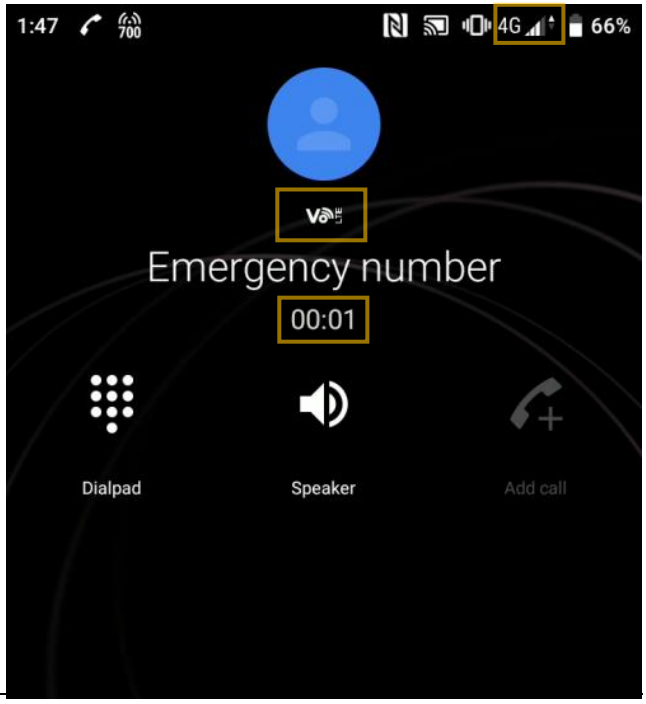
** = Estimated Result based on other network testing* *Test Device: Sony Xperia XP - 2018 Android 8.0 Firmware*

Tested Q2 2024

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 – IMS Not Registered - October 2024

There was even a Change.org Petition about this issue which has garnered over 2,200 signatures. It even pre-dates my Petition.

Change.org - Remove restrictions for 4G Calling from the Telstra mobile network before the 3G shut-down
https://www.change.org/RemoveTelstraRestrictions

This issue also impacted multiple brands and device types, but only on Telstra for VoLTE.

OnePlus - Guide to enable VoLTE on AU Networks – Whirlpool Forums
https://forums.whirlpool.net.au/archive/9m01z7np

3G network closure – Australia – Fairphone Community Forums
https://forum.fairphone.com/t/3g-network-closure-australia/109696/15

The impact of Telstra's 3G network shut-down for making and receiving calls – July 2024
https://reddit.com/r/TelstraAustralia/comments/1e95j1t/the_impact_of_telstras_3g_network_shutdown_for

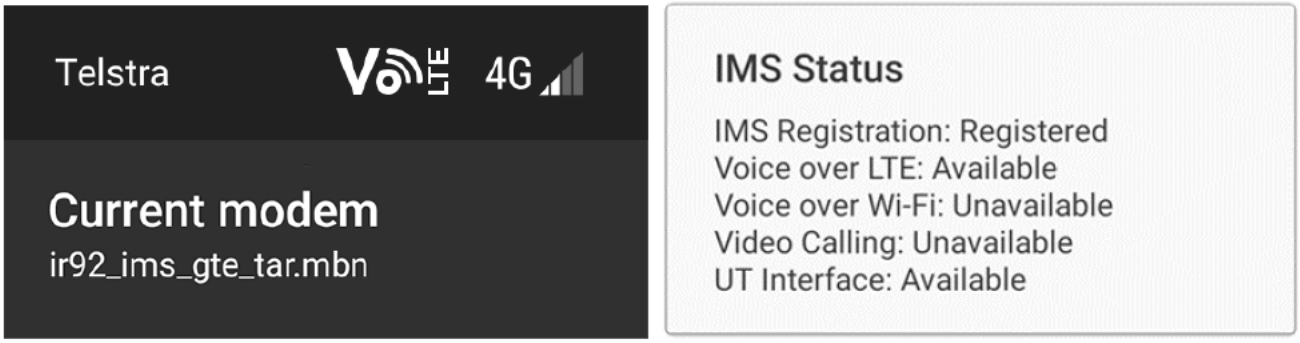
VoLTE forced off. Telstra – June 2024
https://reddit.com/r/australia/comments/1dosxh6/vo_lte_forced_off_telstra

My Xperia 1 V just arrived here in Australia. VoLTE works on both Optus & Vodafone but no luck with Telstra – June 2023
https://reddit.com/r/SonyXperia/comments/1437rh3/my_xperia_1_v_just_arrived_here_in_australia_i

Telstra VoLTE Changes & Open Market Devices

However sometime around late January or early February 2025 Telstra quietly made some changes to their network that allowed Generic 'Open Market' 'IR.92' VoLTE Profiles to register and obtain (IMS) Call Service. *(Which is required only for normal voice calls to work)*

A Telstra specific Modem profile/config newer software profiles are now no longer required.



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

Modem Config Testing Results Q1 2025 to Present

MBN Modem Configurations Qualcomm SD 820 Chipset (2016)	Network Name	Country	4G VoLTE Emergency Calls (112/000)	Optus VoLTE (IMS)	Vodafone VoLTE (IMS)	Telstra VoLTE (IMS)
ir51_ir92_ims_gte_tar.mbn	VoLTE + WiFi Call	GSMA Open Mkt	Yes	Yes	Yes	**Yes**
ir92_ims_gte_tar.mbn	GSMA IR.92 VoLTE	GSMA Open Mkt	Yes	Yes	Yes	**Yes**
optus_ims_tar.mbn	Optus	Australia	**No**	Yes	**No**	No
telstra_ims_tar.mbn	Telstra	Australia	**Yes**	No	*No* *	Yes
vha_ims_tar.mbn	Vodafone AU	Australia	**No**	Yes	Yes	**Yes**

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

Tested Q1 2025

Even generic VoLTE profiles (Modem Configurations) on Android 7 (2016) Qualcomm based devices can now register and obtain IMS call service.

Previously they would only work on Optus and Vodafone for IMS, as shown below.

Modem Config Testing Results Q2 2024

MBN Modem Configurations Qualcomm SD 820 Chipset (2016)	Network Name	Country	4G VoLTE Emergency Calls (112/000)	Optus VoLTE (IMS)	Vodafone VoLTE (IMS)	Telstra VoLTE (IMS)
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
telstra_ims_tar.mbn	Telstra	Australia	**Yes**	No	*No* *	Yes
vha_ims_tar.mbn	Vodafone AU	Australia	**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 2025 (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.)

Telstra could and should have made this change more than 18 months ago, well prior to the October 2024 3G shutdown. This compatibility issue was even mentioned in the interim 3G Senate Inquiry report!

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

> 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]

RRAT Committee - Shutdown of the 3G Mobile Network: Interim Report
https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Rural_and_Regional_Affairs_and_Transport/3GNetworkShutdown/Interim_Report/Chapter_1_-_Interim_Report#Heading1148

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

Yet nothing changed prior to the shutdown.

Despite Telstra fixing this issue, they have not unblocked all the devices they blocked in error due to this compatibility issue.

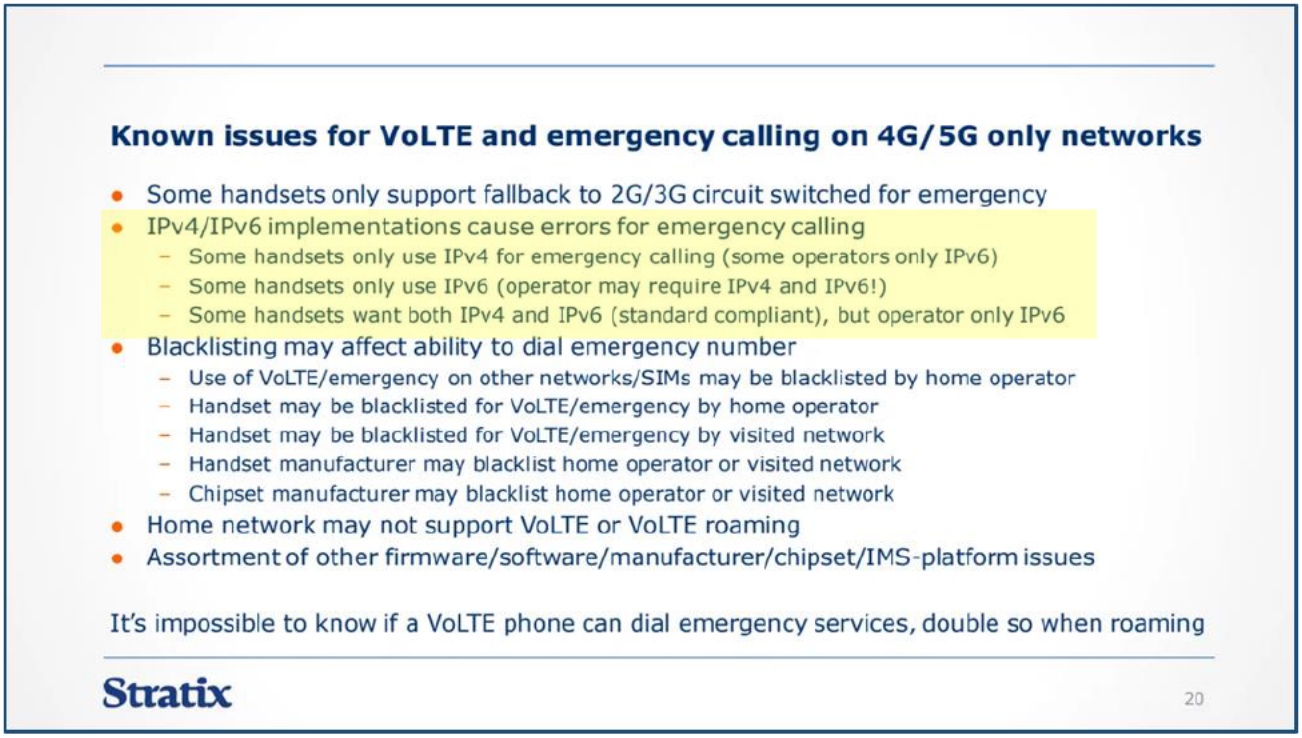
Telstra IP Version Issues for Emergency Calling

As part of the need to ensure consistency of standards and implementation by carriers, Telstra continues to have IR.92 VoLTE standardisation issues which have not been resolved.

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

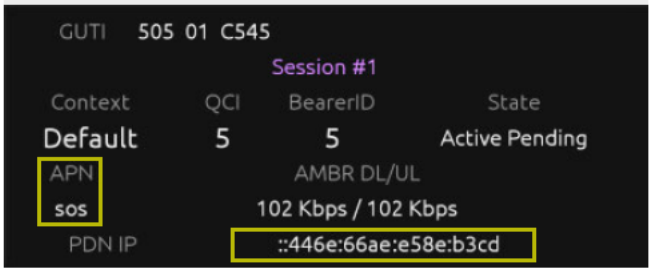
Whereas Vodafone and Optus Support IPv4 and IPv6, which is the correct GSMA IR.92 'standard compliant' approach *(as also shown at the EENA Presentation in 2022)*.

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



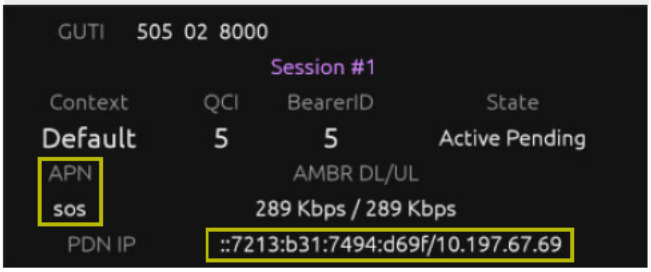
'Should we stop the shutdown of 2G/3G to save lives??' Slide 20 - Rudolf van der Berg - Stratix - EENA 2022
https://drive.google.com/file/d/1WC16k8C1gpeFRJif23yDIuLSRg1OJOnZ/view

SOS APN - IPv6
Telstra



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

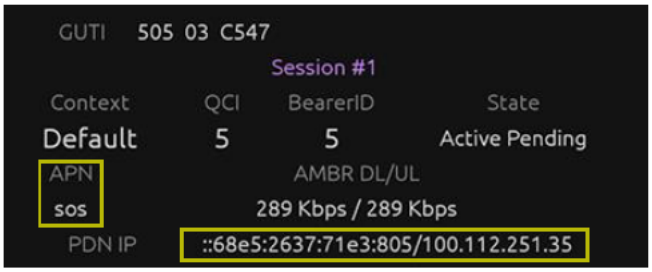
SOS APN - IPv6 & IPv4
Optus & Vodafone



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

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

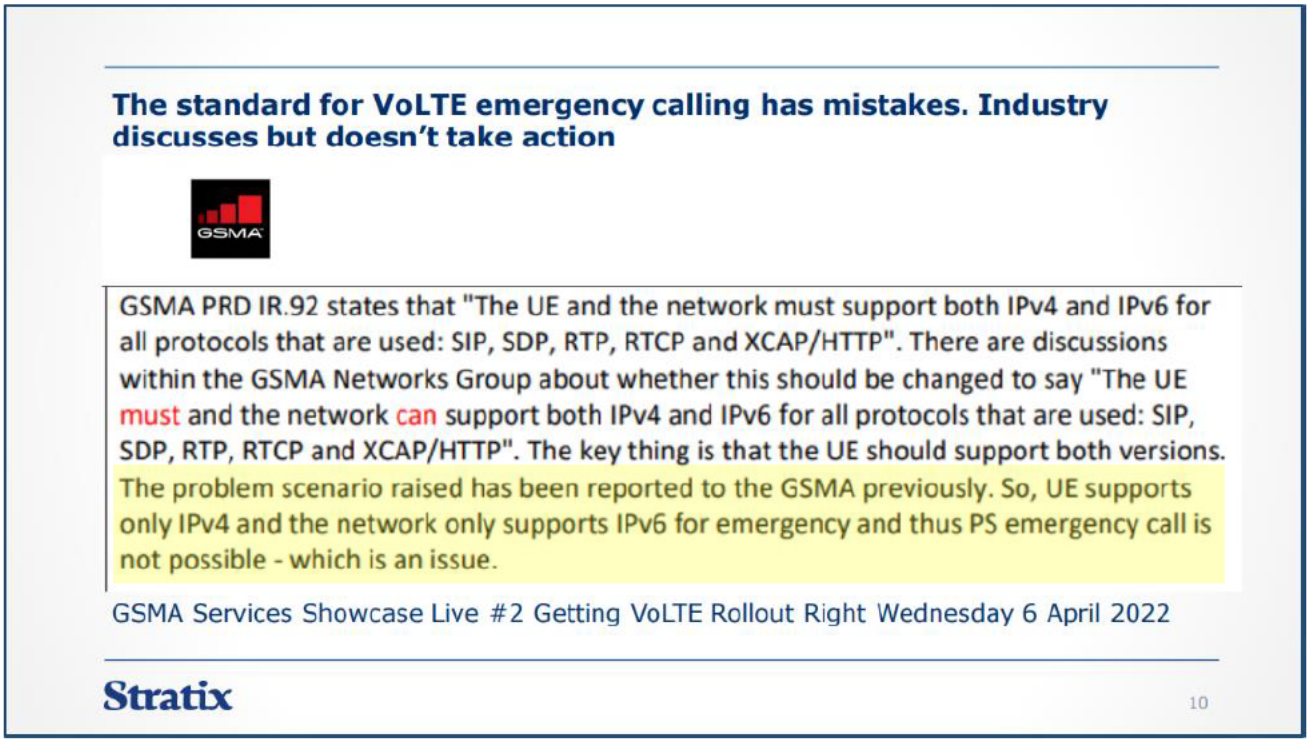
APN = Access Point Name
PDN = Packet Data Network
IP = Internet Protocol (Address)
NW = Network
UE = User Equipment (Phone)



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

So there is still more work to do to ensure that carriers are implementing things consistently and have configurations that are as interoperable as possible with Emergency Calling.

We still **do not** have that.



'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 ↓ / Device →	IPv4 only	IPv6 only	Dual stack IPv4/v6
Network		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.

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

From everything publically available, this is plainly non-compliant with IR.92.

Though 4G devices that are 'IPv4 Only' for Emergency Calling are generally limited in numbers and largely now blocked.

It does still indicate a significant failure and unwillingness for Telstra to correctly adhere to global industry standards, and to otherwise ensure their network is as interoperable as possible with Emergency Calls.

They **have not** done that, despite it likely being a very simple fix.

We could continue to see other devices and overseas carrier specific variants of 'supported phones' that require IPv4 for Emergency Calls (in some or all instances) being used.

This is something that needs to be fixed and the carriers need to all implement things consistently.

A similar 'IP Version support' issue occurred with one of the US Carriers when they shut down their 2G/3G network, and it was promptly fixed.

The same type of IP Version compatibility problem was mentioned at the EENA conference in 2023.

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"

IPv4 Carriers & Devices

For reference 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 use a device in Australia that's configured in software to be IPv4 only for Emergency Calls (on the SOS/Emergency APN) **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
https://docs.google.com/spreadsheets/d/1mo0DQjbVA2sVUeTG5_e2mDa5NDfdFo003HgArNdyuIM

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.

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.

Further to this, I've been able to use various (Not Blocked) devices, (including some Samsung's) that are configured via firmware settings to be IPv4 only for Emergency Calls.

Those devices are unable to Call Triple Zero on Telstra, but can Call Triple Zero on Optus and Vodafone 4G Networks.

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.

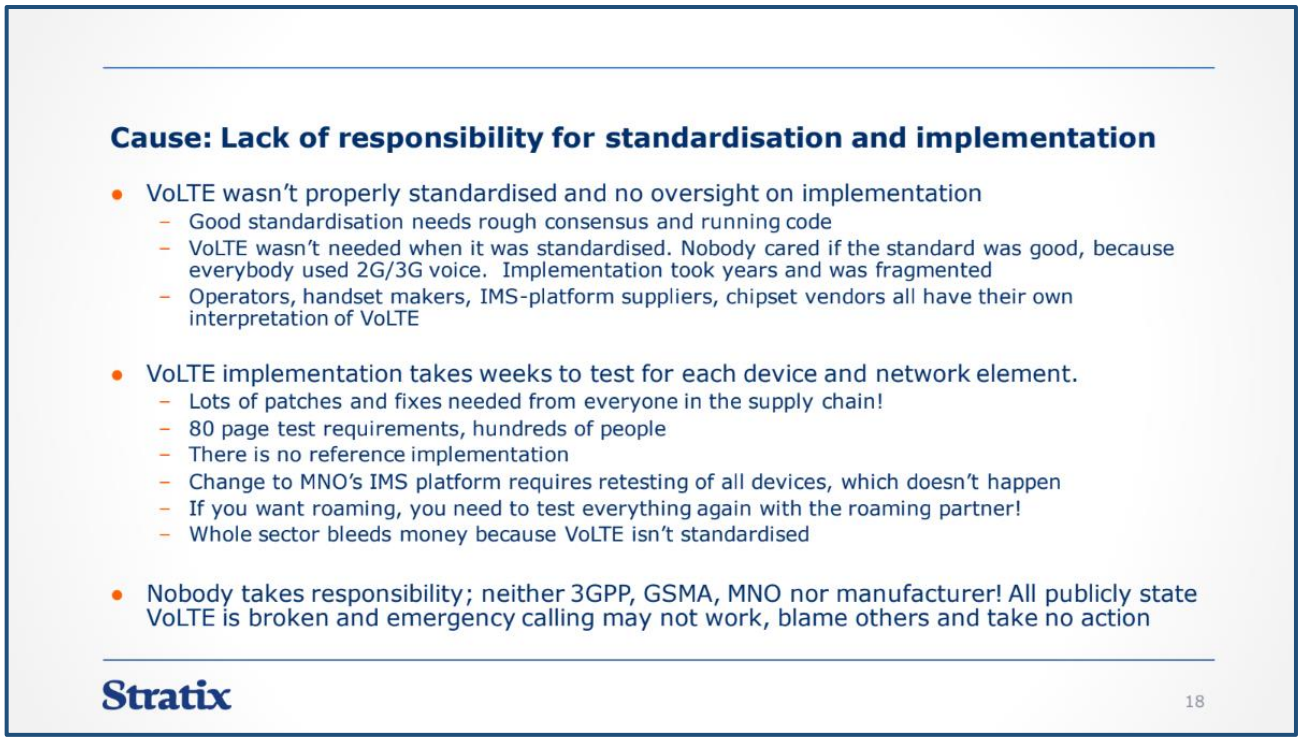
As a country we need to follow **global standards** as we have done previously with 2G/3G.
We need to ensure maximum interoperability across the networks and the devices need to do the same.

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' or requiring Australia specific device testing and 'compliance documentation'.

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.

Enabling Voice over LTE on Devices

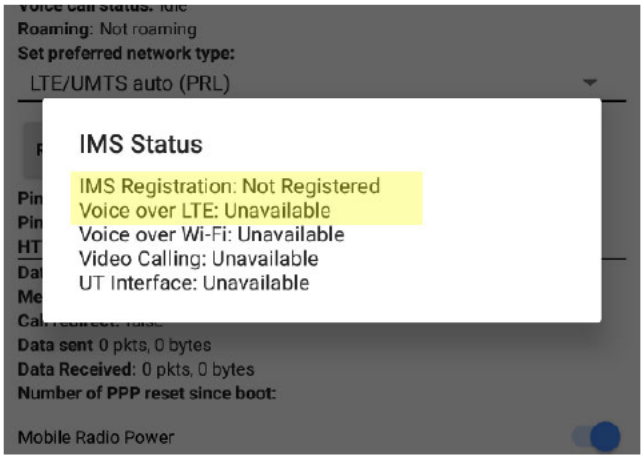
Outside of carrier incompatibility with the Telstra network and Generic 'Open Market Device' VoLTE profiles, there are other aspects which are required for VoLTE to work.

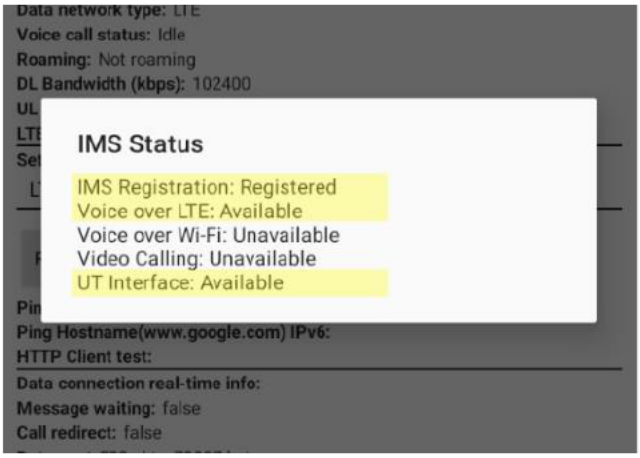
Some of which can impact compatibility or what consumers experience as incompatibility on an otherwise hardware and software compatible 4G/5G device.

As mentioned earlier, for Voice over LTE to work on an Android device (or any 4G device) it must be able to establish IMS and VoLTE Registration with their carrier's network.

Otherwise the phone will be unable to make 4G Calls, only 4G Emergency Calls (however that's provided the modem of the device supports VoLTE Emergency Calling).

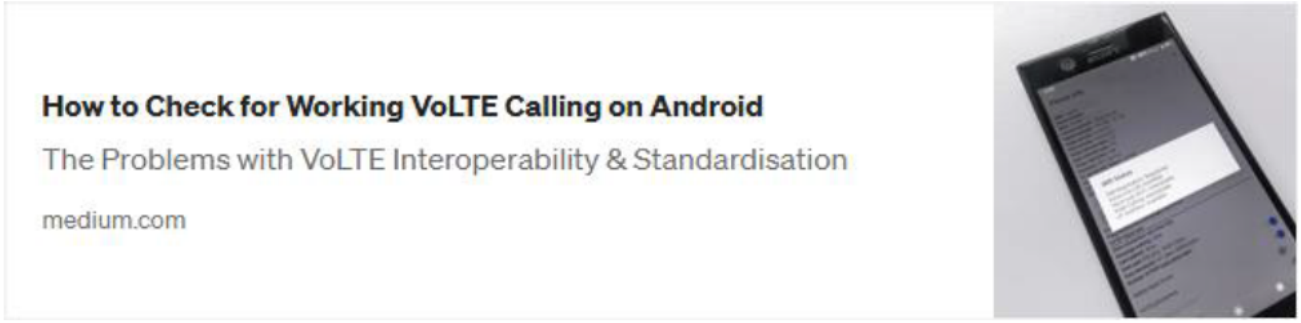
Devices without VoLTE & IMS Registration will default to 2G/3G Circuit Switched Fallback to make calls, and now in Australia post 3G shutdown these devices will fail to place normal calls when connected.





IMS Status Android IMS Registration: Not Registered ✖ Voice over LTE: Unavailable ✖	**IMS Status Android** IMS Registration: Registered ✔ Voice over LTE: Available ✔
H+ 3G	Vo)) LTE 4G VoLTE 4G
2G/3G Icons or 'No Service' when making Calls	*4G Service Icons & VoLTE Icon when making Calls*

So IMS Registration and the ability to register for VoLTE is the most basic requirement for 4G Calls.
For more information about how enabling VoLTE works on Android devices please see below.



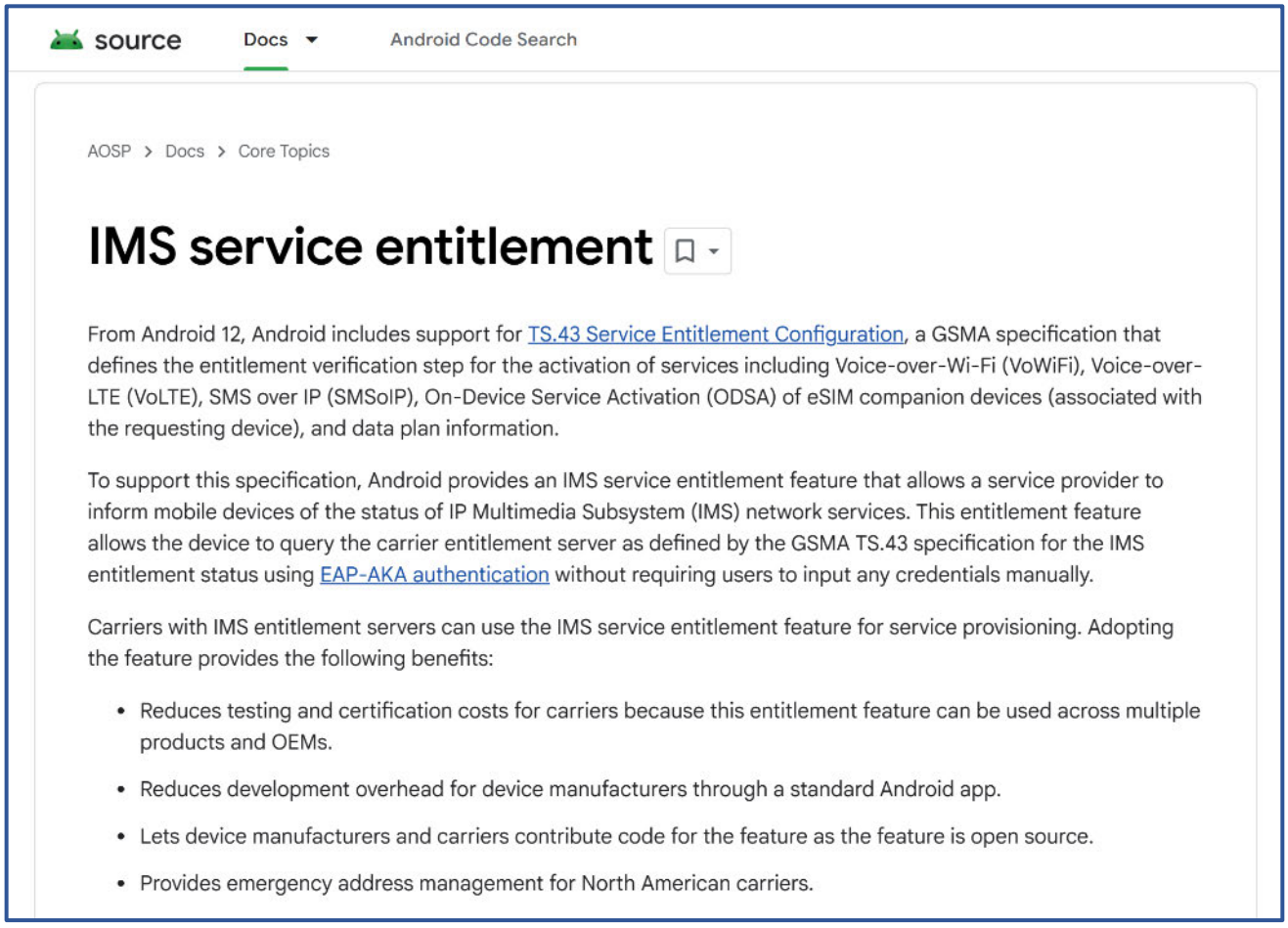
How to Check for Working 4G VoLTE Calling on Android Handsets
https://medium.com/@jamesdwho/how-to-check-for-working-volte-calling-on-android-8c343362ecfe

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

GSMA TS.43 Service Entitlement for Automatic VoLTE Activation

Since the release of Android Version 12 in 2021, Android devices have had native support for something known as ‘IMS Service Entitlement’ (via GSMA TS.43).

As outlined by Google in their ‘Android Open Source Project’ (AOSP) Documentation, IMS (IP Multimedia Subsystem) ‘Service Entitlement’ allows for automatic on device activation of Voice over LTE (VoLTE), Voice over WiFi (WiFi Calling/VoWiFi) and other network services.



AOSP Docs - Core Topics - IMS service entitlement
https://source.android.com/docs/core/connect/ims-service-entitlement

In principle the 'TS.43 Specification' allows a customer's device to directly communicate with their carrier's 'entitlement server' via an API and automatically enable the correct device side IMS provisioning settings for VoLTE, VoWiFi etc.

'*Service Entitlement' is also often used by carriers for e-sim activation and LTE Enabled smartwatches.*

Architecture

The following figure describes the architecture and the behavior of the IMS service entitlement feature.

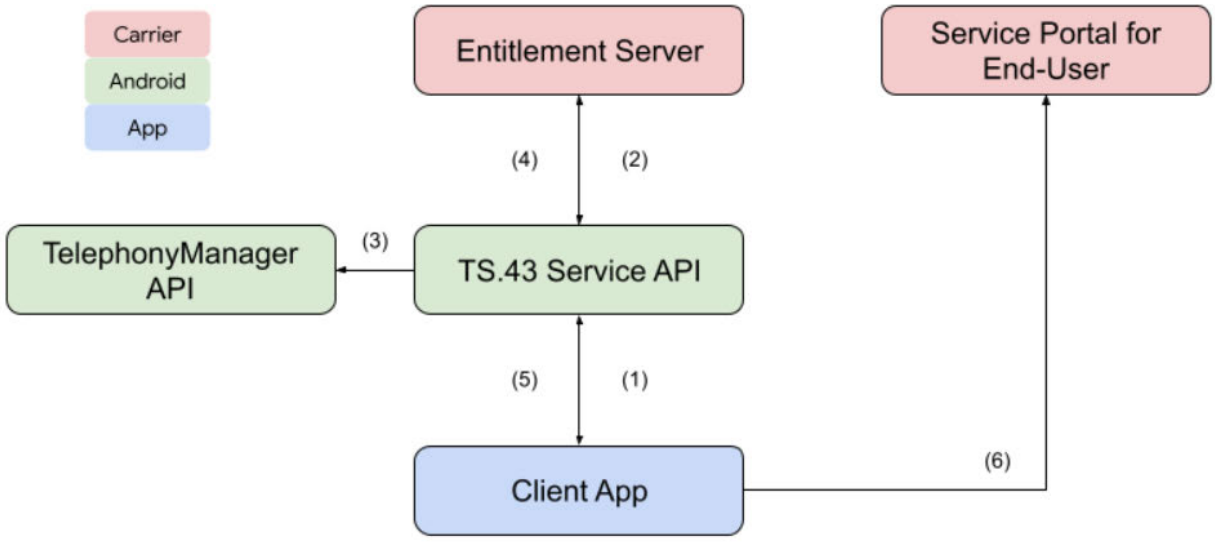
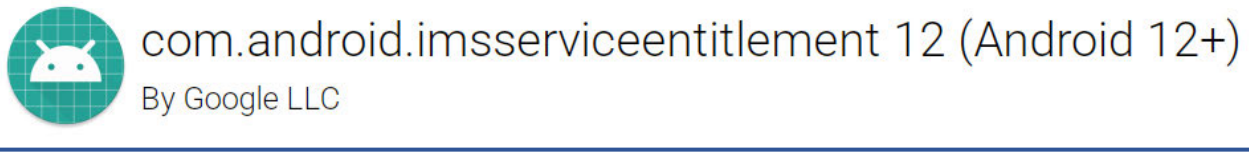


Figure 1. TS.43 entitlement feature architecture

AOSP Docs - Core Topics - IMS service entitlement
https://source.android.com/docs/core/connect/ims-service-entitlement



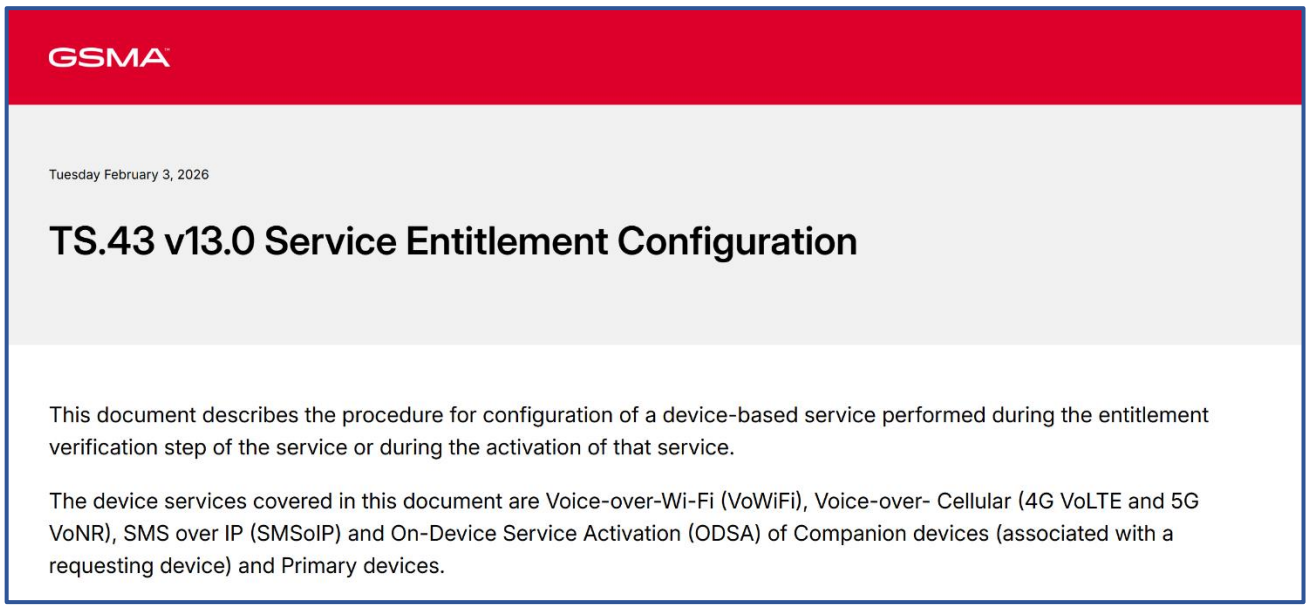
However according to Google's Documentation only a few carriers have deployed this feature and no Australian Carriers are on that list.

GMS partners: The following carriers are supported by the TS.43 entitlement app in Android 12, following the TS.43 v5.0 specification:

- US: CSpire, US Cellular, Cellcom
- France: Orange

AOSP Docs - Core Topics - IMS service entitlement
https://source.android.com/docs/core/connect/ims-service-entitlement

Note: *Australian carriers may or may not support this function, though based on testing some (Carrier Whitelisted) Android 12+ handsets with support for IMS Service Entitlement (that have VoLTE off by default with AU Sims) I've yet to see any automatically provisioning by TS.43 on these devices.*
However even with full support of TS.43, carriers could still prevent the automatic VoLTE provisioning of certain devices even if otherwise perfectly capable.



GSMA Resources - TS.43 v13.0 Service Entitlement Configuration
https://www.gsma.com/get-involved/working-groups/gsma_resources/ts-43-service-entitlement-configuration

With TS.43 supported by the carrier network, any Android device with Android 12 (2021) or newer that uses Google's native IMS Provisioning Framework *should* be able to automatically enable VoLTE Settings automatically without any direct user intervention.

So provided a device is running a Generic/Global GSMA IR.92 VoLTE Profile (Modem Configuration) automatic VoLTE activation via TS.43 would enable those devices to work seamlessly on any network for Calls and Emergency Calls without any user intervention.

Many devices are sold with VoLTE enabled out of the box with VoLTE provisioned on by default, along with a Generic/Global 'GSMA IR.92' Modem Profile loaded on the device.

However some devices will only activate the VoLTE provisioning setting when certain carrier sim cards are installed, TS.43 removes that need for manual configuration.

Prior Approaches

Traditionally to enable VoLTE Calling functionality on devices Android handset vendors have had to specifically configure devices in software to enable these features.

This typically occurs on insertion of a supported carrier sim card. These services are then activated by software directly on the device based on the IMSI (Sim Card Number) prefix of the inserted Sim.

Telstra is 505 01, Optus is 505 02, Vodafone is 505 03.

There is no interaction to enable VoLTE between the device & network, it is all enabled device side only.

```
######################## Customized property values ########################
ro.telephony.default_network=9
persist.vendor.radio.calls.on.ims=1
persist.radio.calls.on.ims=1
ro.vendor.semc.ecclist.num=1
ro.vendor.semc.ecclist.type.0=police
ro.vendor.semc.ecclist.number.0=000
ro.vendor.semc.ecclist.plmn.0=505 FFF
persist.sys.timezone=Australia/Sydney
ro.product.locale=en-AU
ro.cst.prm=1308-6997:R3C
############################################################################
```

Android VoLTE/IMS Provisioning Firmware 'build.prop' Flag

This can also coincide with the forced loading of an alternative modem configuration (carrier profile). Though different handset vendors can take slightly different approaches.

```
Current Modem Config:
/system/etc/customization/modem/amss_fsg_dora_telstra_ims_tar.mbn
```

Telstra Modem Configuration – Qualcomm SD 820 Chipset

Network / Sim IMSI	Modem Config / Carrier Profile
Telstra – 505 01	/system/etc/customization/modem/amss_fsg_dora_telstra_ims_tar.mbn
Optus – 505 02	/system/etc/customization/modem/amss_fsg_dora_optus_ims_tar.mbn
Vodafone – 505 03	/system/etc/customization/modem/amss_fsg_dora_vha_ims_tar.mbn
GSMA IR.92 'OMD' Generic	/system/etc/customization/modem/amss_fsg_dora_ir92_ims_gte_tar.mbn

Modem Configurations Xperia XP F8131 – Android 8.0 QC SD 820 Chipset

However with an OMD (Open Market Device) running a Global/Generic GSMA IR.92 VoLTE Compliant Modem Config/Carrier profile, the loading of a 'carrier specific config' is not strictly required in order to be able to obtain VoLTE Call Service, for either calls or Emergency Calls.

Device Compatibility between Networks

In some instances a given carrier modem configuration or ‘carrier profile’ can be configured to support Voice over LTE for normal calls (over IMS) but not Emergency Calls (over SOS). The reverse is also true.

But this ‘modem config changing’ behaviour can result in a device that is configured for support with one carrier (with their sim inserted) being unable to utilise those features when other carrier sims are inserted, despite the hardware and software of the device being otherwise perfectly capable.

In some instances, this has been used by vendors to lock more advanced 4G VoLTE Calling to specific carriers.

This is common with a large number of Samsung devices that are technically VoLTE capable on multiple networks at a core software and hardware level, but the ‘VoLTE On’ provisioning setting has been forced off for other carriers, either domestically or globally.

This was common practice with certain prepaid devices and with various Android phones directly sold by carriers.

Samsung Devices released from around the Galaxy S8 onwards (2017) are typically not configured like this, though with some OEMs and handset models the practice continued up to around 2019/2020.

Generally speaking, these limitations are artificial in nature and not a fundamental issue with hardware compatibility or band support.

However it’s important to note these specific ‘with a sim different profile’ issues are largely found in older devices.

It does not account for the inconsistent blocking (and support) with newer and in some cases brand new 4G/5G Devices that always use generic ‘IR.92 based’ profiles & settings and work on every network for 4G emergency calls regardless of the sim inserted.

These two issues are entirely separate, and previous device firmware behaviour does not justify current blocking practices by carriers.

Manually Forcing VoLTE on

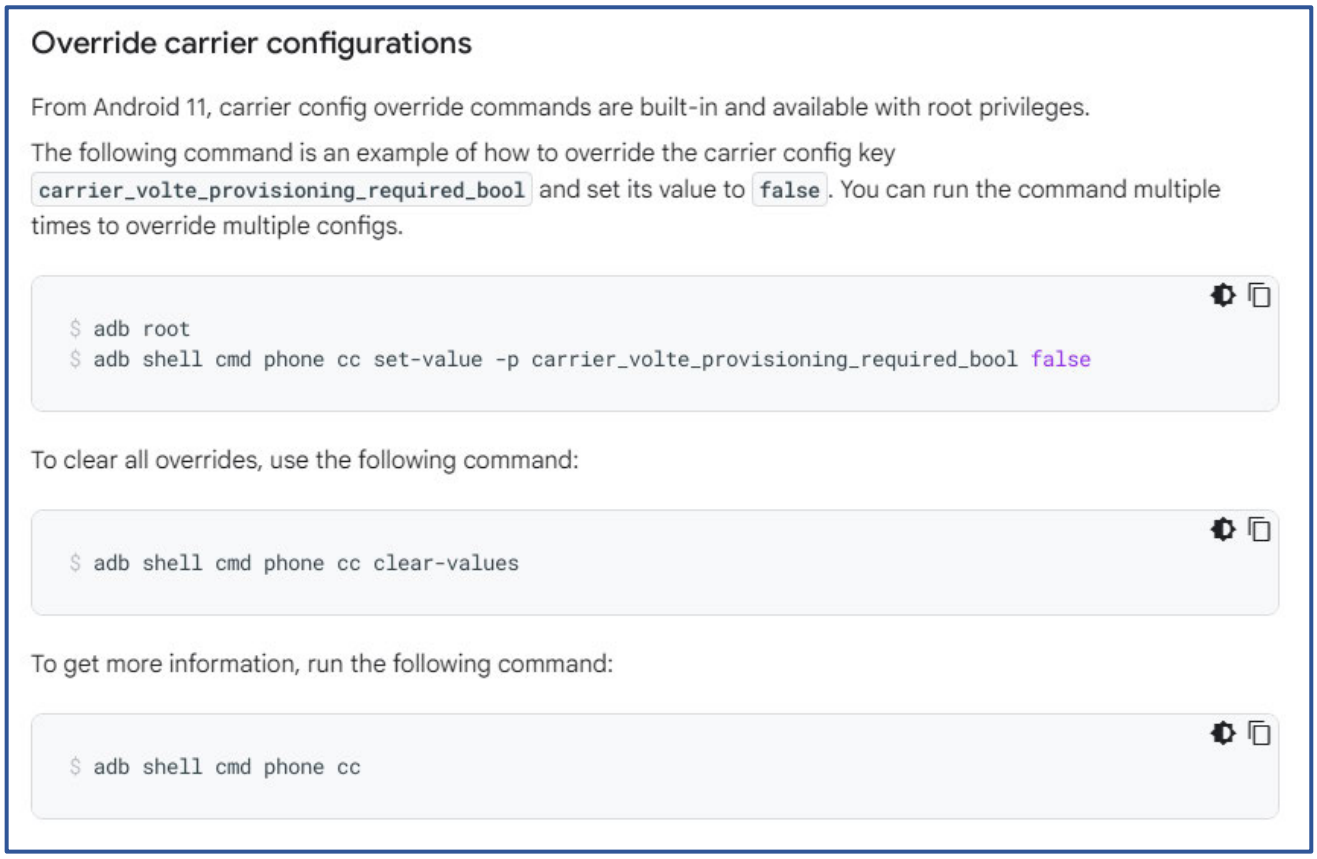
Where a carrier does not support ‘TS.43’ and the device isn’t otherwise enabled out of the box for VoLTE (as many now are), it is possible for end users to manually ‘force on’ these settings at a device level.

Android VoLTE Override Commands

Google provides commands that allow users with ‘root’ (full admin) access to force Enable VoLTE.

However this ‘root’ approach typically requires advanced technical knowledge by users, in addition to a device with a fully unlocked bootloader.

Devices with ‘unlocked bootloaders’ can have any device software installed or settings applied, not just what is provided by the handset manufacturer. Similar to what is possible with a desktop or laptop PC.



Override carrier configurations

From Android 11, carrier config override commands are built-in and available with root privileges.

The following command is an example of how to override the carrier config key `carrier_volte_provisioning_required_bool` and set its value to `false`. You can run the command multiple times to override multiple configs.

```
$ adb root
$ adb shell cmd phone cc set-value -p carrier_volte_provisioning_required_bool false
```

To clear all overrides, use the following command:

```
$ adb shell cmd phone cc clear-values
```

To get more information, run the following command:

```
$ adb shell cmd phone cc
```

AOSP Docs - Core Topics - IMS service entitlement – Override carrier configurations
https://source.android.com/docs/core/connect/ims-service-entitlement

User Accessible ‘App Based’ Methods

However, there are other normal user accessible (‘non-root’) methods and apps that allow users to simply force enable these settings with the use of compatible Android Device Firmware.

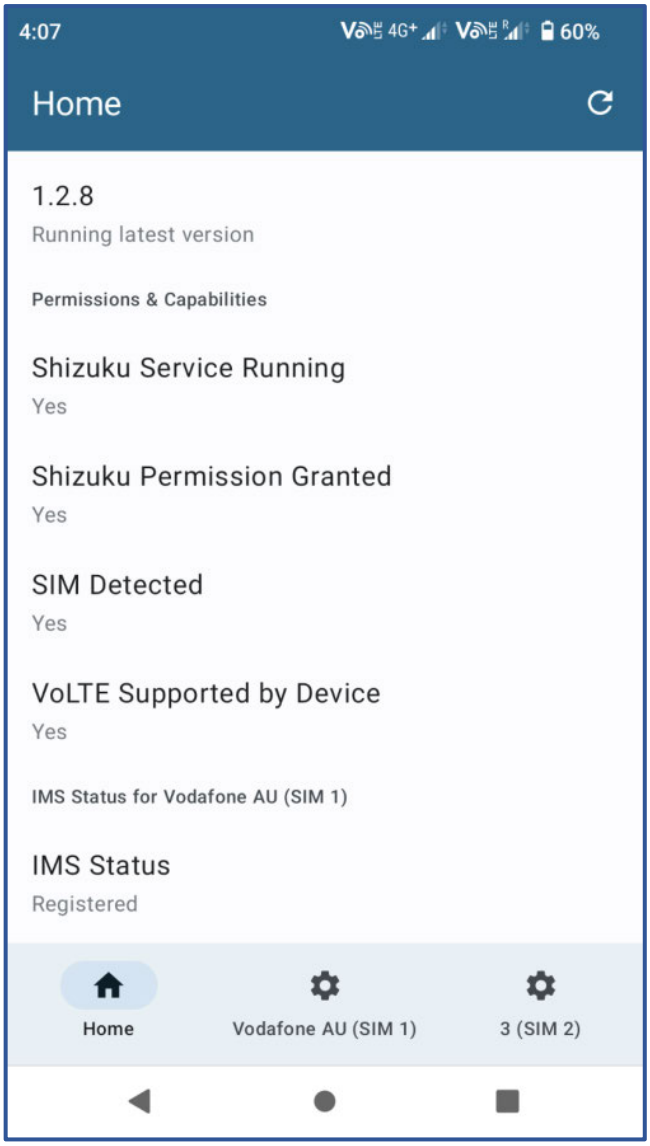
Such apps that allow for this are Pixel IMS, Turbo IMS and other open source forks.

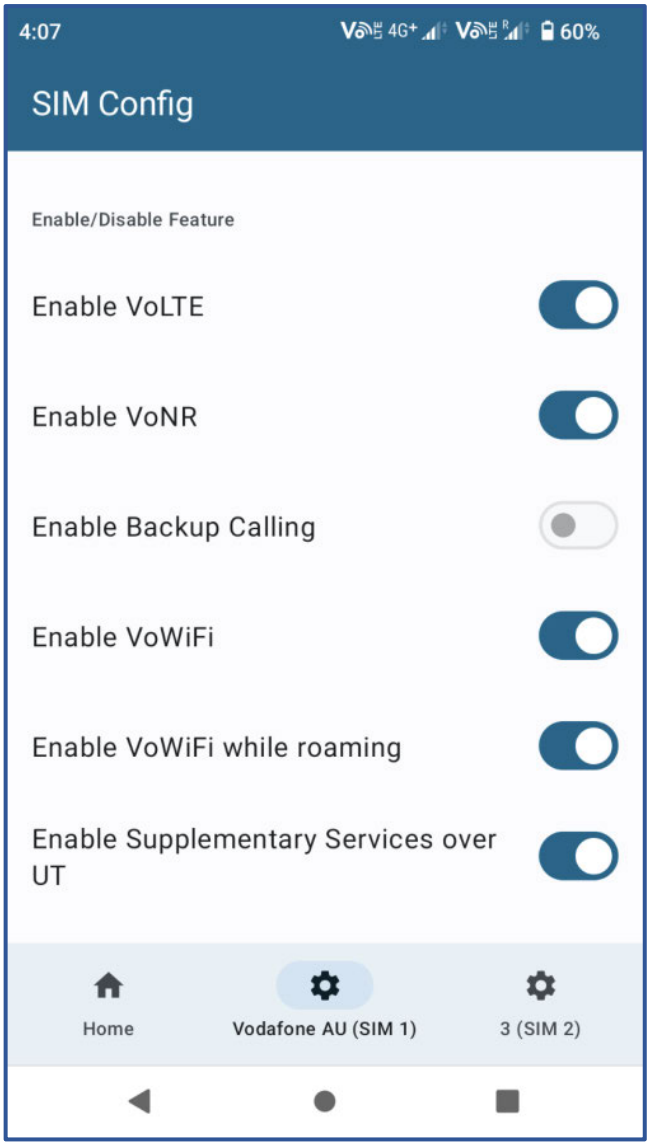
Pixel IMS

Turbo IMS

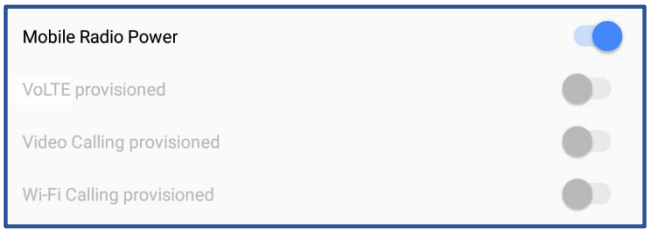
Pixel IMS: https://github.com/kyujin-cho/pixel-volte-patch/blob/main/README.en.md
Turbo IMS https://github.com/Mystery00/TurboIMS

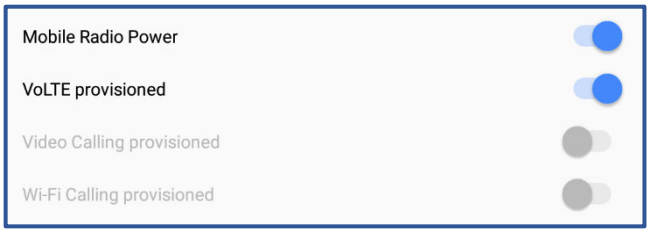
These tools make use of the same underlying provisioning functions available within Android to force these toggles on without the need for the network carrier to provision the device via Service Entitlement.





Pixel IMS – Forced VoLTE Provisioning Settings Toggles – Android 12 Screenshots

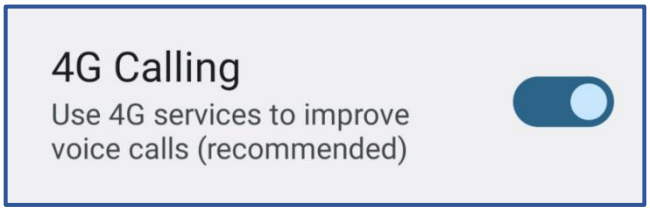


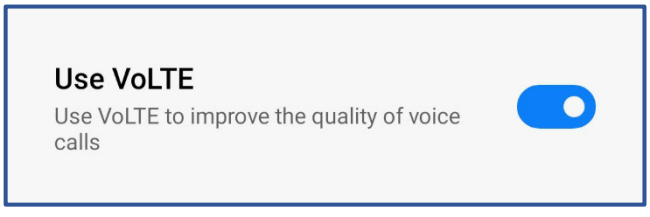


Android – Radio Info Debug – Before VoLTE Provisioning

Android – Radio Info Debug – After VoLTE Provisioning

Provided a device has a VoLTE capable Modem Configuration loaded, then once VoLTE is set as 'provisioned' it's then possible VoLTE to be switched on in user settings (if not 'on' automatically or 'forced on' by default). Once 'on', the device can then attempt to establish IMS Registration and VoLTE.





Android – VoLTE/4G Calling Settings Toggles

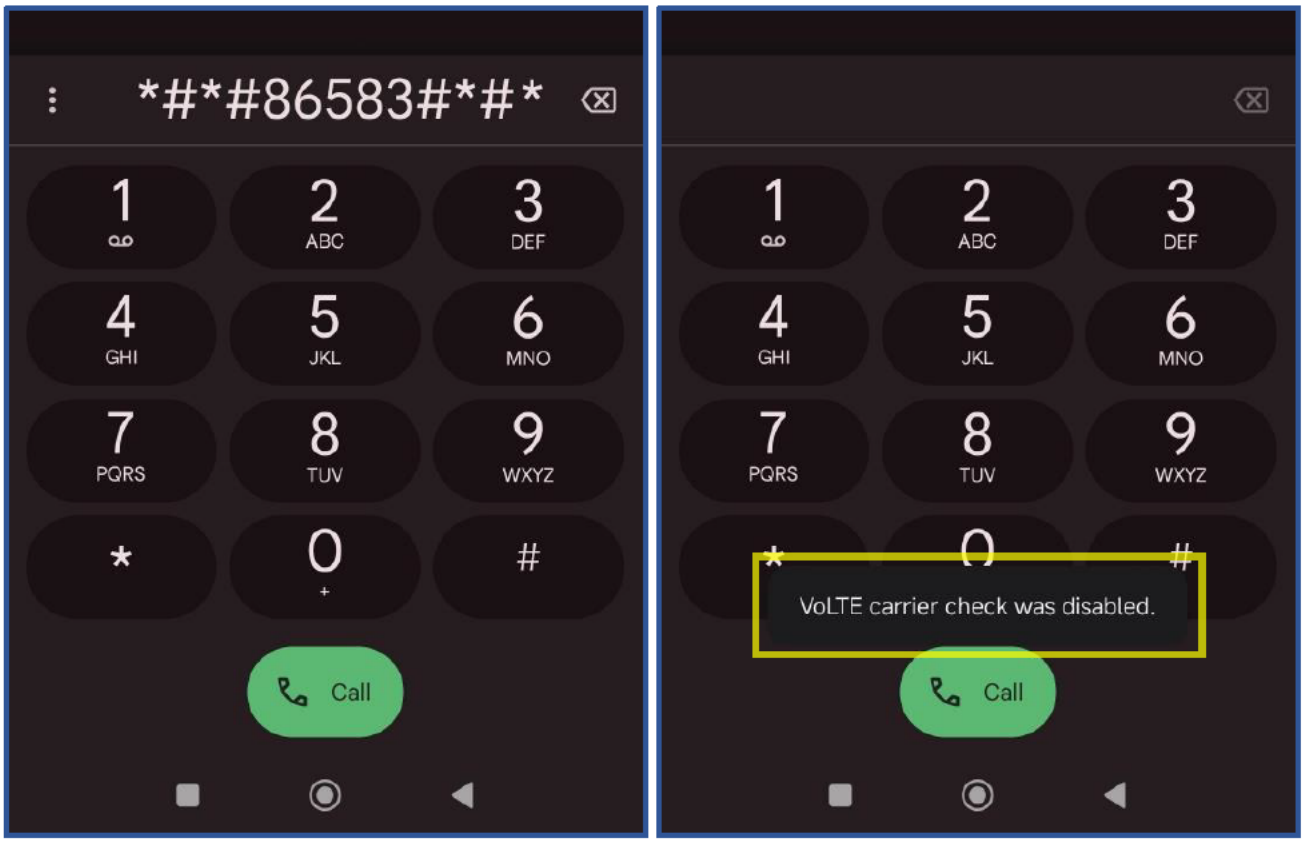
Device OEM Dialer Code Method

Outside of 'Provisioning Apps' and TS.43, some Android handset OEMs have hidden (user enterable) Dialer Codes that can **'Force Enable'** the VoLTE setting on the device and make VoLTE **'Provisioned'**.

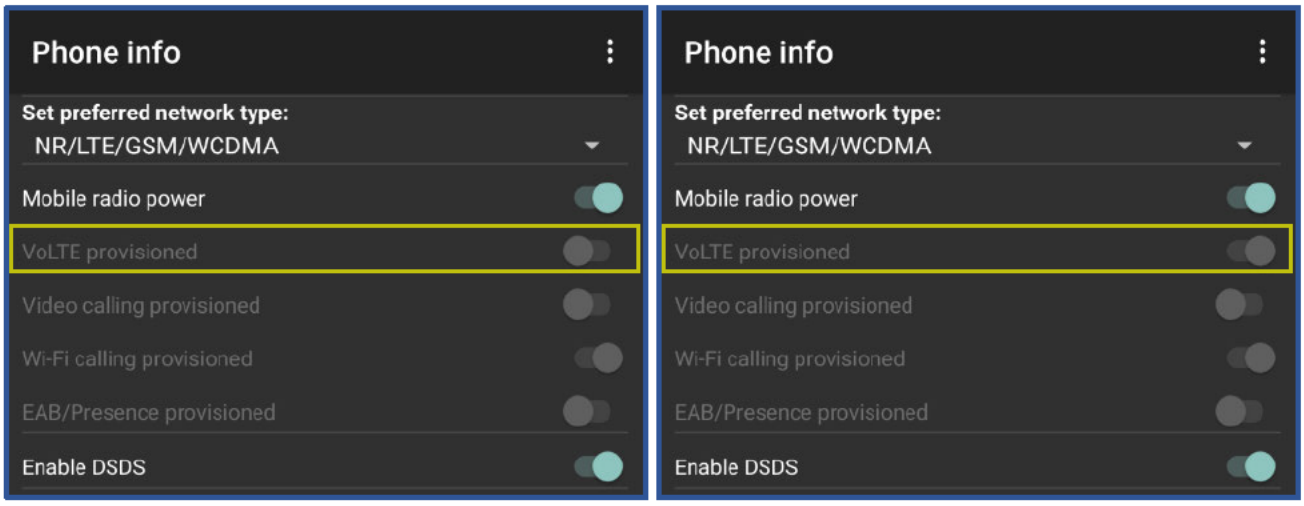
However a carrier VoLTE compatible modem firmware configuration is also required for VoLTE to work. Though many devices use a Generic/Global 'IR.92' VoLTE Modem Configuration out of the box.

Examples of such Dialer Codes are below:

Asus Code: *#*#3642623344#*#* (Spells 'ENHANCED4G')
Xiaomi Code: *#*#86583#*#* (Spells 'VoLTE') & ***#*#869434#*#*** for VoWiFI



Xiaomi MIUI VoLTE Dialer Code – Before & After



Android - Radio Info Debug – Before VoLTE Dialer Code

Android - Radio Info Debug – After VoLTE Dialer Code

Vodafone's 3G Shutdown & VoLTE

It's important to note that in the context of the TPG/Vodafone 3G Shutdown in late 2023/early 2024, many consumers with VoLTE Capable 4G/5G devices had to manually enable 'VoLTE Calling' on their device after Vodafone's 3G Networks were shutdown in their area.

For many users this issue was experienced through lost call service post 3G Shutdown between December 2023 and January 2024.

Below are some user reports from TPG/Vodafone Network customers sent to (then) Minister Rowland in early 2024. Both users had newer 4G/5G devices that likely had VoLTE off by default or an incorrect setting of software version applied.

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

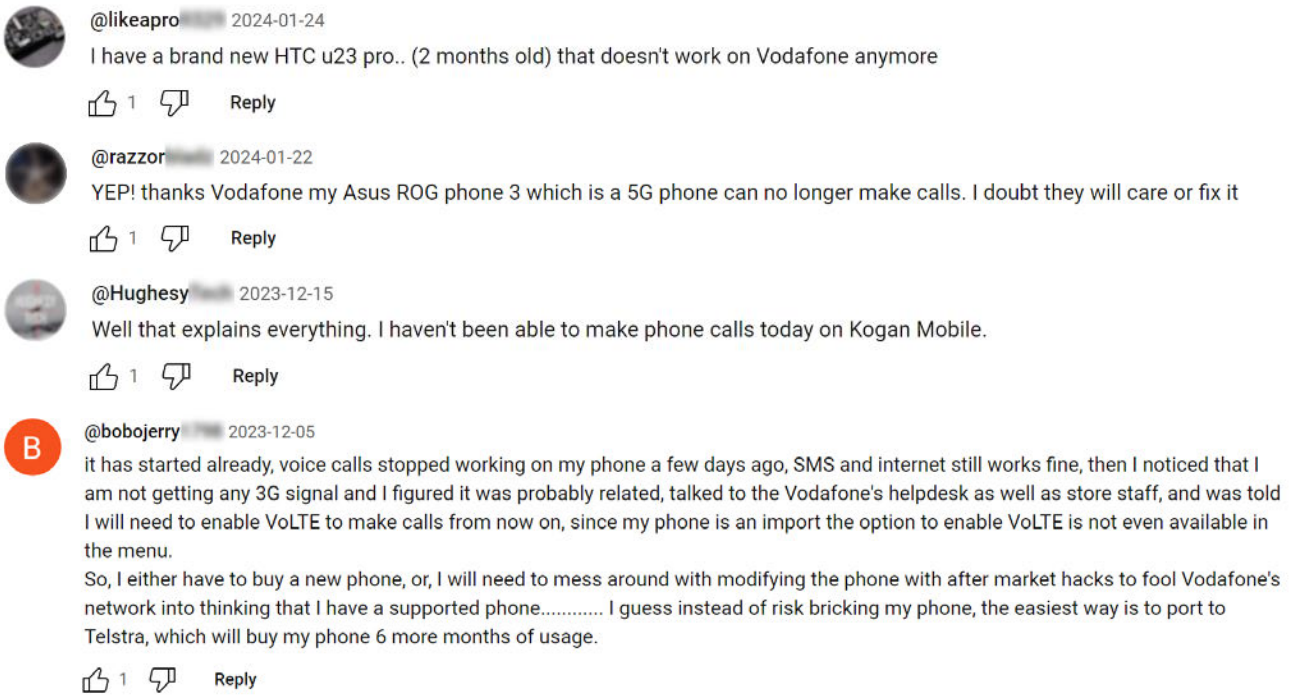
FOI 24–354 — Document 19
https://www.infrastructure.gov.au/sites/default/files/documents/foi-24-354--documents-for-release--pdf.pdf

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

There were other comments about this online including in the November 2023 Hugh Jeffreys Video titled *'Carriers are Killing 4G & 3G Devices - Your 4G Phone May Soon Stop Working'*
https://www.youtube.com/watch?v=Q6qb9dml6So

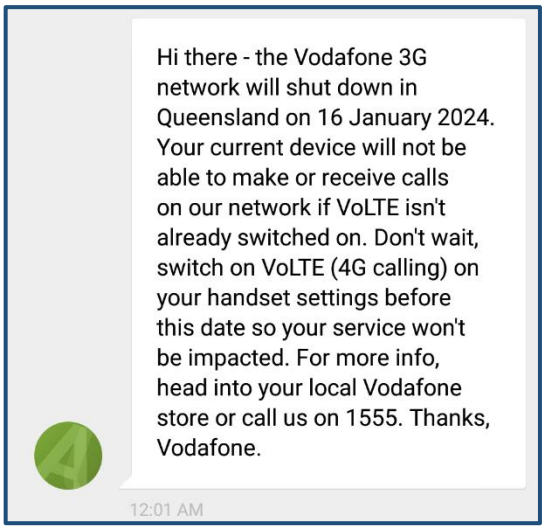
Some of the Video Comments are below:



Whirlpool Forums - 3G shutdown: no more calls on many 4G devices – 2023-11-26
https://forums.whirlpool.net.au/thread/3l10nzwy

The advice from Vodafone to customers in advance of their 3G Shutdown was just to 'turn VoLTE on'.

However that same message was also sent to 4G devices they removed from their VoLTE support list months earlier due to being unable to call Triple Zero on 4G.



But for many devices, the 'fix' to get them to work was simply to switch (or force) the VoLTE setting on.

Once that occurred the devices worked fine, including for Emergency Calls on 4G, which doesn't actually need VoLTE 'to be switched on' to work.

Some of these devices that Vodafone currently supports for VoLTE were blocked by Telstra and Optus.

GSMA TS.43, D2D & Non-Terrestrial Networks

It's important to note that the GSMA has continued to improve and develop upon TS.43 and works to expand the functions of 'service entitlement' for future NTN (Non-terrestrial networks) and direct-to-device (D2D) satellite connectivity, as noted in the below technical blog from February this year.

GSMA

Thursday 19 February, 2026 (modified Friday 20 March, 2026)

Taking entitlement into the skies

Jean-Philippe Cormier of Google and Nacho Blázquez of HCLTech outline how a key GSMA specification is expanding to support more use cases, including seamlessly connecting devices to non-terrestrial networks.

The latest mobile handsets can connect to satellites when terrestrial networks aren't available. In the case of an emergency, such as an accident in a remote area, direct-to-device (D2D) satellite connectivity can be a vital lifeline.

Stitching terrestrial and non-terrestrial networks (NTN) together in a seamless way requires some technical wizardry in both the handsets and the networks. But making the magic happen also depends on an important, but often overlooked, element – an entitlement server , which enables the handset to differentiate NTNs from terrestrial networks.

By employing standardised application programming interfaces (APIs), entitlement servers can provide a fast and efficient way to configure connected devices so that they can take advantage of a network's capabilities. As its name suggests, the entitlement server notifies the device which advanced features it is entitled to use (having checked with the operator's BSS), enabling the operator to provide different configurations to different users. The device then interacts with the network accordingly. In simple terms, the entitlement server acts as the glue between the device and the network.

The latest version 13 of the GSMA's TS.43 specification, which standardises the APIs used by entitlement servers, introduces some detailed configurations for devices that may need to access satellite connectivity during an emergency. Depending on the situation, an operator may allow any device in the vicinity to access a non-terrestrial network or it may only allow devices used by the emergency services to connect to satellites, so as to conserve bandwidth. The operator can then use an entitlement server to apply these policies for each device. In short, the entitlement server helps protect the integrity and the capacity of the satellite network.

GSMA – Working Groups – Technical Blog - Taking entitlement into the skies – TS.43 – March 2026
https://www.gsma.com/get-involved/working-groups/content-type/technical-blog/taking-entitlement-into-the-skies

GSMA

Enabling immediate access to advanced network capabilities

Interoperability between different devices and networks is a key focus area for the GSMA's Terminal Steering Group (TSG), which oversees the development of TS.43 by the Service Entitlement Configuration Group (TSGVVEC) sub group. When devices and networks are fully interoperable, end users can immediately benefit from the full range of network capabilities and features, including eSIMs, 5G standalone, RCS (Rich Communication Services), Voice-over-Wi-Fi, Voice-over-New Radio and number verification. The result is a better experience for consumers and businesses alike.

The TS.43 specification is key to achieve that goal. While every mobile operator has different back-end systems, a TS.43-compliant entitlement server obfuscates all the complexity for the device. The end-user can then serve themselves, avoiding the need to contact an operator for help. After establishing whether the customer is entitled to a specific service, the entitlement server helps onboard the user for the first time, and configures the device to work with the relevant network capability.

GSMA – Working Groups – Technical Blog - Taking entitlement into the skies – TS.43 – March 2026
https://www.gsma.com/get-involved/working-groups/content-type/technical-blog/taking-entitlement-into-the-skies

UOMO & D2D

Given the UOMO & D2D Rollout in the coming years this should be closely looked at to ensure that what is deployed for use in Australia by carriers is following best practice Global Industry Standards, such as those specified as part of GSMA specifications and initiatives.

There needs to be uniform standardisation globally.

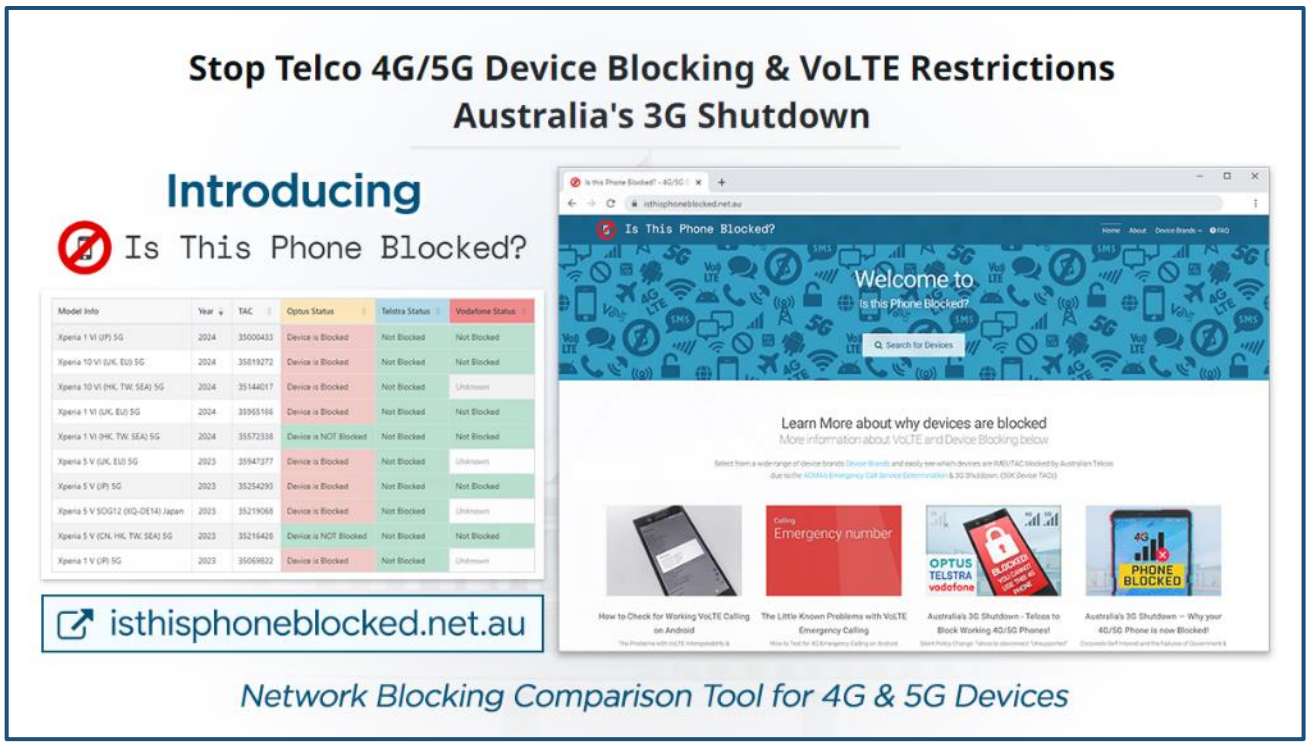
Australia should take advantage of work being done internationally and through global industry groups & standards bodies to ensure we can take maximum advantage of future technologies.

Rather than stifle improvements and innovation through any overly complex 'Australia market only' requirements and regulations.

Lack of Transparency & Systemic Classification Failures

Due to a lack of transparency for consumers around what phones they are allowed to use following on from the 3G Shutdown & blocking, in May 2025 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 data available **for more than 260,000 unique device models across dozens of 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).

ABC News Coverage about Inconsistent Blocking

In late May last year 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. Their dual sim phone was blocked on Telstra, but whitelisted on Optus & TPG.

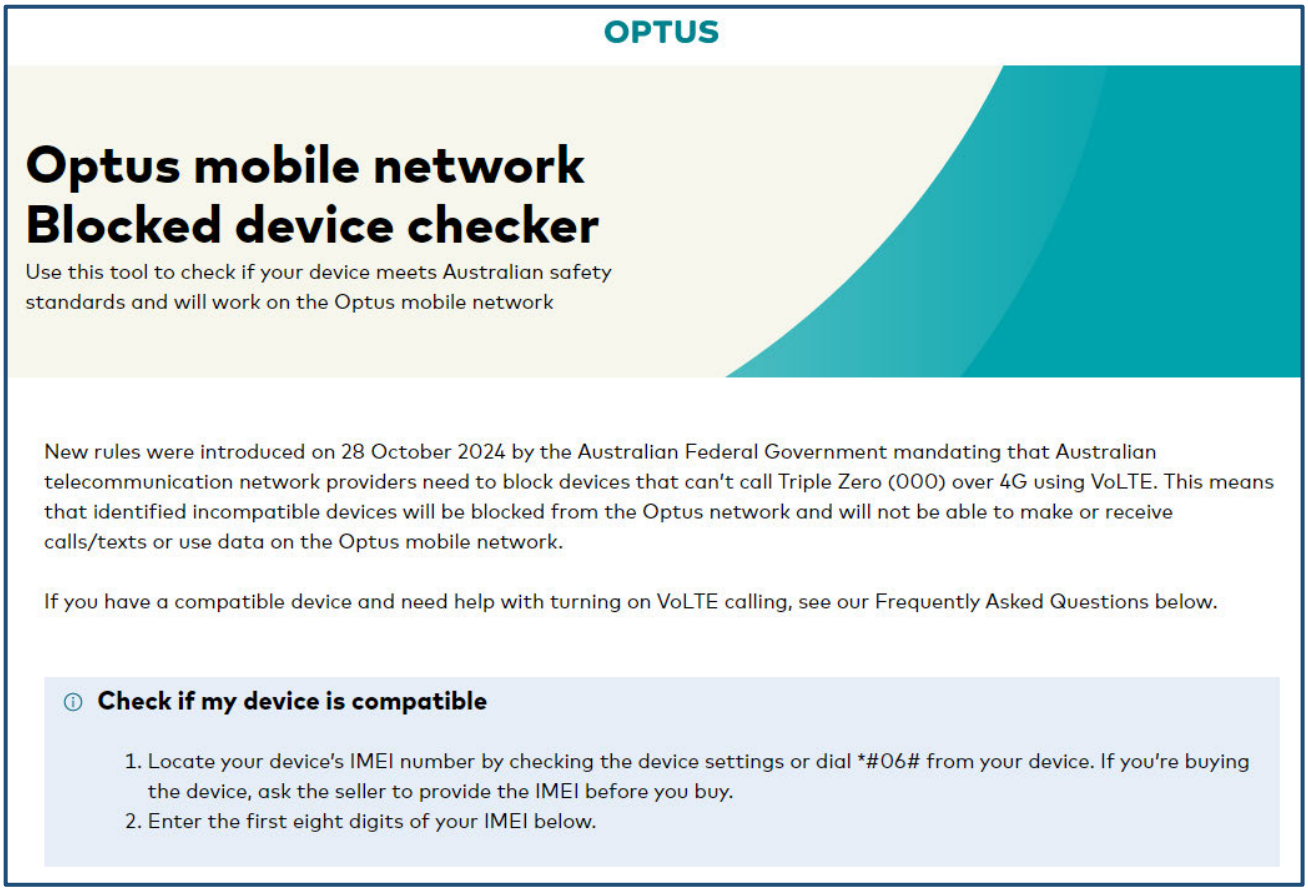
ABC - Telstra and Optus are inconsistently blocking phones. The regulator doesn't know how many - 27 May 2025
https://www.abc.net.au/news/2025-05-27/telstra-optus-inconsistent-blocking-phones/105319626

That story quite clearly highlighted major failures on behalf of the carriers to accurately determine what works, what doesn't and why. The story also highlighted issues around the regulatory oversight of these matters following on from the 3G Shutdown, despite it having occurred more than 6 months prior.

Optus 'Checker' Database

For reference, in January 2025 Optus launched their device 'TAC' (Type Allocation Code) checker tool.

This online tool allows Optus network customers to input the first 8 digits of their device IMEI (Serial Number) and obtain a result as to whether that model is blocked from accessing the network.



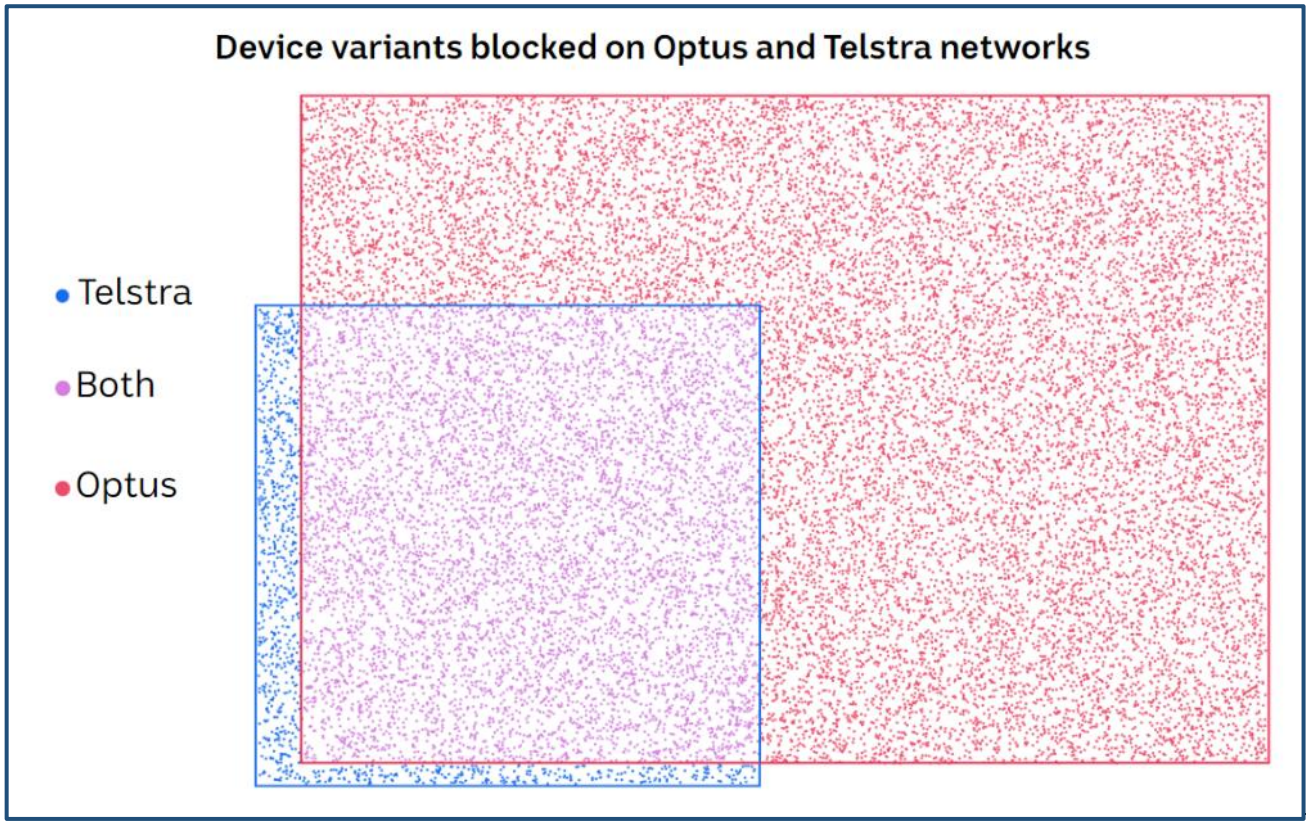
Optus Blocked Device Checker – January 2025
https://www.optus.com.au/support/checkdevice

Telstra by contrast had such a tool available in October/November of 2024

Systemic Classification Errors

Since the launch of both tools I have regularly been datamining the results and publishing the data on my 'Is this Phone Blocked' website. (As carriers have largely hidden their lists behind 'checker tools'.)

Despite Optus regularly updating their checker database, their dataset is by far the more inaccurate of the two, astonishingly so. *(As highlighted by the 27 May 2025 ABC story).*



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

The inaccuracy of the Optus 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 very 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 'VoLTE Enabled' device 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 2025 that Optus did not. The devices they unblocked didn't need any software updates to function.

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 2025 - June 2026
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

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 card and network.

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

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. (2025-2026 Data)

In July last year Optus unblocked a 4G Vehicle Asset Tracker that they had blocked (PROTRACK VT08F) and in their 6 August 2025 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 more than a year ago and they still remain blocked.

TAC	Model	Optus Status June 2026	Telstra Status February 2026
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

In May last year 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 2025 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

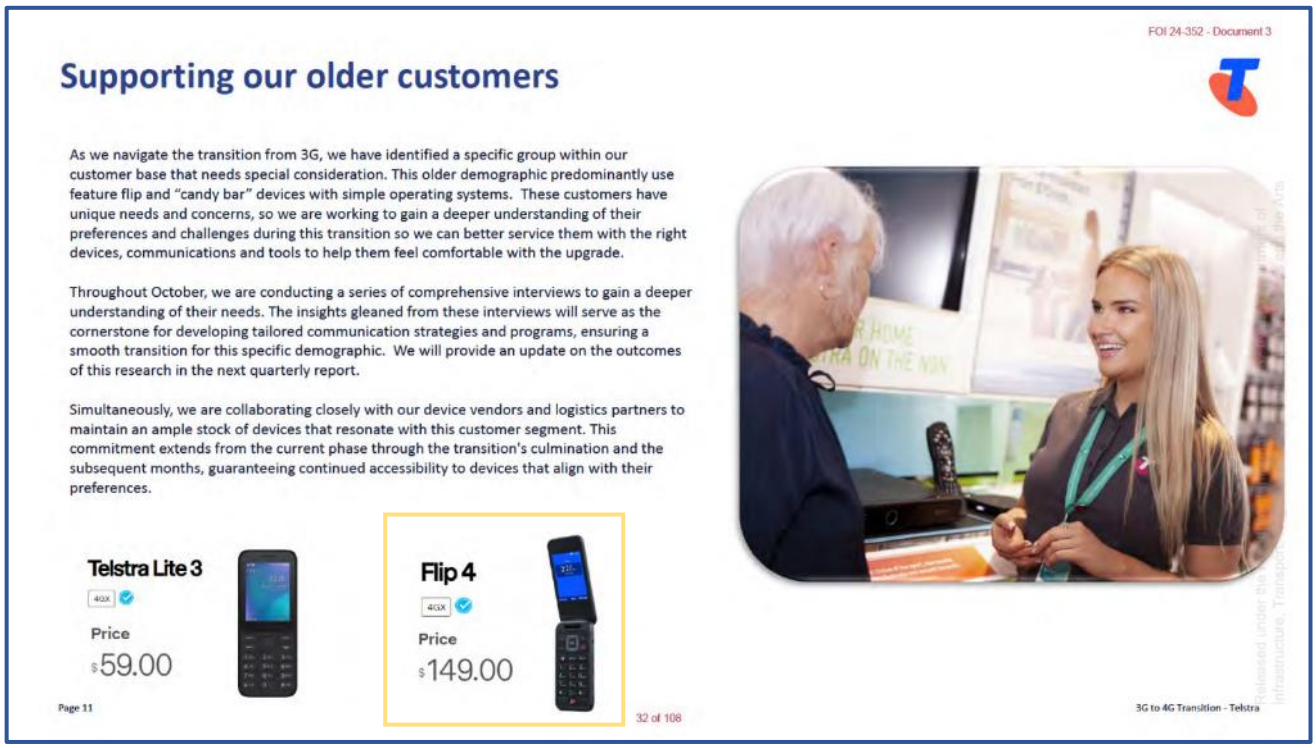
https://isthisphoneblocked.net.au/optus/changelog

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 - Jun 2026	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.

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.

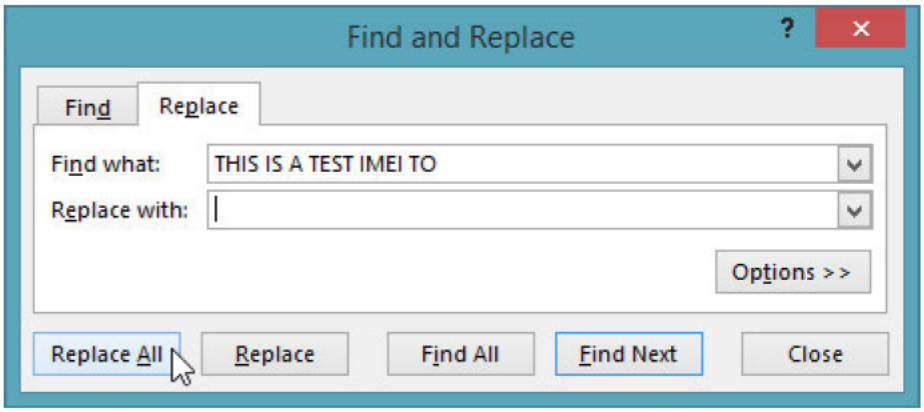
The full model name/description from the dataset Optus has used is
"This is a Test IMEI to be used with multiple prototype models."

'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 2025 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 Custodian & Department 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

At the time of the 3G Shutdown, 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 2025 ABC Story) they advised the ACMA 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.

For reference below are the blocking and unblocking changes I've been able to identify.

Optus Dataset Date	Devices Blocked – Changes	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	219	-
3 December 2025	86	-
27 January 2026	2407	-
4 February 2026	418	3
12 February 2026	85	-
4 March 2026	50	-
1 April 2026	137	3
7 May 2026	325	-
3 June 2026	28	-

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

There are very few devices that have been unblocked.

However 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.

Given the subsequent comments from Dr Kerry Schott about the 'Culture of Carelessness' within Optus, then this perhaps doesn't surprise, and again speaks to systemic issues within the organisation.

ABC - Senator Sarah Hanson-Young calls for Triple Zero overhaul at Optus outage hearing – 26 February 2026
https://www.abc.net.au/news/2026-02-26/optus-call-centre-panic-during-triple-zero-crisis/106391184

Optus Copying Telstra's Blocklist

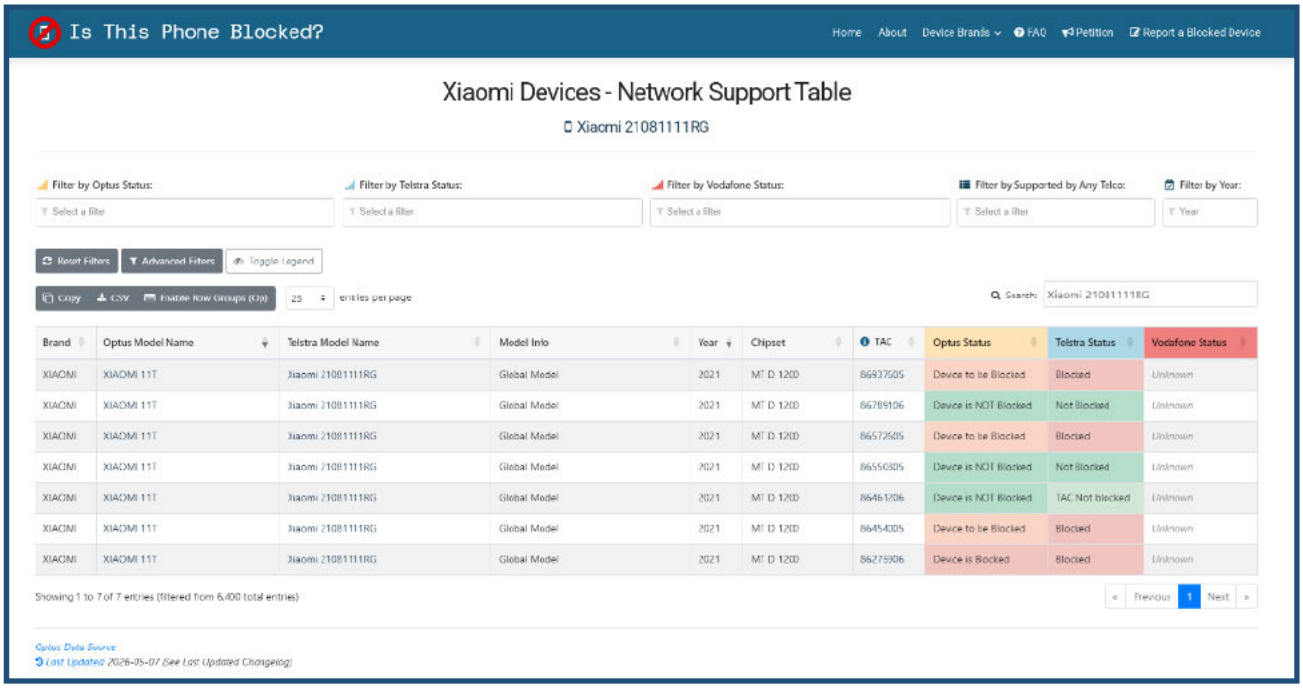
In January this year I noticed that Optus started copying Telstra's 3G-Shutdown device Blocklist to block phones. Even devices that Optus had advised were fully compatible post 3G shutdown.

It's also very obvious that they are directly copying Telstra's list, as looking through the changes across brands and model ranges shows identical gaps between devices 'Blocked' and 'Not blocked' by Telstra.

Devices 'Not Blocked' or not categorised by Telstra **haven't been Blocked by Optus** in these changes.

This does line up with reporting from late last year that the telcos would start sharing lists of 'incompatible' models through a shared database. Though this data is not available publicly or accessible for scrutiny.

iTnews - Telstra, Optus, TPG build new list of devices causing trouble for triple zero – 14 November 2025
https://www.itnews.com.au/news/telstra-optus-tpg-build-new-list-of-devices-causing-trouble-for-triple-zero-621805



Brand	Model Name	Model Number	Model Info	Year	TAC	Optus May 2026	Telstra February 2026	Vodafone
Xiaomi	XIAOMI 11T	21081111RG	Global Model	2021	86937605	Device to be Blocked	Blocked	*No TAC Data*
Xiaomi	XIAOMI 11T	21081111RG	Global Model	2021	86789106	Device is NOT Blocked	Not Blocked	*No TAC Data*
Xiaomi	XIAOMI 11T	21081111RG	Global Model	2021	86572605	Device to be Blocked	Blocked	*No TAC Data*
Xiaomi	XIAOMI 11T	21081111RG	Global Model	2021	86550305	Device is NOT Blocked	Not Blocked	*No TAC Data*
Xiaomi	XIAOMI 11T	21081111RG	Global Model	2021	86461206	Device is NOT Blocked	TAC Not blocked	*No TAC Data*
Xiaomi	XIAOMI 11T	21081111RG	Global Model	2021	86454005	Device to be Blocked	Blocked	*No TAC Data*
Xiaomi	XIAOMI 11T	21081111RG	Global Model	2021	86275906	Device is Blocked	Blocked	*No TAC Data*

https://isthisphoneblocked.net.au/device-brands/xiaomi?search=XIAOMI+11T++

Brand	Model Name	Model Number	Model Info	Year	TAC	Optus December 2025	Telstra November 2025	Vodafone
Xiaomi	Note 12 Pro 4G	2209116AG	Global Model	2022	86025306	Device is NOT Blocked	Blocked	*No Public Data*
Xiaomi	Note 12 Pro 4G	2209116AG	Global Model	2022	86224406	Device is NOT Blocked	Blocked	*No Public Data*
Xiaomi	Note 12 Pro 4G	2209116AG	Global Model	2022	86300106	Device is Blocked	Not Blocked	*No Public Data*
Xiaomi	Note 12 Pro 4G	2209116AG	Global Model	2022	86459406	Device is NOT Blocked	Blocked	*No Public Data*
Xiaomi	Note 12 Pro 4G	2209116AG	Global Model	2022	86351506	Device is NOT Blocked	TAC Not blocked	*No Public Data*
Xiaomi	Note 12 Pro 4G	2209116AG	Global Model	2022	86705106	Device is NOT Blocked	Blocked	*No Public Data*
Xiaomi	Note 12 Pro 4G	2209116AG	Global Model	2022	86741406	Device is NOT Blocked	Blocked	*No Public Data*
Xiaomi	Note 12 Pro 4G	2209116AG	Global Model	2022	86832106	Device is NOT Blocked	Blocked	*No Public Data*
Xiaomi	Note 12 Pro 4G	2209116AG	Global Model	2022	86855206	Device is NOT Blocked	Blocked	*No Public Data*

Xiaomi - Note 12 Pro 4G – November/December 2025 Results

Brand	Model Name	Model Number	Model Info	Year	TAC	Optus January 2026	Telstra February 2026	Vodafone
Xiaomi	Note 12 Pro 4G	2209116AG	Global Model	2022	86025306	Device to be Blocked	Blocked	*No Public Data*
Xiaomi	Note 12 Pro 4G	2209116AG	Global Model	2022	86224406	Device to be Blocked	Blocked	*No Public Data*
Xiaomi	Note 12 Pro 4G	2209116AG	Global Model	2022	86300106	Device is Blocked	Not Blocked	*No Public Data*
Xiaomi	Note 12 Pro 4G	2209116AG	Global Model	2022	86459406	Device to be Blocked	Blocked	*No Public Data*
Xiaomi	Note 12 Pro 4G	2209116AG	Global Model	2022	86351506	Device is NOT Blocked	TAC Not blocked	*No Public Data*
Xiaomi	Note 12 Pro 4G	2209116AG	Global Model	2022	86705106	Device to be Blocked	Blocked	*No Public Data*
Xiaomi	Note 12 Pro 4G	2209116AG	Global Model	2022	86741406	Device to be Blocked	Blocked	*No Public Data*
Xiaomi	Note 12 Pro 4G	2209116AG	Global Model	2022	86832106	Device to be Blocked	Blocked	*No Public Data*
Xiaomi	Note 12 Pro 4G	2209116AG	Global Model	2022	86855206	Device to be Blocked	Blocked	*No Public Data*

Xiaomi - Note 12 Pro 4G – January/February 2026 Results
https://isthisphoneblocked.net.au/device-brands/xiaomi?device=XIAOMI+NOTE+12+PRO+4G
https://isthisphoneblocked.net.au/optus/changelog

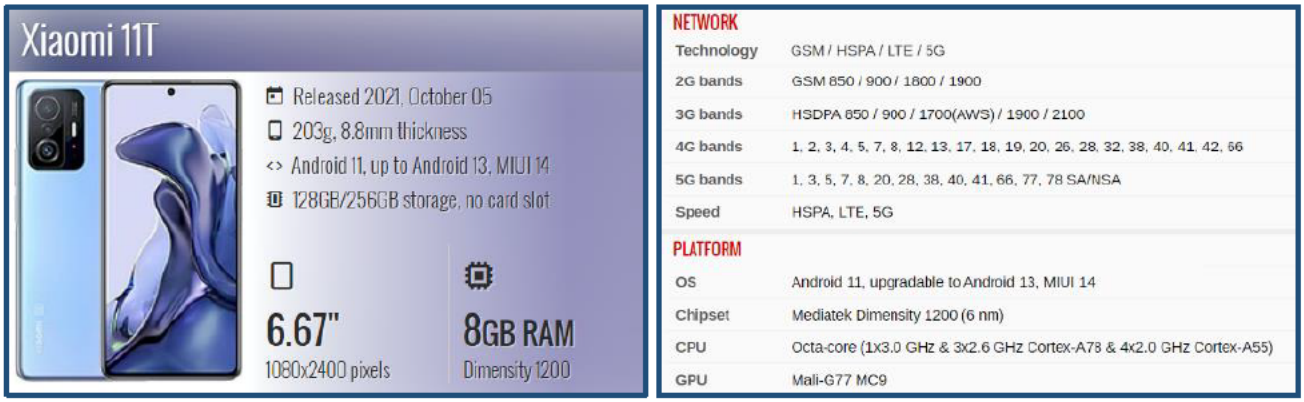
The Xiaomi 11T

One of the devices Optus blocked in their 7 May 2026 dataset was the Xiaomi 11T, this also happened to be the exact same device that was featured in the below ABC News Article from 27 May 2025.

TAC	Model Telstra Name	Optus Status 4 March 2026	Optus Status 7 May 2026
86454005	XIAOMI 11T 21081111RG	Device is NOT Blocked	Device to be Blocked
86572605	XIAOMI 11T 21081111RG	Device is NOT Blocked	Device to be Blocked
86937605	XIAOMI 11T 21081111RG	Device is NOT Blocked	Device to be Blocked

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

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



GSM Arena - Xiaomi 11T - Full phone specifications
https://www.gsmarena.com/xiaomi_11t-11099.php

The device in that story had been blocked **only by Telstra** at the time of the 3G Shutdown and was able to make Emergency Calls on every network, including in Telstra only coverage locations in the regional areas the device owner lives and works in.

Despite this Telstra would not unblock the phone.

Optus & Telstra both provided statements to the ABC about the inconsistent blocking of the phone featured in that story.

Copies of those responses are below.

Optus statement – received 21 May 2025

Optus is required by law to prioritise customer safety. As part of the 3G switch off process Optus blocked any phone that we could not guarantee would connect to Triple Zero.

Device manufacturers tailor handsets to suit different markets, which can result in phones with the same model name having different software versions, regional capabilities, or network certifications.

Optus undertook a detailed assessment of device capabilities, as part of its compliance with the ACMA Emergency Calling Service Determination.

We continue to work closely with manufacturers and analyse device usage on our network, to determine whether a handset supports emergency calls over VoLTE.

Devices confirmed as not supporting VoLTE emergency calling were subsequently blocked from the network in line with the regulatory requirements.

Telstra statement – received 21 May 2025

We were required to block some mobile phones from October 2024 under the Federal Emergency Service Call Determination, because they used 3G for Triple Zero calls.

We went through rigorous checks of devices' capabilities, including cross-referencing manufacturer specs, industry data and our own testing.

Regarding this particular device, there were only 25 Xiaomi M11T's using our network nationally.

In some rare cases, devices behave differently depending on the mobile operator's network it's connected to. This means a device may be blocked as incompatible by one operator, but might work on another network.

ABC - Story Statements from Telstra, Optus
https://www.abc.net.au/news/2025-05-27/telstra-optus-inconsistent-blocking-phones/105319626
https://live-production.wcms.abc-cdn.net.au/75b5caadf77ae17efef6e8b6898af7f6

So given those comments, **why now, a year later has Optus decided to block the phone?**

Whatever has occurred quite clearly looks to be a breach of the Emergency Call Service Determination and warrants investigation.

That device was not blocked by Vodafone either at the time of the October 2024 3G shutdown.

For reference, TPG/Vodafone's Table Blocklist following on from the December Triple Zero Senate Inquiry hearing shows they didn't block a single instance of the 11T and these phones have been otherwise whitelisted following on from their shutdown.

Users of these devices have been able to Call Triple Zero and make Normal Voice Calls on 4G.

The carriers have clearly failed to do proper analysis and continue to do so.

Inconsistent Blocking of the Fairphone 5

Further to this, in February Optus added the 2023 Fairphone 5 (5G) to their 'Device to be Blocked' list.

TAC	Model	Optus Status 27 January 2026	Optus Status 4 February 2026
35521450	FAIRPHONE 5 5G	Device is NOT Blocked	Device to be Blocked

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

> **Device to be Blocked**
>
> Unfortunately, based on the number you entered, the FAIRPHONE 5 5G device has been identified as having compatibility issues and will be blocked from accessing the Optus mobile network from 10/03/2026 to comply with Australian legislation around mobile safety requirements. This means it won't work for calls (including calls to Emergency Services i.e. '000' & '112'), texts or data once blocked. If you are an existing customer, your service number (phone or service number) will remain active. However, to use your service and stay connected, you'll need to insert your SIM card into a compatible device. Advice current as of 04/02/2026 and is subject to change.

Optus Blocked Device Checker Result – Fairphone 5 5G - 4 February 2026
https://www.optus.com.au/support/checkdevice

For reference, Fairphone makes highly repairable devices with conflict free materials and long term software support. This device was only blocked by Telstra at the time of the 3G shutdown.

Model Name	Year	Chipset	TAC	Optus Status January 2025	Telstra Status Nov 2024	Vodafone Status Nov 2024
FAIRPHONE 5 5G	2023	QC QCM6490	35521450	Device is NOT Blocked	Blocked	Not Blocked
FAIRPHONE 4	2021	QC SD 750G 5G	35587009	Device is NOT Blocked	Not Blocked	Not Blocked - AMTA

https://isthisphoneblocked.net.au

Since the 3G Shutdown Fairphone 5 users have been able to call Triple Zero on 4G with their devices (and on multiple networks).

The issues around the phone being inconsistently blocked have been discussed extensively by users on the Fairphone forums.

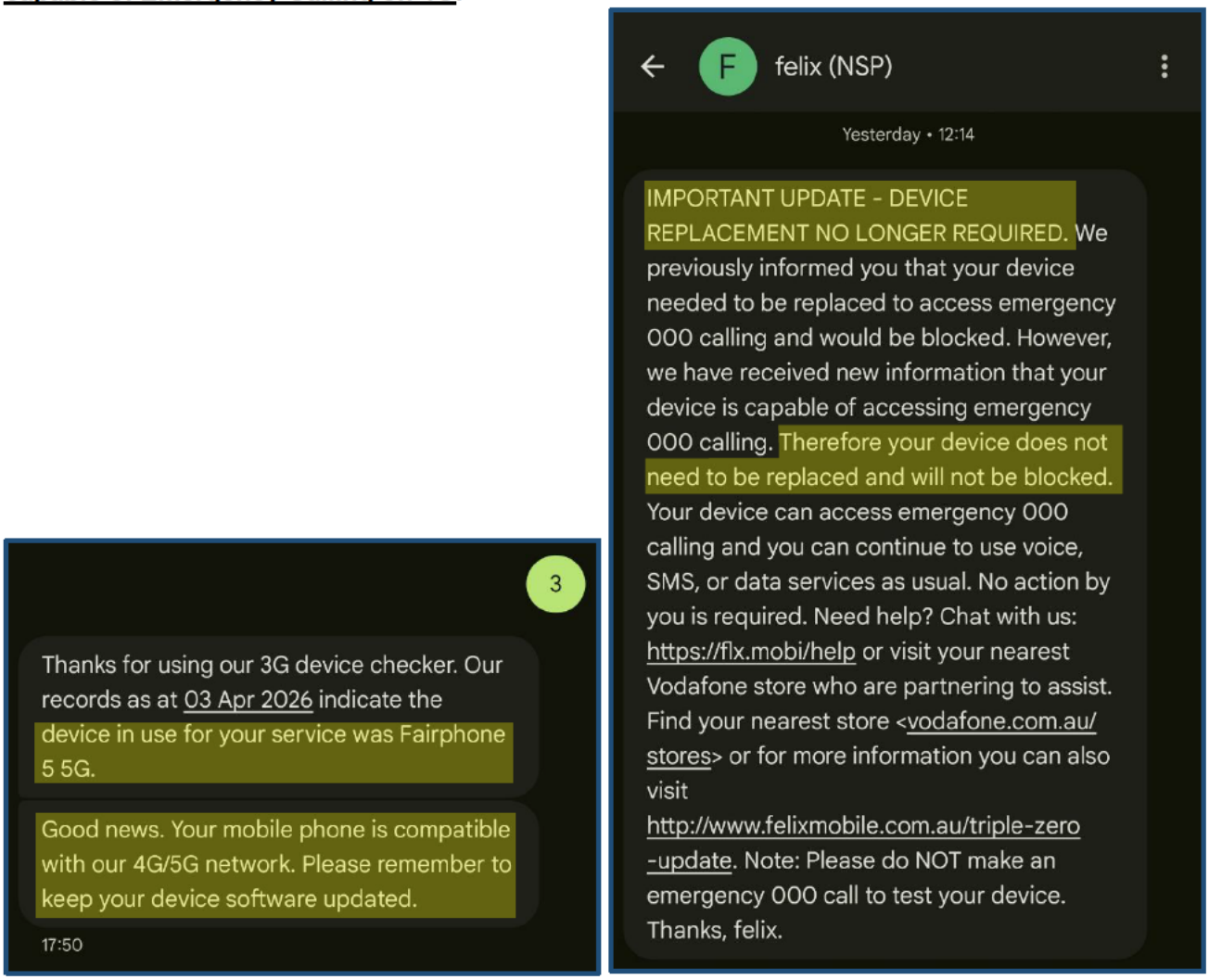
3G network closure – Australia
https://forum.fairphone.com/t/3g-network-closure-australia/109696/277

Vodafone Whitelisting of the Fairphone 5

Following on from the phone being blocked from Optus some people have migrated to Vodafone.

Via the Google Forms survey and contact forms I have, a number Vodafone Network customers said that in May Vodafone was also going to block the Fairphone 5.

However recently I received an email from someone where they have now been told by TPG/Vodafone the phone won't be blocked anymore and **to disregard the previous blocking advice as the phone is capable of Emergency Calling on 4G**.



SMS Message to Felix (TPG/Vodafone Network) Customer – Fairphone 5 5G – 5 May 2026

If the Fairphone 5 was unable to Call Triple Zero on the Telstra network then Vodafone **would have to block the phone!**

However quite clearly the device is capable of doing so, and given the device works for Emergency Calling on Optus (with active sim service) it should **not** have been blocked on Optus either.

It's quite clear whatever device categorisation Optus is carrying out is not based on the actual real-world capabilities of the device, but rather flawed 'pre-shutdown' network data from Telstra.

Which as outlined in an earlier section cannot be relied upon as Telstra had major VoLTE compatibility issues when it comes to devices with Generic IR.92 VoLTE Modem Configs/Profiles.

Carriers must use 'best endeavours' in determining device capabilities, **wholesale copying Telstra's incomplete and incorrect homework is not best endeavours.**

Carrier Device Categorisation Flaws

The failures by the carriers to accurately determine the real world capabilities of devices pre-shutdown can largely be explained by the classification and call record analysis methods they used.

Along with the flawed and in some cases significant smaller call record volumes used to determine 'compatibility'.

In addition to publishing a summarised copy of their device 'blocklist' in December (following on from the Senate hearing), TPG also provided a copy of their Device categorisation and Method flow chart.

Though I don't have copies of these for Telstra & Optus (though that information should be in the public domain), the methodologies used by the carriers were reviewed by an industry expert.

It was noted the methodologies applied by the telcos were determined to be *"…based on sound and established industry practices"* and that *"there were no material differences between the operators' approaches that raised concern".*

Device blocking

Have unaffected devices been blocked by mistake?

- The former Minister has made her expectation clear to the telecommunications industry that devices affected by the 3G switch off were to be reliably identified.
- The mobile network operators reviewed network data, examined past call records and engaged with international industry associations and handset manufacturers.
- Prior to the switch off, Telstra, Optus and TPG Telecom's device identification methodologies were independently verified by Mr Mike Wright, an industry expert, with over 40 years of experience in the telecommunications industry.
- The independent expert concluded that, in his professional opinion:
  - the methodologies applied by Telstra, Optus and TPG Telecom were based on sound and established industry practices
  - these methodologies are consistent with how operators in other jurisdictions would approach the issue
  - there were no material differences between the operators' approaches that raised concern, and
  - the operators have refined their methodologies and identified shortcomings to the point where remaining errors would be minor.
- If an end user believes their device has been blocked in error, their service provider is best placed to address questions regarding whether or how their device is impacted.

Department of Infrastructure FOI 26-158 – 3G switch off: Key Issues - 23/09/2025
https://www.infrastructure.gov.au/sites/default/files/documents/foi-26-158_documents_released_dl.pdf

So given that, I can only assume the categorisation logic for Telstra and Optus is broadly similar and work on that basis.

TPG & Industry Device Categorisation Logic

TPG's Tabled categorisation is (in general) broadly reasonable and to some extent quite good (at least on paper). However there are some areas that are flawed, and assuming the same logic was applied by the other carriers, these flaws can explain a range of device classification errors.

TPG.0003.0001.0202

tpg TELECOM

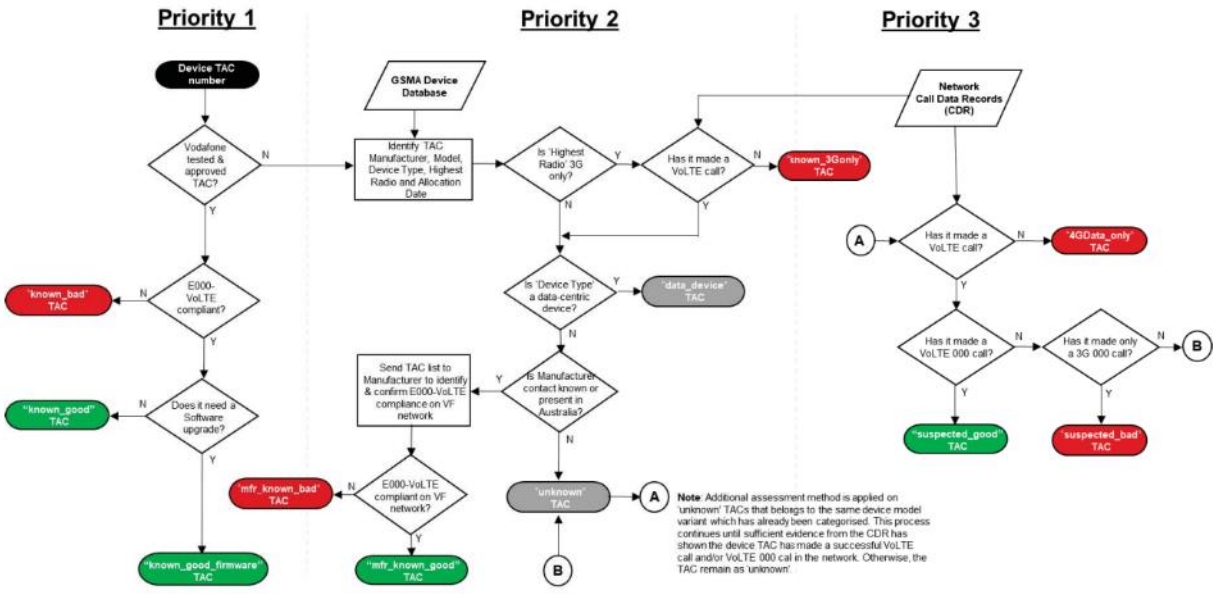
	VoLTE Emergency 000 Device Compliance Categorisation Definition	
	Categories	**Definition**
Good	**known_good**	Known to support VoLTE and VoLTE Emergency 000 calling from our own testing.
	mfr_known_good	Declaration the device supports VoLTE & VoLTE Emergency Calling from the local device manufacturer. **Note TPG Telecom has not tested this device**. Customers must ensure they upgrade their device to latest available software from the manufacturer.
	known_good_firmware	Known if the device owner has kept the device software updated, it will support VoLTE Emergency 000 calling.
	suspected_good	Categorised based on CDR data analysis for VoLTE Emergency 000 calling.
Bad	**4GData_only**	This device can use 4G data but needs 3G for any/all voice calls (including 000) based on CDR data analysis.
	known_bad	Known NOT to support VoLTE or VoLTE Emergency 000 calling by our own testing
	known_3Gonly	Known 3G only device based GSMA Device Database Band lists and CDR data analysis including some from our own testing.
	mfr_known_bad	Declaration the device does **NOT** support VoLTE or VoLTE Emergency 000 calling from the local device manufacturer. **Note TPG Telecom has not tested this device.**
	suspected_bad	Previously an unknown device categorised based on CDR data analysis for VoLTE Emergency 000 calling.
Others	**data_device**	A data centric device or module whose primary use case is for access to wireless data service, e.g. Tablet/iPad, Embedded PC Laptop, MBB Modem, USB Modem Dongle, FWA CPE modem, FBB CPE Wireless Backup, M2M data module, IoT module, Telemetry data, Vehicle Navigation unit, Mobile EFTPOS, Mobile Barcode Scanner etc. as categorised by GSMA Device Database.
	unknown	A determination of VoLTE Emergency 000 calling capability has not been able to be made with the device.

vodafone TPG iinet Internode LEBARA AAPT felix

TPG Telecom Limited ABN 76 096 304 620 Level 27, Tower Two, International Towers Sydney, 200 Barangaroo Avenue, Barangaroo NSW 2000

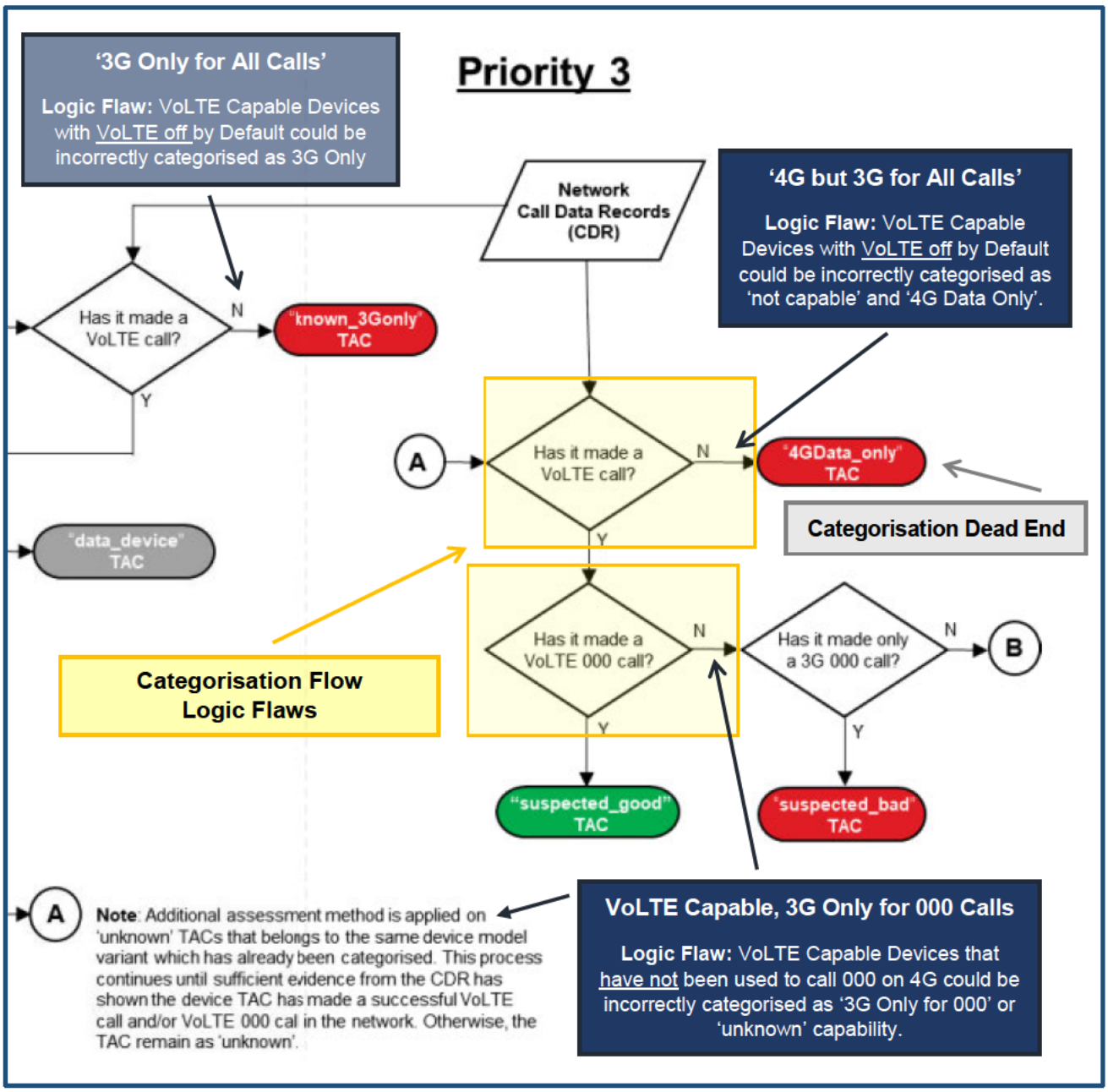
tpg TELECOM

High-level Device TAC Categorisation Method Flowchart



Within the 'Call Data Record' flow, there are decision points around VoLTE compatibility which have the potential to misclassify large numbers of perfectly compatible devices (TACs) that either have VoLTE off by default, or are VoLTE capable but haven't made any (or enough) Triple Zero Calls on 4G.

I have highlighted the 'Categorisation Flow' Logic Flaws below.



TPG Telecom Answers to questions taken on notice public hearing 9 December 2025 (received 19 December 2025)
https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/TripleZero48P/Additional_Documents?docType=Answer%20to%20Question%20on%20Notice

So many devices have likely been classified as 'incompatible' by the carriers either because VoLTE was not enabled by default prior to shutdown, or was but for whatever reason the volumes of calls (including for 000) were not sufficient for the carrier to 'whitelist' that TAC.

To the carriers many 4G/5G devices that may appear to be '3G Only for all calls' (pre-shutdown) are in fact entirely capable but have VoLTE switched-off by default.

Transparency of Data

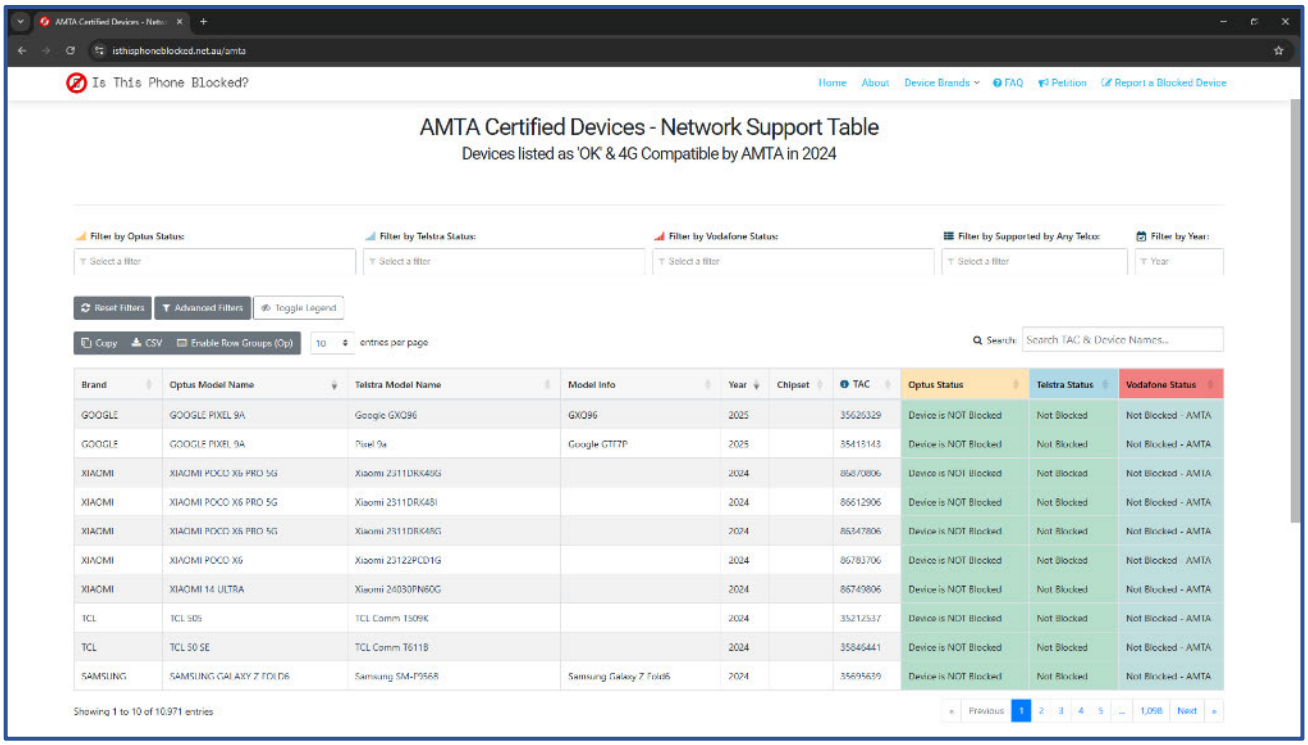
Device Compliance Database

An RCM (Register Compliance Mark) Database (suggested by the ATA and others) that lists device models with Australia specific 'Compliance Declarations' for 4G **is not a solution to this problem**.

Such a public register is one very small part of a broader need of full data transparency & accessibility for consumers.

There is essentially **none of that** currently.

Assuming this 'RCM' data is largely what's contained in the '2024 AMTA 3G Shutdown Checker tool' database, I have data-scraped this data and it is available in full below.



Is this Phone Blocked? – AMTA Certified Devices – Network Support Table
https://isthisphoneblocked.net.au/amta

From what I was able to extract, there are only **10,971** Device Model TACs in the 2024 AMTA list, 304 of which are now TAC Blocked by Telstra & Optus.

For context there are **over 20,000 TACs for 4G/5G Samsung Devices alone**, and **over 8,000 TACs for Apple iPhone Devices**.

Samsung Devices - Network Support Table – Is this Phone Blocked?
https://isthisphoneblocked.net.au/device-brands/samsung

Apple Devices - Network Support Table – Is this Phone Blocked?
https://isthisphoneblocked.net.au/device-brands/apple

Across Android Brands like Huawei, Xiaomi, Oppo, Vivo,OnePlus, Realme, TCL, Motorola **there are over 32,000 Device Model TACs**, with approximately **70,000 TACs for 4G & 5G Devices across major brands** within the GSMA TAC Database.

As of June 2026 there are over 266,000 registered device TACs.

Within 2025 there were over 10,000 new TACs added to the GSMA database.

Compliance Paperwork vs Real World Data

RCM and any 'compliance testing results' are ultimately just pieces of paper and are from a point in time and typically involve testing in a controlled environment, rather than real world capability and data on a live network.

Such paperwork and a list of 'supported' models does little to ensure actual best practice adherence to technical standards, by both devices & carrier networks, along with reliable operation in the real world.

The presence of an 'RCM sticker' on the back of a phone (or their lack of) is not sufficient to know if something works or not.

Neither is the information about when a given model obtained that 'Compliance Testing Mark', as has been suggested by those in industry.

Regulatory Compliance Mark (RCM)

More 'compliance stickers' on devices and more paperwork is not a way to resolve this problem.

Further to that, forcing global handset vendors to supply 'Australia specific testing & compliance documentation' if they want their phones to work in Australia (even if solely used by tourists) is never going to solve this either.

All that will do is allow the carriers to continue to block devices that work perfectly fine.

Vendors other than Google, Apple and Samsung will largely not bother with the Australian market if they are required to jump through expensive and proprietary 'AU specific' testing hoops.

When markets like the US, South East Asia and EU countries either recognise global testing and compliance, or have uniform testing regimes between those markets.

This is why it's so important to follow and accept global industry standards and best practices, along with assessing the real capabilities of devices in the real world on the networks.

This is also why there must be a system to address the capabilities of BYO Devices.

'Compliance testing' data and paperwork (though not without value) is just one small part to this issue, but other things are also required separate to that.

Public Data Accessibility Requirements

The carriers must be required to make publicly available their full blocklists & support lists, including all historical versions, along with the exact technical reasons why given models are blocked or not.

That data **must be** made accessible to the public, the same way that the historical coverage map data is made available on data.gov.au by the ACCC.

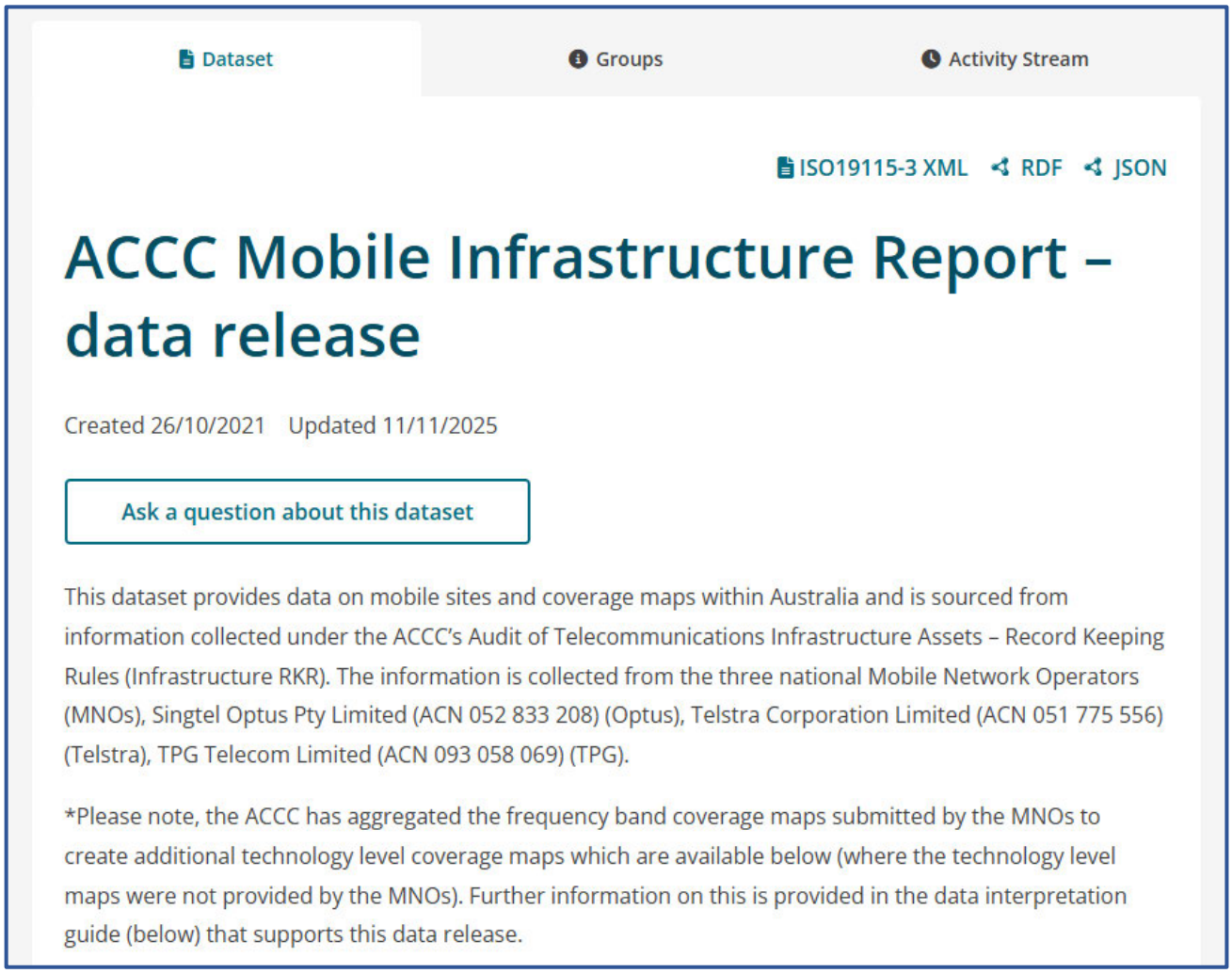
The carrier's blocklist information does not warrant any 'commercially sensitive' or 'commercial in confidence' concerns.

I have the list of models already, but not all of the historical versions, nor the reasons why devices have been classified incompatible or not.

It is entirely unacceptable that this information isn't already fully public.

Data.gov.au – Datasets - Explore the central source of Australian open government data.
https://data.gov.au

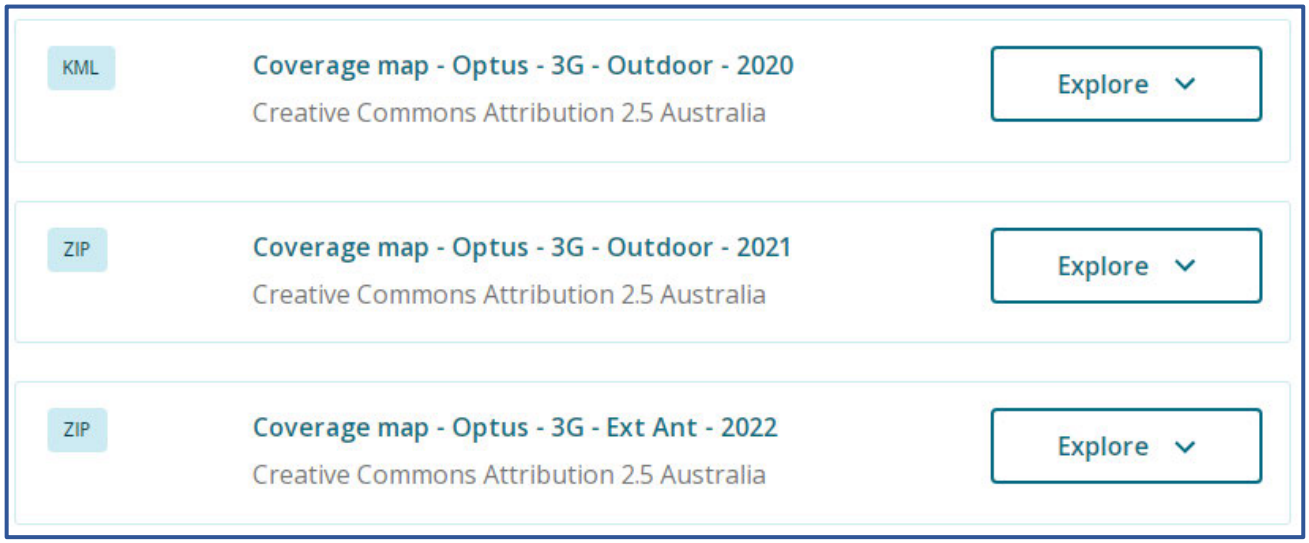
By contrast the historical network coverage mapping data and tower location information is available on data.gov.au under Creative Commons Licensing. *(It's also the only place you can get this data anymore as the carriers have deleted their old 3G Coverage maps from their websites).*



https://www.data.gov.au/data/dataset/accc-mobile-infrastructure-report-data-release

This exact same approach needs to be taken for blocklist data, except to be obtained and published 'as-is' from the carriers by the ACMA.

It doesn't even have to be in a user-friendly database or format, it just has to be available in full.



To date the only transparency of data and ‘compatibility lists’ that are available to the public is my **‘Is this Phone Blocked’** Website.

A site which gets several hundred visits per day.

A site I was only able to create because I was able to find a way to data mine and extract the ‘checker tool’ data from Optus and Telstra.

Data that should be available publicly in spreadsheet format and should have been made available months before the 3G Shutdown.

https://isthisphoneblocked.net.au

There is currently no transparency of lists or requirement for carriers to provide proof of incompatibility.

They have made (and continue to make) serious mistakes which have harmed consumers and competition. The carriers need to be able to substantiate why something should be blocked or not.

That information must be fully transparent.

If they can’t do something as basic as that, then they cannot be trusted to continue with the blocking as they are.

To date the carriers have essentially obfuscated device blocking and compatibility information from full & transparent public view.

Limiting access to this important data behind device ‘TAC checkers’ and SMS tools.

And TPG/Vodafone still does not have an online checking tool, despite having a list of phone TACs they deem ‘incompatible’ and having a checker tool for support staff.

Outside of public transparency of data, there needs to be mandatory auditing and oversight of device blocking practices by the carriers along with adherence to technical standards.

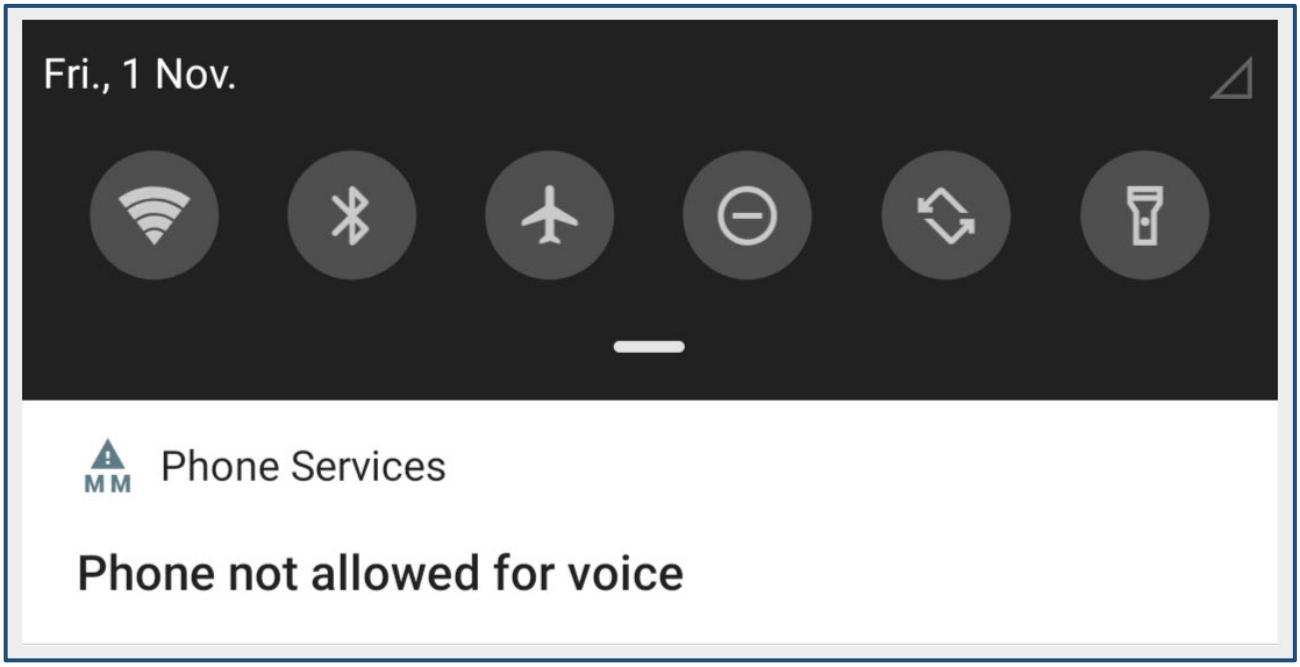
The lack of consistency and oversight of these matters for several months post shutdown has caused significant harm to consumers. There must be meaningful regulatory action on these matters.

Proving a Blocked 4G Phone can Call Triple Zero on all Networks

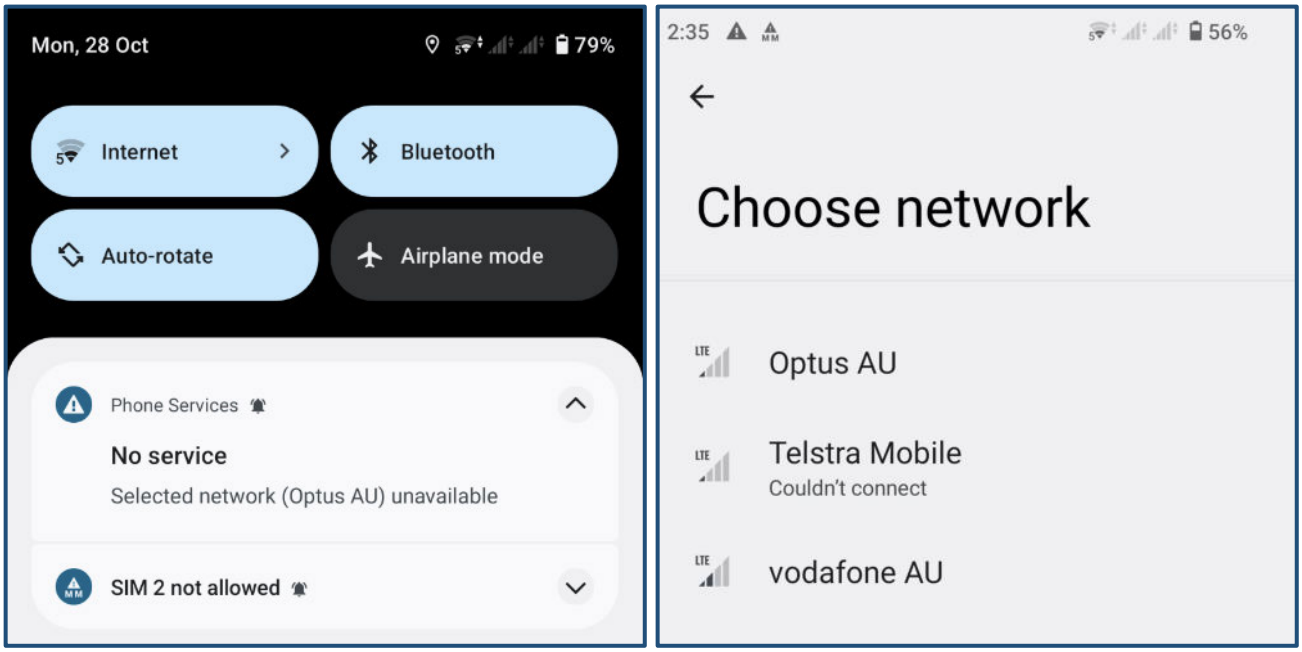
Now devices are TAC Blocked from all networks service, it is now not possible to simply insert a carrier sim card (be that a $2 card or a full service card) and easily prove that a phone can work for VoLTE Calls and VoLTE Emergency Calls on a given network.

This is fundamentally the most corrosive aspect of the blunt blocking approach set out in the Emergency Call Service Determination.

It makes it nearly impossible to prove something works and just allows the carriers to blanket block things under the guise of something being 'incompatible with the network'.



Phone not allowed for voice Device Blocking Message - Android 9



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

Real World Emergency Call Testing

However, it is entirely possible to test the ability for a device to be able to Call Triple Zero over 4G on all networks in a blocked 'camp-on' (Limited Service) state.

In some cases, with the right device and software it's possible to log the entire IMS/SIP VoIP Call session that is established by the device when connecting to the network, along with what exact network the device connected to in order to make that call.

```
SIP Message : {INVITE urn:service:sos.police SIP/2.0
From: "Anonymous" <sip:Anonymous@Anonymous.invalid>;tag=34
To: <urn:service:sos.police>
CSeq: 23 INVITE
Call-ID: 34 _ @2405:dc00:  :  :  :  :  :
Max-Forwards: 70
Contact: <sip:user@[2405:dc00:  :  :  :  :  :  ]:5060>;
+sip.instance="<urn:gsma:imei:35353811-  -0>";+g.3gpp.icsi-ref=
```

NSG Log – 'Camp-on' (Anonymous) 4G VoLTE Emergency Call to 000 via 'urn:service:sos' – TAC 3535811 – XQ-AT52

```
⊞ Frame 8: 926 bytes on wire (7408 bits), 926 bytes captured (7408 bits)
⊞ Linux cooked capture
⊞ Internet Protocol Version 6, Src: 2405:6e00:4ef:f184:1b90:2c73:154a:444e (2405:6e00:4ef:f184:1b90:2c73:154a:444e), Dst: 2405:6e00:23fe:6000::11
⊞ Transmission Control Protocol, Src Port: 42392 (42392), Dst Port: 5060 (5060), Seq: 1301, Ack: 1, Len: 850
⊞ [2 Reassembled TCP Segments (2150 bytes): #7(1300), #8(850)]
⊟ Session Initiation Protocol (INVITE)
  ⊟ Request-Line: INVITE urn:service:sos SIP/2.0
      Method: INVITE
    ⊟ Request-URI: urn:service:sos
        Request-URI Host Part: \n
      [Resent Packet: False]
  ⊟ Message Header
    ⊞ Via: SIP/2.0/TCP [2405:6e00:4ef:f184:1b90:2c73:154a:444e]:5060;branch= ;rport;transport=TCP
      Max-Forwards: 70
    ⊞ Route: <sip:[2405:6e00:23fe:6000::11]:5060;lr>
    ⊞  [truncated]Contact: <sip:[2405:6e00:4ef:f184:1b90:2c73:154a:444e]:5060>;+sip.instance="<urn:gsma:imei:35650307- -0>";+g.3gpp.icsi-ref=
      To: <urn:service:sos>
    ⊞ From: "Anonymous"<sip:anonymous@anonymous.invalid>;tag=ec67194c
      Call-ID: -xV5KIMu0p0w_k3anOJbjA..@2405:6e00:4ef:f184:1b90:2c73:154a:444e
    ⊞ CSeq: 1 INVITE
      Session-Expires: 1800
      Accept: application/sdp, application/3gpp-ims+xml
      Allow: INVITE, ACK, OPTIONS, CANCEL, BYE, UPDATE, INFO, REFER, NOTIFY, MESSAGE, PRACK
      Content-Type: application/sdp
      Supported: timer, 100rel, precondition, gruu
      User-Agent: Telstra Samsung SM-G930F Android_8.0.0 G930FXXU8EVG3 Samsung IMS 6.0
    ⊞ P-Preferred-Identity: <sip:35650307 @[2405:6e00:4ef:f184:1b90:2c73:154a:444e]>
      Accept-Contact: *;+g.3gpp.icsi-ref="urn%3Aurn-7%3A3gpp-service.ims.icsi.mmtel"
      P-Early-Media: supported
      P-Preferred-Service: urn:urn-7:3gpp-service.ims.icsi.mmtel
      P-Access-Network-Info: 3GPP-E-UTRAN-FDD;utran-cell-id-3gpp=50503
      Content-Length: 824
  ⊞ Message Body
```

Telstra CSC Galaxy S7 SM-G950F – Samsung IMSLogger Packet Capture – Vodafone Network VoLTE Emergency Call

For example the above packet capture is from a recently blocked Samsung Galaxy S7 which was sold by Telstra with Telstra Firmware.

As per the log above, this phone is entirely capable of calling Triple Zero on the TPG/Vodafone 4G Network (505 03), and the device used the Telstra Emergency Calling Profile (as shown in the device User Agent header data).

Devices that require 3G for Emergency Calls now just get stuck on calling Triple Zero when connected to either some networks or all networks.

As was demonstrated in the below November 2024 video and September 2024 test guide for consumers.

Australia's New Firewall IMEI BLOCKED 516,875 Active Phones Overnight + Tourists Phones Blocked

2024-11-10

Hugh Jeffreys

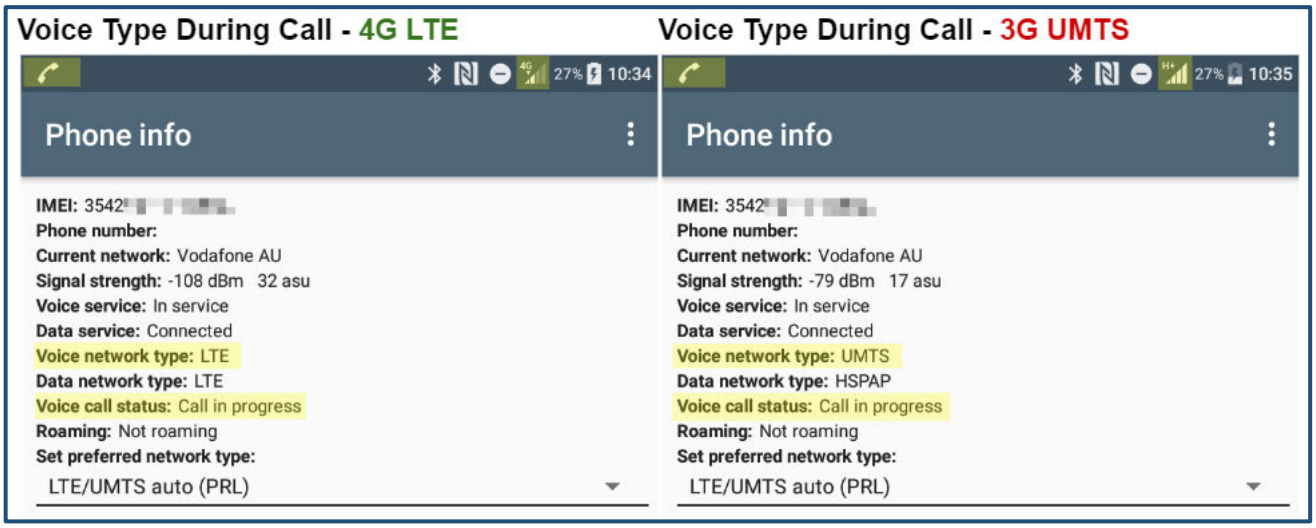
The final wrap up of Australia's 3G Shutdown.

4K

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

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

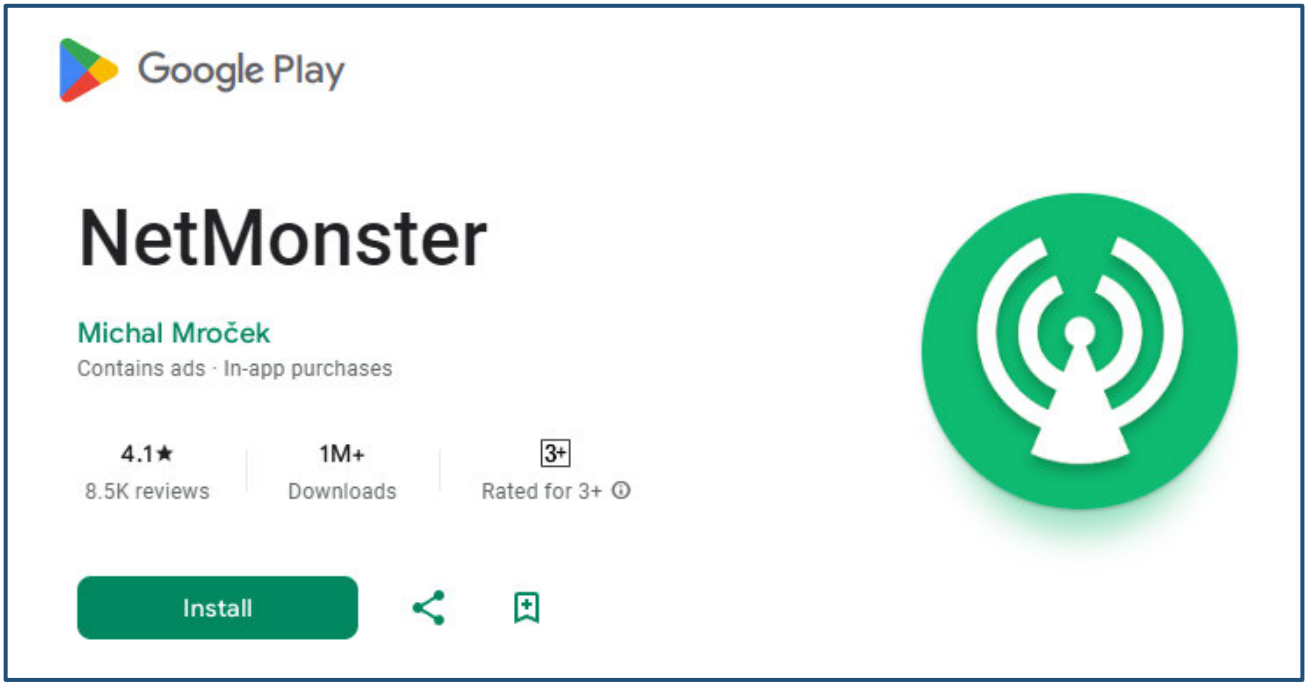
The fact that 3G has now been shut down makes it even easy to test for.

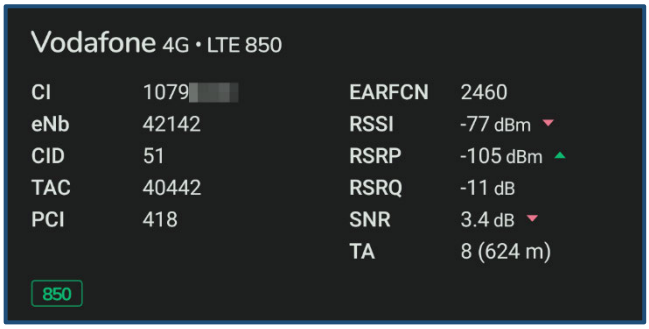


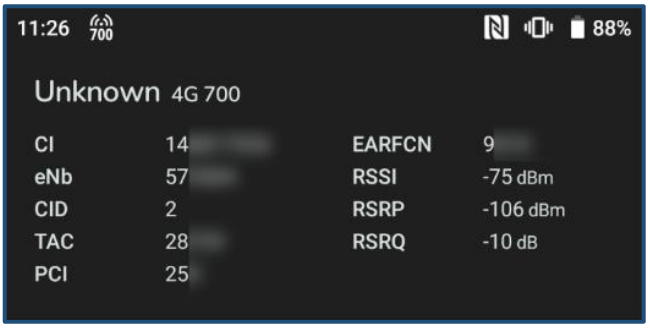
On Android there are built-in device diagnostics that allow users to monitor how their device is connected.

Net Monster Band & Network Monitoring

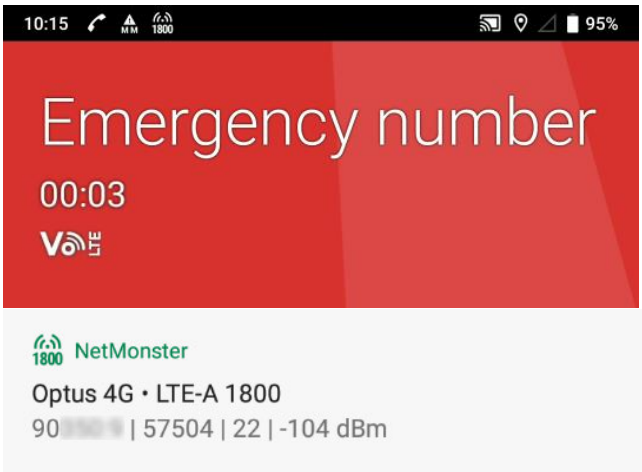
Additionally on Android there is a downloadable app called ‘NetMonster’ which can provide very clear information about what sort of band & carrier network a device is connected to at any point in time, including when blocked.



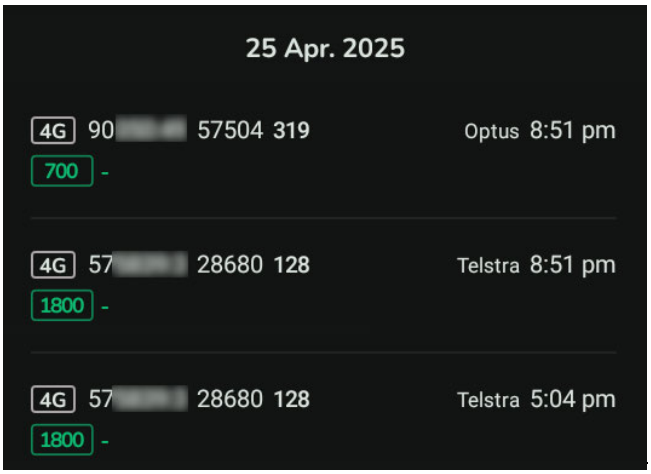




Through this I have been able to very easily confirm the blocked devices I have are able to place 4G Emergency Calls on every network, and have done so multiple times.



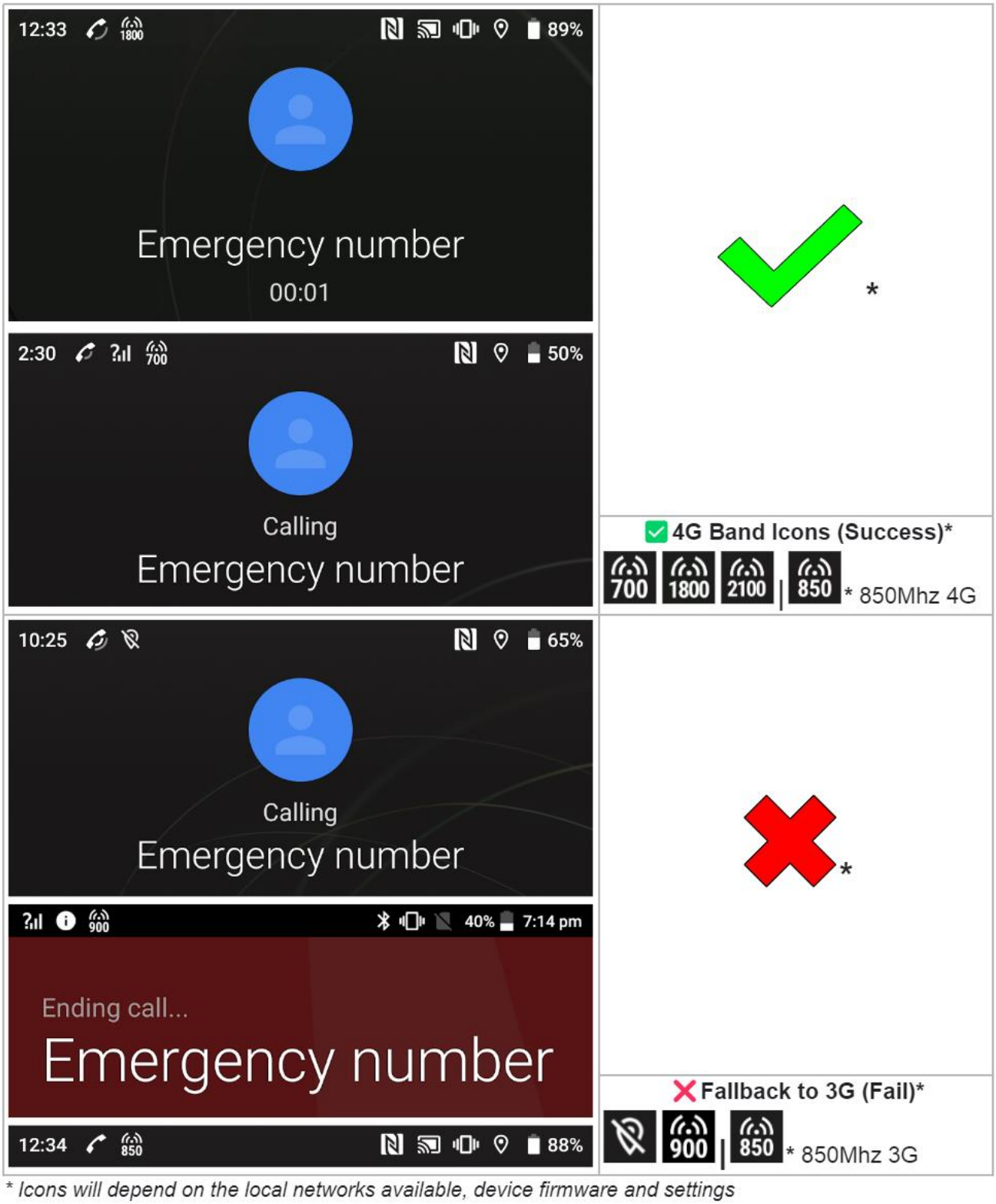
NetMonster – Optus 4G 000 VoLTE Call – Blocked Device



NetMonster App - Band Logging (non-root)

The carriers have information about what devices are blocked that can still call Triple Zero on 4G, but that data isn’t being used to reclassify devices blocked in error.

Net Monster Call Testing Icons (Pre Shutdown)



** Icons will depend on the local networks available, device firmware and settings*

In addition to NetMonster there are other similar apps like Network Signal Guru and Cellular-Pro, both of which can provide full in-depth device diagnostics and call records down to a packet level.

Google Play Store - Network Signal Guru - QTRUN Technologies
https://play.google.com/store/apps/details?id=com.qtrun.QuickTest

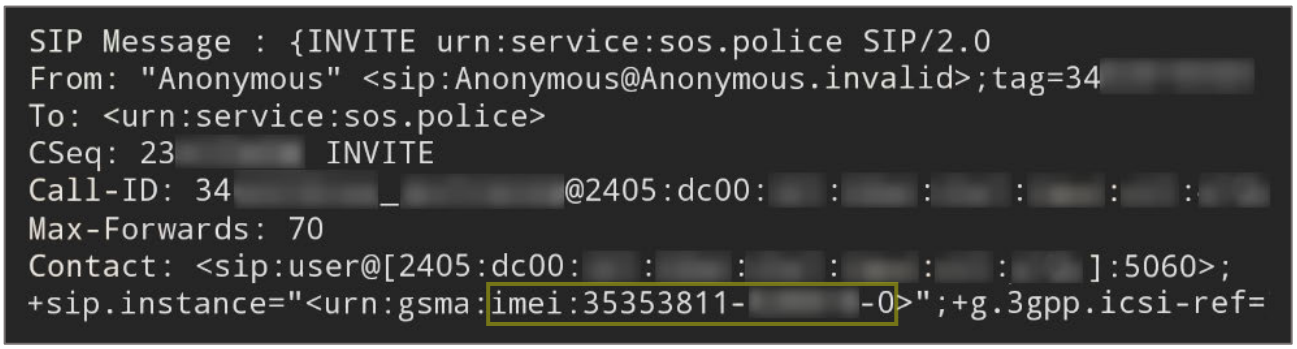
Google Play Store - Cellular-Pro
https://play.google.com/store/apps/details?id=make.more.r2d2.play.cellular_pro

Telco Awareness

But 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 full 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

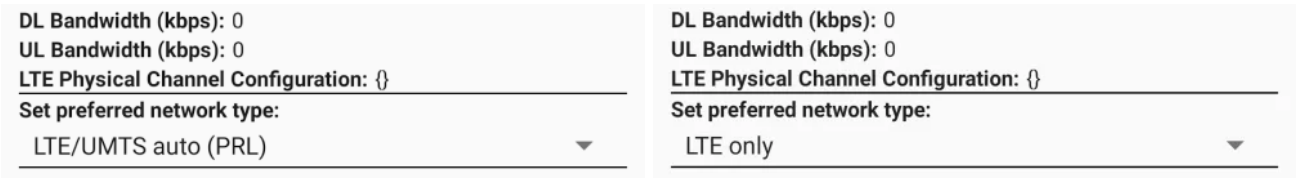
Again, devices are **not blocked** from Emergency Calling if they are technically capable.

It was also entirely possible to test the 4G Emergency Calling of Android devices prior to shutdown, despite claims otherwise.

It did not and does not require a lab environment to confirm if a device is actually at all technically capable.

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

The Bean Review

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

I would also note that the Bean review did not explicitly recommend that incompatible devices or BYO devices 'untested for Triple Zero' should be entirely blocked from all network services.

The review outlined that:

> 4. If this testing does not include devices supplied by the customer (i.e. 'Bring your own device') then information should be provided to those customers warning that those devices may not have been tested in emergency scenarios.

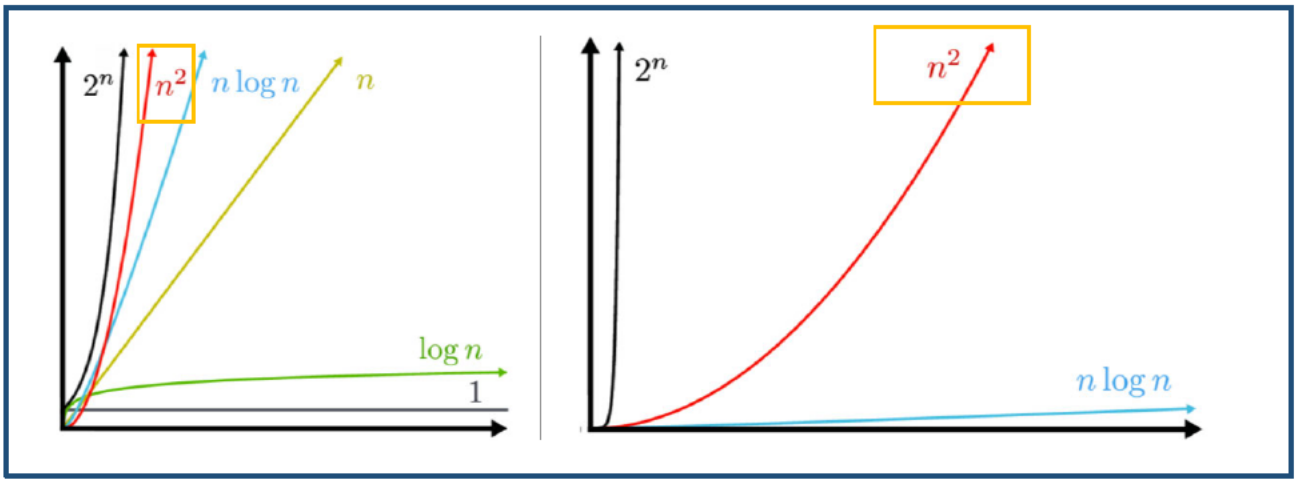
In fact, the word 'block' doesn't feature anywhere in the review report or recommendations.

But despite this and the blocking there still remains "***no system for addressing the capabilities of the devices of customers who bring their own***"

Device Testing Scale Problem

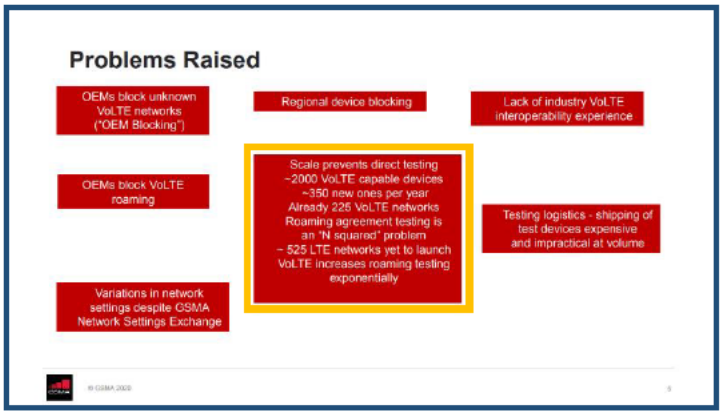
This problem **cannot** be solved by requiring controlled 'lab testing' of blocked devices, **this is an exponential N-squared problem**.

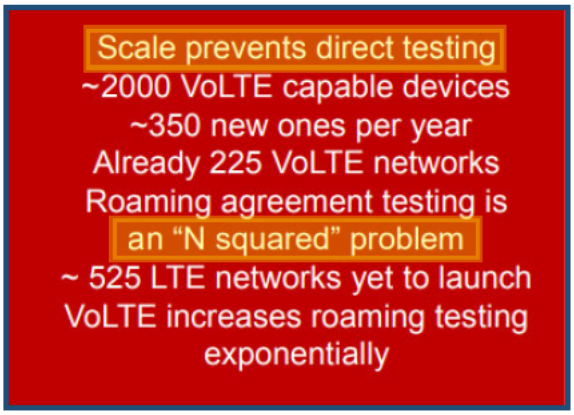
There are too many software versions and variants of devices for the carriers to be able to comprehensively and physically test all known device models & configurations, and that's even ignoring issues with individual devices and carriers not following standards properly.



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 has been happening, 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 and have compatible software & hardware.

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 real world data combined with formal lab testing can ensure that functionality across brands, chipsets and software versions is validated and any issues resolved.

This data can also be used to unblock devices.

Real World Emergency Call Testing

A very simple option here would be to explore what was suggested in the 2024 3G Shutdown Working Group and establish a 'test RVA' for 000 calls. Per FOI 24–353 (Page 57 of 75)

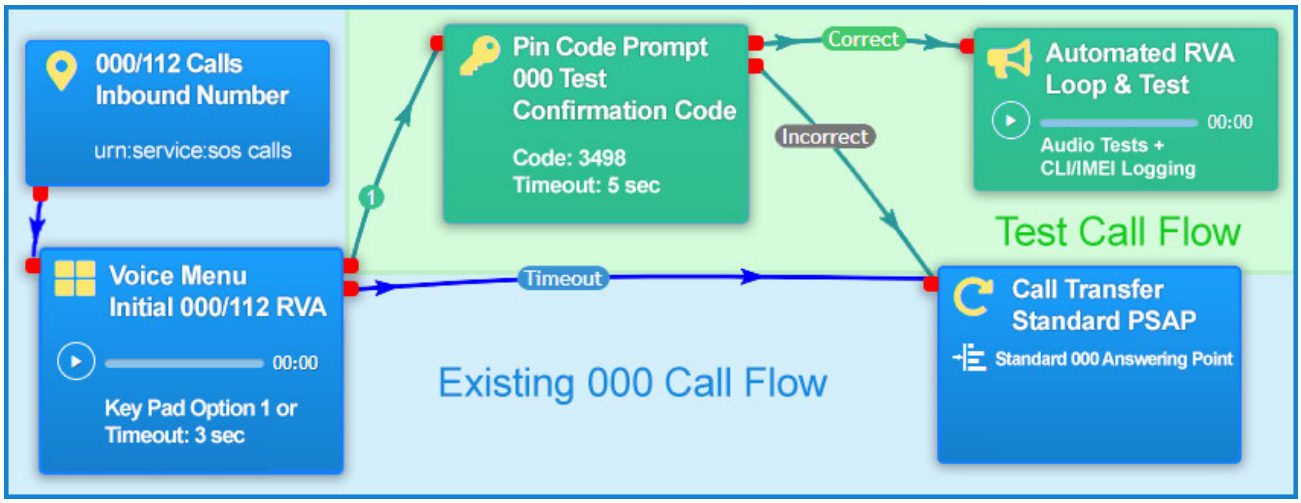
> *4. A Triple Zero "test call" facility may not be feasible*
>
> Telstra indicated that it investigated the possibility of creating a "test call" number that would allow consumers to test their devices before the shutdowns take place. Such a facility would route test calls to a recorded voice announcement (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

In the above call flow example, **someone looking to test would dial 000 or 112 as normal.**
(This ensures the device initiates a 'service:sos' call over the SOS VoLTE Bearer)

```
SIP Message : {INVITE urn:service:sos SIP/2.0
From: "Anonymous" <sip:Anonymous@Anonymous.invalid>;tag=34
To: <urn:service:sos>
CSeq: 23  INVITE
```

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

They would then hear the existing:
"You have dialed Emergency Triple Zero, your call is being connected".

This message is approximately 5 seconds long.
This is enough time to allow a user to **press 1 or *** (or another button) on their phone keypad.

Pressing the designated button would then move the call over to a **'Pin Code Test'** prompt.

Users **must enter the correct 4 digit test code** to proceed to the Audio loop test.
This code could be **8378** which spells **"TEST"** on a T9 Dial pad.

If the user **fails to enter the correct code** within a given period of time (for example 5 seconds) the call is sent back to the ECP/PSAP (where it would have otherwise been sent to).

This flow would guarantee that genuine emergency calls could not accidently end up at the 'Triple Zero Call Test', only those who wish to test their device and check for call quality or coverage problems would end up at the RVA audio test.

This testing addition is also entirely invisible and hidden to all other callers needing access to Triple Zero.

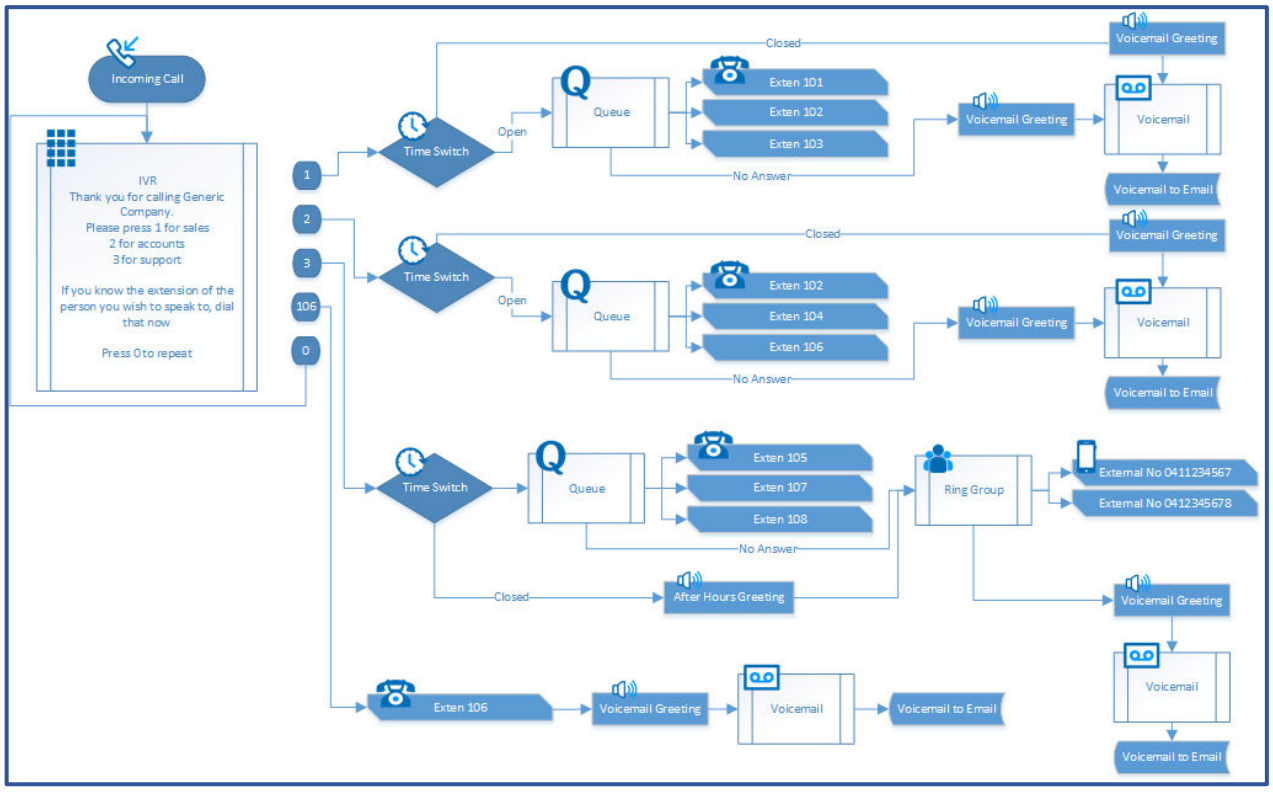
For the general public nothing would functionally change in how Triple Zero currently works, however there would now be a 'full end-to-end' test call system that allows for better classification of devices.

This automated approach also ensures that the Triple Zero ECP Operators are not overwhelmed with test calls, since the Triple Zero incidents last year people have been test calling and some taking up valuable time of operators.

Call Flow Design
It's worth noting the above Call Flow diagram was created and deployed in a cloud based VoIP Phone PBX, except the demo operated via a standard phone number and the diverts were to recorded messages and not Triple Zero.

But the underlying technical logic and call flow processing is entirely possible.

Phone 'support trees' used by the carriers and other businesses are far more complex than a simple (IVR) Voice Menu Announcement and alternate divert based on keypad input.



Maxo Telecommunications - Complex PBX Setup Example, IVR with After Hours
https://www.maxo.com.au/support/my-account-portal/how-to/complex-pbx-setup-example-ivr-with-after-hours

The deployment of an 'automated 000 test' call flow would be extremely simple for Telstra to do, even if that was just initially for industry use.

'SOS Only' Network Coverage Testing Benefits

Such a test system is also necessary in order to be able to check for call quality and coverage issues in regional 'SOS Only' or 'Emergency Calls Only' Coverage areas.

At the 5 February 2025 3G Shutdown Senate Inquiry hearing a representative from Grain Growers expressed that post 3G Shutdown farmers (with now heavily reduced 3G Network coverage or intermittent coverage) expressed concerns about being unable to call triple zero when most in need.

> **Mr Cole:** Dialling triple 0. We don't know what the effects are. Post shutdown, growers aren't too keen on prank calling emergency services to see if triple 0 will work, but we do have grave concerns that it may not work anymore where it used to work. I think that needs to be addressed. There needs to be some kind of way to find out if it works or not without bombarding the emergency services with prank or test calls. That's not so much functionality, but, when it comes to life or death, it's definitely of high importance.

RRAT References Committee - 5/02/2025 - Shutdown of the 3G mobile network – Grain Growers
https://www.aph.gov.au/Parliamentary_Business/Hansard/Hansard_Display?bid=committees/commsen/28679/&sid=0001

The Dr Schott Report

Further to this, in the independent report into the 18 September 2025 Optus Triple Zero Outage, Dr Kerry Schott outlined a number of recommendations.

Number 10 recommended that customers should be encouraged to test their devices for Emergency Calling issues.

> 10. Inform all customers that their devices may take 40-60 seconds to connect to Triple Zero and **encourage them to test their devices to ensure they work for a Triple Zero call.** To ensure that the Emergency Call Person does not get unnecessary calls, set up a system where devices can be tested. This is an industry-wide matter and best done as an industry-wide initiative.

Independent Report The Triple Zero Outage at Optus: 18 September 2025 - Kerry Schott AO - 12 December 2025
https://www.optus.com.au/content/dam/optus/cloud/documents/about-us/media-centre/speeches-and-reports/2025/Independent_Report_Triple_Zero_Outage_at_Optus_18_September_2025.pdf

Optus response regarding testing

Optus was asked about this recommendation by Dr Schott at the 26 February 2026 Triple Zero Inquiry hearing, and subsequently took the question on notice.

Optus was asked the below on notice.

6. Confirm that Optus' testing of Triple Zero calls occurs in cooperation with the Emergency Call Service (ECS) and provide a view as to whether customers should be testing their own devices separately.

In a response to those questions taken on Notice they responded with the below:

Optus has been engaged with the ECP on the volume of test calls undertaken by our network. This currently sits at 1,000 automated test calls daily. We will continue to work with Telstra and the ECP as this testing progresses.

To ensure that the ECP is not flooded with test calls (impacting legitimate calls), our automated test calls drop prior to going through to an operator.

This is aligned with the industry standard and expanded to support additional volumes post-September 2025.

Optus does not encourage our customers to make test calls to Triple Zero. We do encourage customers to check their device compatibility on our website.

Optus continues to work with industry, government and the regulator on future device testing arrangements and public awareness activities in line with the recommendation of the Independent Review by Dr Kerry Schott AO.

Optus Answers to questions taken on notice - 26 February 2026 (received 13 March 2026) – Triple Zero Outage Inquiry
https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/TripleZero48P/Additional_Documents

So in other words, they test Triple Zero by dialling 000 and immediately 'hanging-up' the call.

That's hardly comprehensive and does nothing to check call quality issues, either upstream or downstream.

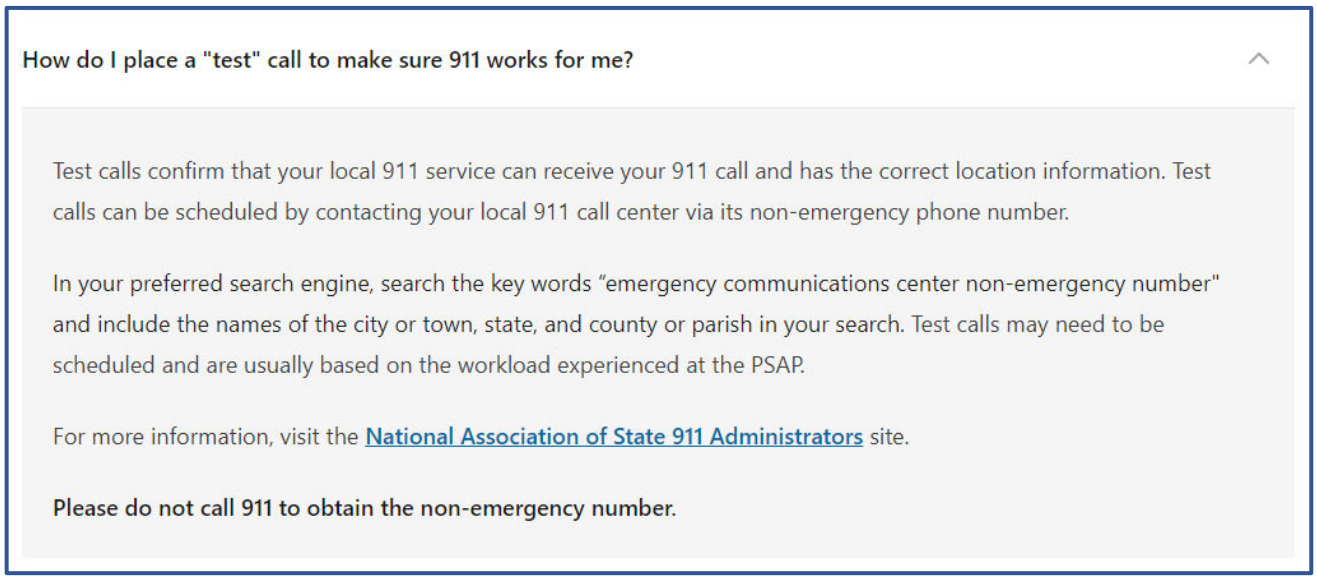
That response by Optus also doesn't provide any answer for people that have a genuine and legitimate need to test the Emergency Calling functionality of their device.

Especially those in regional areas with unreliable or intermittent network coverage.

Emergency Call Testing in the US

Even outside of the above automated call flow example, in the United States members of the public can book a time to test call 911.

So there is no good reason why we shouldn't or couldn't have something like that here, and better still it could be entirely automated and not require any human operators to be involved at any point.



How do I place a "test" call to make sure 911 works for me?

Test calls confirm that your local 911 service can receive your 911 call and has the correct location information. Test calls can be scheduled by contacting your local 911 call center via its non-emergency phone number.

In your preferred search engine, search the key words "emergency communications center non-emergency number" and include the names of the city or town, state, and county or parish in your search. Test calls may need to be scheduled and are usually based on the workload experienced at the PSAP.

For more information, visit the National Association of State 911 Administrators site.

Please do not call 911 to obtain the non-emergency number.

FAQ About Calling 911 – 911.gov
https://www.911.gov/calling-911/frequently-asked-questions

An automated test system such as the above model would not and could not overwhelm the ECP and Call Operators, the entire call flow to test entirely by-passes them.

'Requesting a Test'

The enablement of a 'Triple Zero Call Quality Test RVA' could be combined with requiring customers with emergency call coverage, call quality or device capability concerns to reach out to their provider first to 'request a test'.

That customer would then be provided with a 'package of information' along with detailed instructional information on how to carry out a basic 'call quality test'.

That information package would also contain the 'test' pin code necessary to perform an audio test, along with other relevant call testing information.

Reporting & Escalation Process

As a result of that test, if people identify problems there would then be a robust and standardised escalation process that ensures any and all identified issues or faults are properly raised with the carriers and investigated.

The data generated from these 'test calls' would also give the carriers better 'real world' post 3G Shutdown data about device capabilities and different coverage scenarios.

Better data means better analysis, it also gives consumers a powerful tool, especially for those who have found their 4G/5G phones illegitimately blocked by some or all of the providers.

To not have any 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 seems to be the current policy approach.

Smoke Alarms are sold with test buttons for a reason, as are RCD Electrical Safety Switches. There is always a need to be able to test things directly.

Not everyone needs to test, but testing must be made possible.

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 it’s possible to have access to built-in settings and diagnostics that can tell you explicitly what network or band a device is on and how it’s placing the call.

Devices that require 3G for Emergency Calls now just get stuck on calling 000.

The Samsung’s that don’t work on Vodafone for Triple Zero also get stuck on calling with a Vodafone sim or network settings selected.

Device Blocking & Unblocking Solutions

Separate to those user accessible testing methods, there are a wide range of possible solutions to unravel this issue, all with varying levels of technical complexity from very simple to more technically nuanced.

Fundamentally this issue is not complicated to resolve.

It is highly technical, but it is not fundamentally complicated to unpick this and make meaningful improvements for consumers.

This includes solutions that do not create additional safety risks and most importantly decouple the corrosive & anti-consumer powers from the carriers being able to unilaterally decide what phones their customers are allowed to use.

Powers that are currently without any transparency or recourse.
Along with no penalties for the carriers for when they get it wrong. (Which they have)

So far there have been no genuine or meaningful improvements regarding this issue and if anything this problem has only become much worse.

All that has happened since the shutdown and blocking took place is even more consumers have been put out of pocket having to unnecessarily purchase replacement devices.

It has generated an extraordinary amount of excess e-waste and funnelled more money to telcos, retailers and handset vendors with new device sales.

It's also worth noting the below changes are also separate to the need of transparent blocking data.

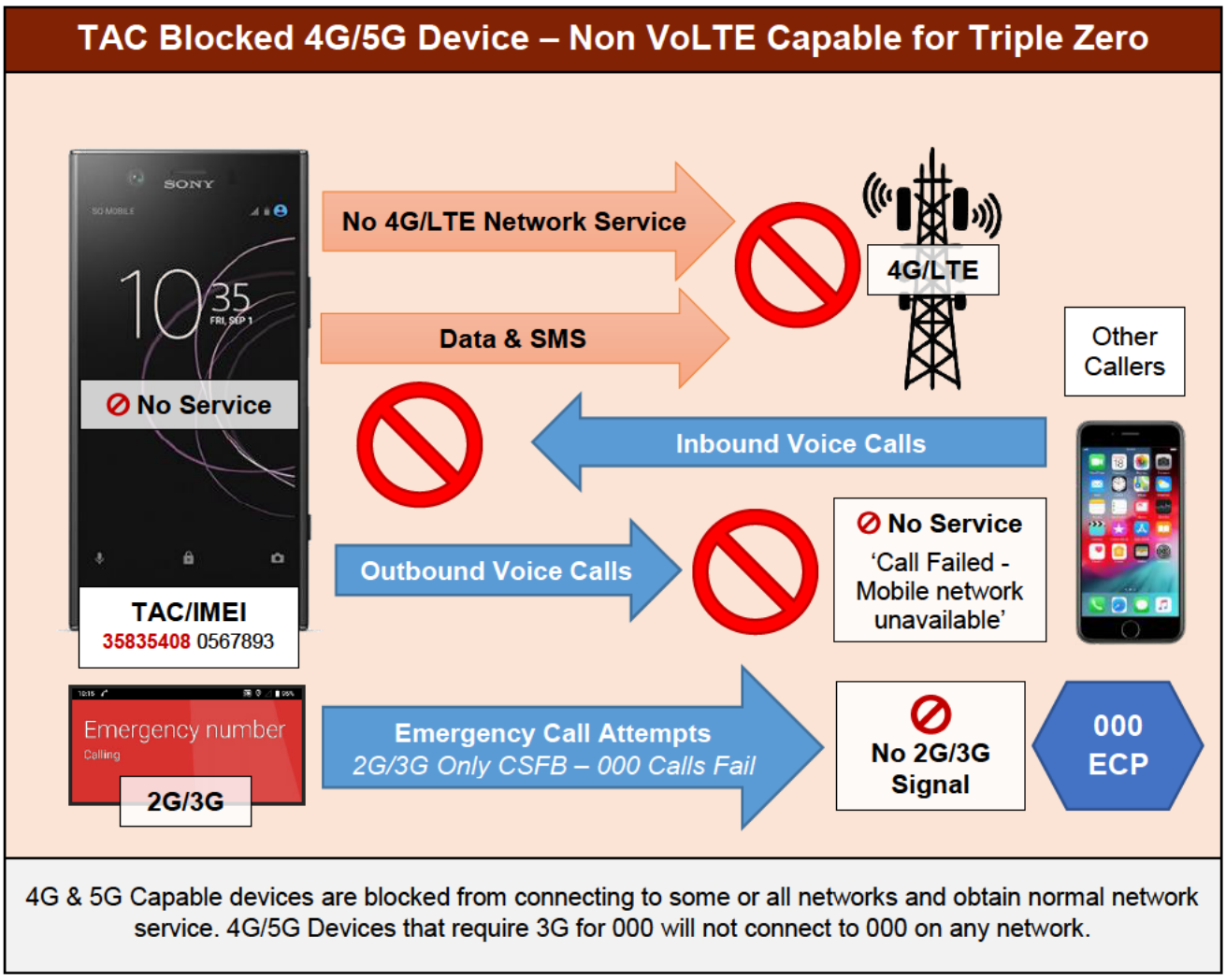
Some of the below wouldn't be necessary if that data (including the reasons why devices were blocked or not) was public.

Current Situation

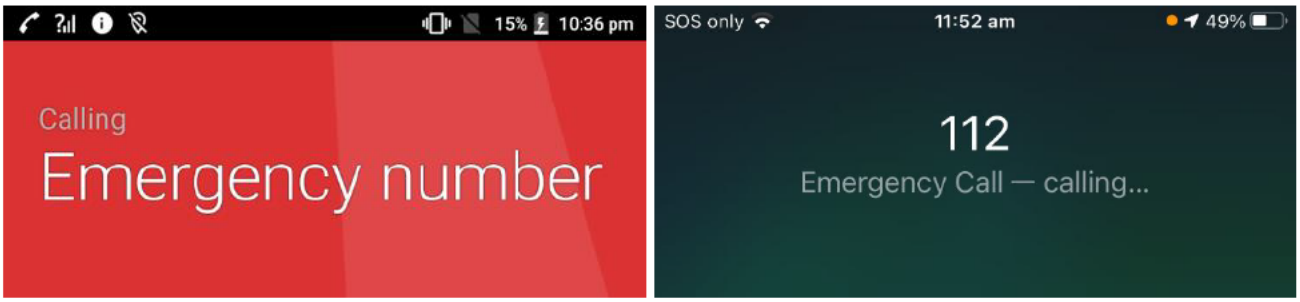
With the current TAC (Make & Model) Blocking of 'incompatible' devices from the mobile networks, devices are unable to obtain mobile service, this includes data or SMS. Either on some or all providers.

Of this, 4G/5G Phones that are '3G only for all calls' (including for 000) are now entirely unable to connect to any services at all, both normal network connectivity or Triple Zero via LSS 'Camp-on' Calling.

Visual Diagrams of TAC Blocking



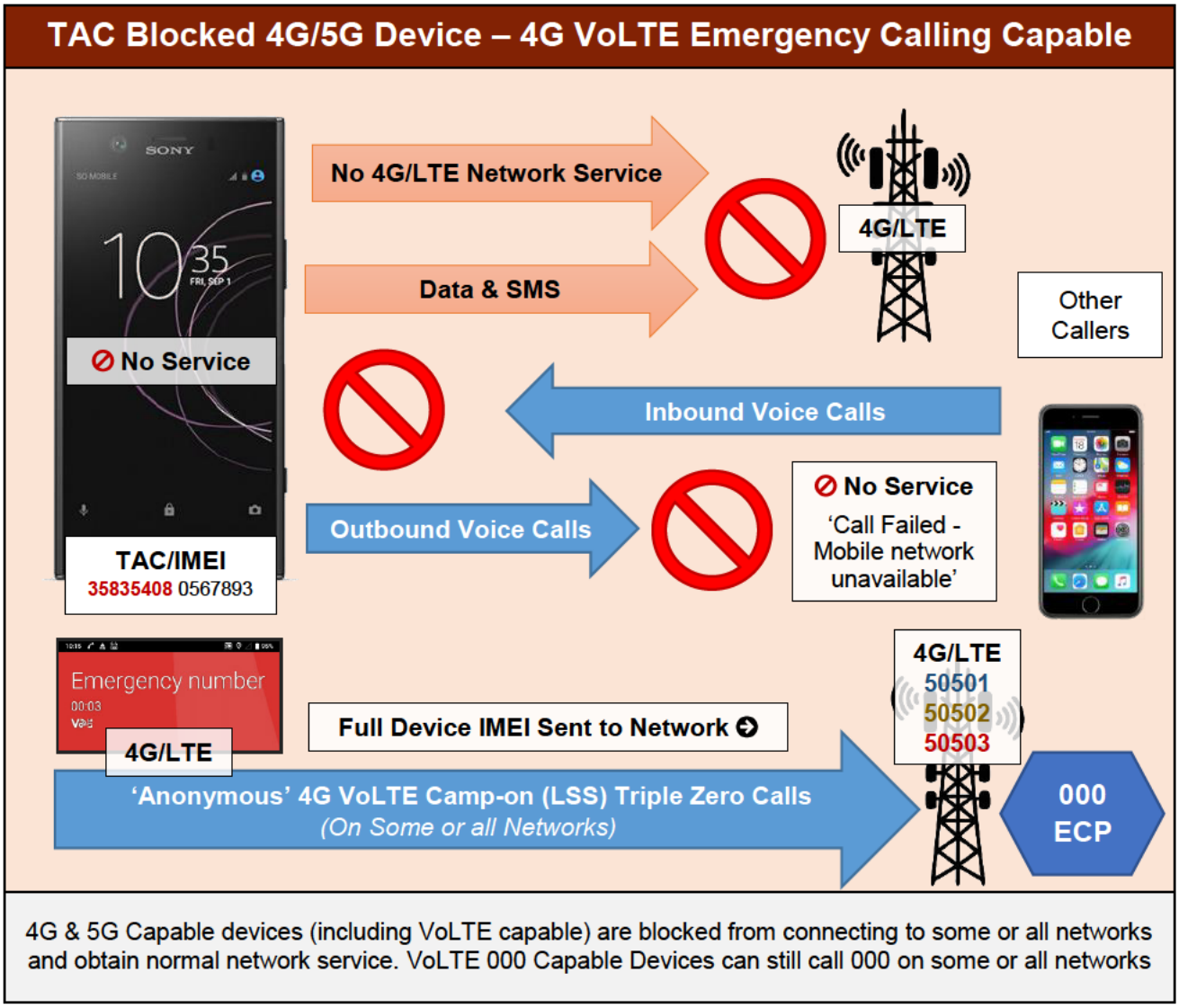
*Devices that **require** 3G for Emergency Calls will now just get stuck on calling, this can include 'Officially Supported' Devices with software and settings issues.*

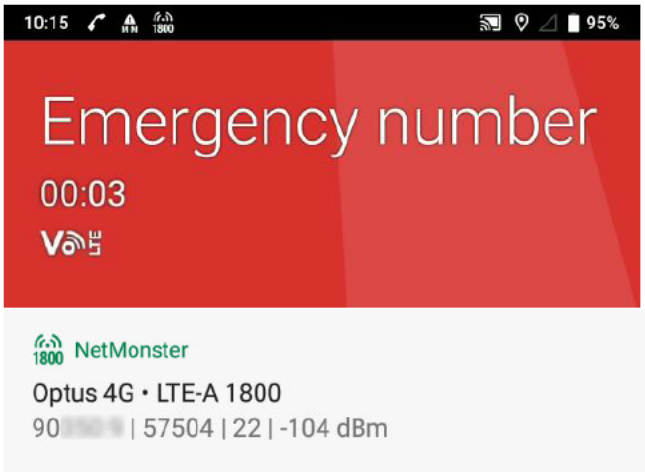


Screenshots - Android Device & iPhone stuck on Emergency Calling Post 3G Shutdown – CSFB Emergency Calls

However many blocked 4G/5G Devices are in fact capable of calling Triple Zero on 4G, including on every network, and can still connect and successfully place Emergency Calls

Blocked devices are not blocked from Emergency Calling if technically capable, and all these blocked devices can now do is call Triple Zero on 4G.





NetMonster – Optus 4G 000 VoLTE Call – Blocked Device

NetMonster App - Band Logging (non-root)

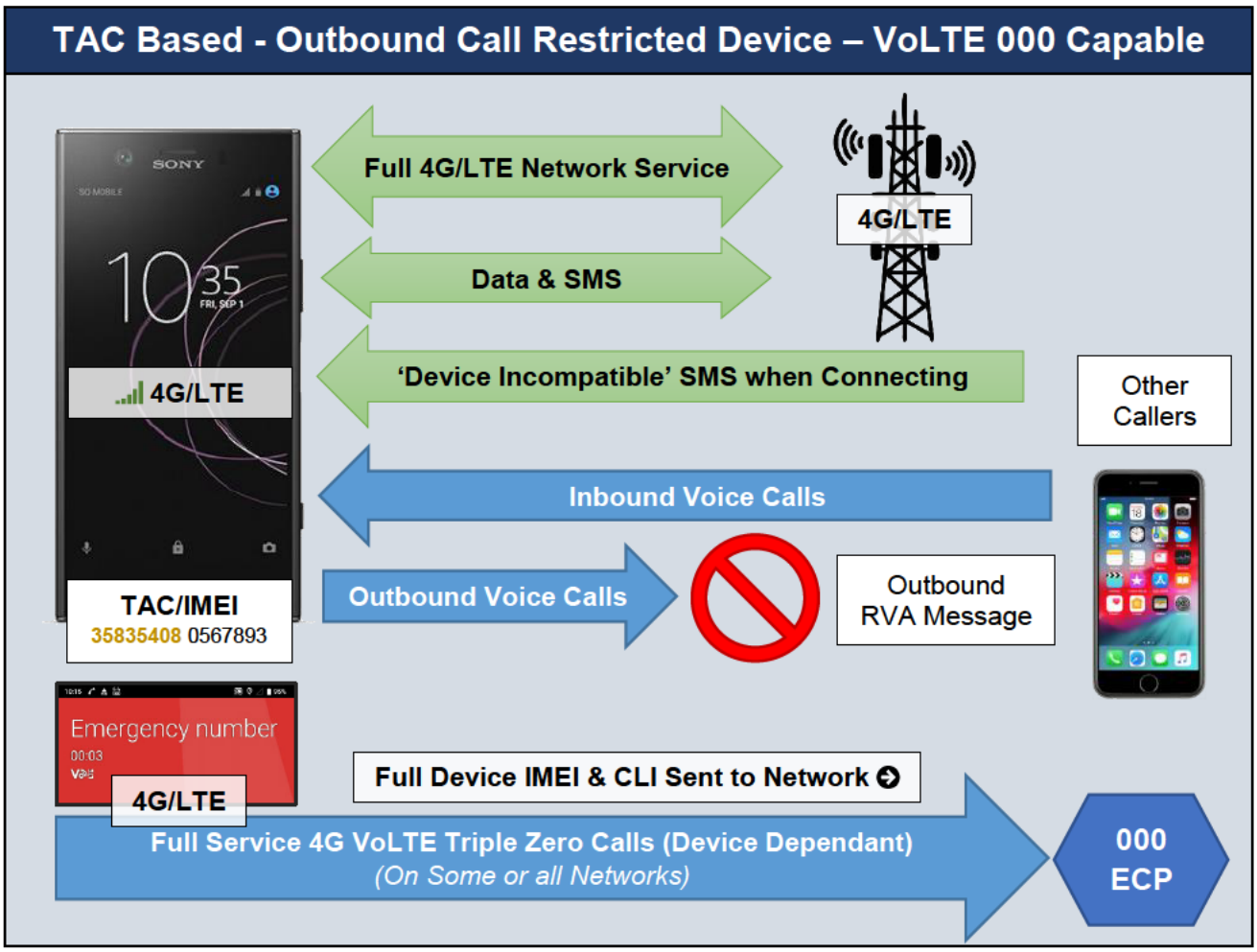
Solutions

Option 1 – TAC Based Outbound Call Blocking/Restrictions
Solution Complexity: Simple

The most simple and straightforward approach that at least in part resolves the issue, is to move to an 'outbound call blocking' model for 'incompatible' 4G/5G devices, and away from the TAC Blocking from all services.

With this model devices are no longer TAC Blocked from all network service & data connectivity, but are instead only prevented from successfully placing outbound calls on 4G.

Mobile Data, SMS & Inbound calls would be allowed to function, however devices would receive SMS warning messages about incompatibility on a regular basis. *A visual Diagram of this approach is below.*



The primary benefit from this approach is it ends the blunt TAC Blocking and allows devices to connect again with some level of normal network service.

That by extension makes it much easier to prove that a phone can actually make a 4G Emergency Call on a given network with a sim card in the phone with active network service.

For TAC Blocked devices, carriers can and do currently say to customers *'it's incompatible with the network'* without having to substantiate why or how they came to that determination.

In my experience carrier customer support agents (from all across telcos) often just read from scripts and do not provide real explanations or answers.

The outbound call blocking **is not** a full solution but it does rebalance the power dynamic in favour of the consumer and ends the abuse of the TAC Blocking by the carriers.

In addition to this, there **must be** a process that ensures the carriers **correctly re-categorise devices** that are shown to work.

⊕ Pros	⊖ Cons
• Very Simple • Ends the blanket blocking which prevents users from being able to prove a phone actually does work • Consumers will know why the phone isn't working for calls and is now 'blocked' • Consumers can receive text messages from their provider on what to do • Method implemented by Telcos for US Model iPhones (and others) that don't support LTE Band 28 (700MHz) • Existing method used prior to the 3G Shutdown and blocking to inform consumers • Roaming Tourists with 'incompatible devices' no longer blocked from network service in line with the determination exemption	• Does not address individual devices well, if a TAC is deemed 'incompatible' individual devices that both do work and don't work (due to software differences) would both be subject to the inhibited outbound call service. • Due to being based on Model (TAC) there are potentials for false positives and negatives in regards to devices that do and don't work. • Does not allow Tourists to use local sim cards with their device without an outbound message as only VoLTE Roaming Calls Are Registered on Home Network • This approach by itself doesn't resolve the misclassification issues unless there is another process that requires the carriers to do so with this new 'post-shutdown' data.

Restricting Access to the Standard Telephone Service

This type of 'call blocking/barring' approach was also the preferred 'blocking' approach suggested by the MNOs in the 2024 Emergency Call Service Determination Public Consultation.

Extracts of those responses are below.

- **Recommendation 3**: If the ACMA is not minded to adopt Recommendation 1, the language in the Amendment Determination should be changed to allow MNOs the option to restrict access to only the Standard Telephone Service (STS). This would allow data and text (SMS) carriage services to remain operational, while denying all network-based voice calls. It would also allow customers some means of communication (e.g., text message or voice calls through over-the-top apps such as WhatsApp or Messenger) so they could contact family members or friends for assistance.

ACMA - Proposal to amend the ECS Determination – Public Submissions – 40. Telstra – 9 October 2024
https://www.acma.gov.au/consultations/2024-09/proposal-amend-ecs-determination

Question 1

Do the proposed amendments to the ECS Determination fulfil the objectives and content requirements of the direction? If not, please explain why, and describe any alternative or additional approaches that could be used to meet the objectives and requirements of the direction.

Response

A suggested clarification is that the ECS Determination should only apply to a standard telephone service (STS) which is used to access the emergency call service (ECS), and not to all carriage services (that is, should not encompass data only services). Optus considers this is consistent with the overarching policy objectives because consumers would not have an expectation that a data only device is able to be used to contact the emergency call service.

ACMA - Proposal to amend the ECS Determination – Public Submissions – 33. Optus – 10 October 2024
https://www.acma.gov.au/consultations/2024-09/proposal-amend-ecs-determination

The situation we have is this broadly reasonable suggestion of only blocking calls was not accepted and the far worse, far more anti-consumer approach to bluntly block devices from all network service was used instead.

The ACMA citing that it was 'not permissible' to do call blocking under the terms of the August 2024 Ministerial Direction to 'must not provide carriage services'.

Some preference for only blocking voice and allowing data and SMS use to continue.	Not permissible under terms of the Direction – must not provide carriage services. Likely impact on some businesses who use mobile phones for non-voice activity e.g. scanners where those devices may be caught and will be denied service according to the terms of the determination. Size of that issue is not able to be quantified. Vulnerable consumers – family violence affected, disabled, financial hardship will have access to all forms of communications disabled. Consumers will not be able to use apps etc to contact family or support services.	Cannot address within terms of the direction. Potential for complaints from consumers, including businesses who will need to upgrade devices that were never intended to be used for voice calling.

Telecommunications (ECS) Amendment Determination 2024 (No. 1) – ACMA Explanatory Statement – 24 October 2024
https://www.legislation.gov.au/F2024L01353/asmade/text/explanatory-statement

As a result of this approach, devices have been prevented from normally connecting.

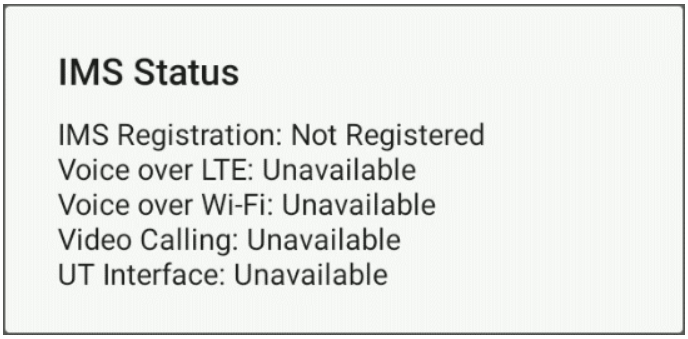
This has made it even more difficult to prove that a phone can make an Emergency Call over 4G with active network Sim and a full service Sim Card in the phone.

The problems with an IMS Whitelist

However, an important distinction (unlike what the carriers may have imposed), is that devices must not be blocked from IMS/VoLTE registration, this is commonly known as an 'IMS Whitelist'.

With an 'IMS Whitelist' devices with all the right software and all the right hardware are artificially prevented from accessing VoLTE Voice Services due to an 'unsupported' serial or model number (TAC).

Such an 'IMS whitelist' based on IMEI or TAC is fundamentally anti-consumer & anticompetitive and is any other barrier to being able to prove a phone will normally work.



How to 'Block' outbound Calls

The way any 'call blocking' or restrictions should be imposed is through a forced outbound message when making voice calls.

Such outbound messages were used by all carriers prior to the 3G shutdown to inform consumers to 'upgrade', however these messages were generally **10-15 seconds long** and not long enough to prevent ongoing use of a device.

These messages were in continued use post shutdown with devices on some carriers that were lacking a software update, and in the case of the Wentworth Falls incident it shows that a short outbound message is not sufficient.

That combined with a lack of proactiveness on behalf of carriers in ensuring their customers have access to a capable device.

A list of some of the RVA voice messages used in 2024 are below:

Telstra

"This phone may no longer connect when Telstra's 3G Network closes on the 31st of August, potentially including emergency calls to 000, contact us or go in store for more details"

"Telstra's 3G Network closes from the 28th of October, your handset may not be able to call 000. Act now to continue to make calls"

"Your device may have reduced network connectivity and will not always be able to call triple zero. For your safety, upgrade to a compatible device now. Call Telstra for more." [Band 28 Limited RVA]

Optus

"This is an important announcement; this phone will be impacted when the Optus 3G Network is switched off from September. You will need a compatible phone to stay connected. Please contact your service provider today. You can disregard this message if you've recently upgraded your device."

"Act Now! 3G is switching off! This phone will stop working from the 28th of October. You will need a compatible phone to stay connected. Please connect with your service provider today. You can disregard this message if you've recently upgraded your device. Please hold while your call is connected."

TPG/Vodafone

"This is an important announcement; this phone will not be able to make Emergency Calls to Triple Zero once all 3G Networks are switched off from October. You will need a compatible phone to stay connected. Please contact your service provider for details. You can disregard this message if you've recently upgraded your device."

Outbound Call Blocking Model

In an 'outbound call blocking/restrictions model' this outbound message (RVA) would loop and instead be **10-15 mins or longer** to make a voice call.

The below is a potential 'call blocking' message:

> "This device has been blocked from making Voice Calls due to being deemed incompatible with Triple Zero Calls. You will not be able to use this device as a mobile phone to make calls. Please contact your service provider for details. Free & low cost handsets may be available"
> [Message Loops for 10+ minutes]

Therefore, consumers looking to ordinarily use that device to make phone calls will be unable to without being subjected to an outbound 'call blocking' audio message.

Calls can still be received under this model and most importantly it remains possible to prove in the real world on a live network that the device is actually capable of VoLTE Calling (including being able to test for 000) on a network with Sim Service.

Outbound Voice calls should still be allowed to process at some point (e.g. after 10-15mins), as to prevent them from doing so creates another insurmountable barrier to proving that the phone can work.

But even a 30-60 min long outbound message to make a voice call would be far better than the blunt blocking approach we currently have.

No ordinary consumer is going to use a device that is unable to place outbound calls in regular use of the device, especially when consumers already have a replacement device that is 4G compatible.

A consumer would first have to remove their sim and put it into their blocked device anyway, which most people are not likely to do, certainly not at scale.

A further benefit of this change is that consumers that try to connect with a 'blocked device' would actually find out why their phone isn't working anymore. Along with what the right course of action is, be that contacting their provider, a software update or otherwise.

Rather than inserting their sim and seeing nothing happen, then try to troubleshoot, and then of those only some will realise the phone has been artificially blocked from all network service by their carrier due to a blunt legal instrument, along with no mechanism for them to dispute it.

This is basically what happens to tourists that get off the plane with 'incompatible' 4G/5G devices.

Further to this, devices that are 4G or 5G that are not VoLTE Enabled or Capable will not be able to make any calls. A phone that is unable to make phone calls is not a phone.

People need their phones to make phone calls.

Post 3G Shutdown Environment Risks

As we're in a post shutdown environment (and have been for some time), there is no practical need to continue to TAC Block all 'incompatible' devices from all network services.

TAC Blocking should be a limited and targeted tool and only applied where appropriate.

Consumers have upgraded now, forcibly or otherwise, so we're not in a situation where someone could continue to use a 'known incompatible' device that doesn't work and not know about it.

Given that, there is also no longer a need to block 4G phones that are '3G only for All Calls'.

This class of device if unblocked (and if the telcos have been accurate) won't be able to make any calls. That type of device is basically by extension not a phone as it cannot make phone calls.

The reality is Telstra has classified a large number of 4G/5G phones that are fully VoLTE capable (including now on their network) as '4G but 3G only for all calls'.

These devices must be unblocked.

Alternative 'Lower Risk' Approach

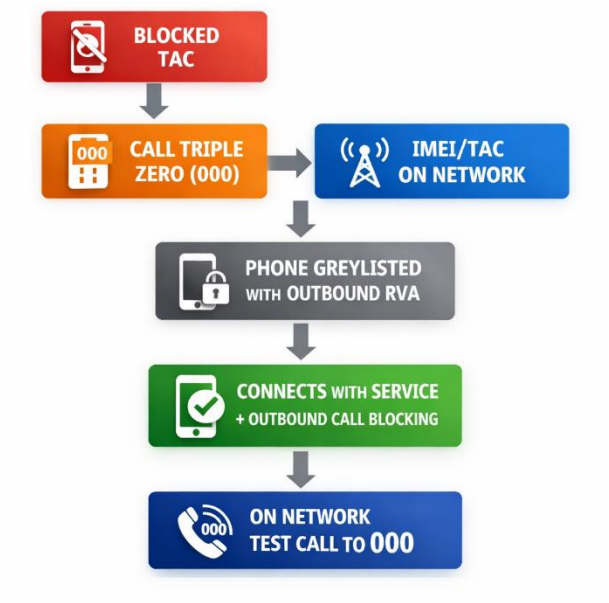
However an alternative lower risk approach would be to only 'unblock' and impose outbound call blocking on 'incompatible' device models (TACs) that have successfully placed Anonymous 'Camp-on' 4G VoLTE Emergency Calls since the 3G Shutdown in a 'post shutdown' network environment.

A block device with an entirely 'unknown' Emergency Calling Capability (that is in fact capable) would be able to place anonymous camp-on calls on some or all networks.

However in a live environment, network selection is likely to be somewhat random and based on the strongest signal available at that point time.

But once a device has been able to do that, it can then move (for the carrier network it connected to) to the 'Outbound Call Blocking' list (essentially a 'grey list').

General Device Reclassification Flow Example



Device Reclassification Steps

1. Blocked 4G/5G Device TAC – 000 Capable
2. Blocked Device Calls Triple Zero
3. IMEI/TAC of Device sent to network
4. Phone is 'Greylisted with' Outbound 'Call Blocking' RVA on that network
5. Phone can then connect with Normal 4G Service and RVA 'Outbound Call Blocking'
6. Device can then establish VoLTE & IMS Registration for normal phone calls
7. Test Call to 000 with full Sim/Network Service (and/or IMS Registration for Calls)
8. Device TAC is then reclassified depending if it was able to successfully connect etc.

Devices that aren't able to connect to Triple Zero via Camp-on *could* remain on the TAC block list.

Option 2 - Equipment Identity Register (EIR) Solutions

Solution Complexity: Moderate

The other more granular approach would involve taking advantage of the EIR (Equipment Identity Register) databases in use by the MNOs.

The EIR allows carriers to manage access to their networks, including limiting what can connect, blocking stolen or suspicious phones, and controlling which types of devices can use the network.

Within the EIR, rules can be configured very granularly, per device (IMEI), per model (TAC), or per Customer Sim (IMSI) etc.

EIR Platforms

Below is information from various EIR Platform Suppliers along with the types of functions & features supported. Most all support the same broad set of features.

BroadForward

BROADFORWARD

Equipment Identity Register (EIR)

The BroadForward Next Generation Equipment Identity Register (EIR) is the world's most advanced software solution for authentication of mobile devices in the network, including IoT devices. It provides a single, unified access point, fully standards compliant, 100% software based and supports 2G/3G, 4G/LTE, 5G and IT interfaces. It also offers an extensive feature set for implementing service logic, active triggering, reporting, alarming and more.

Need for blacklist and whitelist access control to mobile networks

Traditional EIR systems provide device authentication security based solely on blacklisting. Devices in this list are prohibited from entering a specific network. However, in many cases this no longer suffices. With the massive adoption of smartphones and exponential growth of IoT devices there is a growing desire to increase device access control not only to individual networks but to enable enforcement of regulatory directives on a national level. Nominated by the GSMA for Best Mobile Technology, the BroadForward EIR supports both blacklisting and whitelisting, virtually without storage limitation. Because it also supports auto-provisioning, the BroadForward EIR provides a strong base for controlled network access of devices without running the risk of unmanageable access restrictions.

BROADFORWARD

Next Generation EIR

The BroadForward Next Generation EIR provides a single, unified access point for authentication of mobile devices in the network. It is a fully standards compliant, 100% software-based product and supports 2G/3G, 4G/LTE, 5G and IT interfaces. It also offers an extensive feature set for implementing service logic, active triggering, reporting, alarming and more.

The BroadForward EIR supports black-, grey- and white-lists for individual IMEIs, 5G PEIs as well as IMEI / PEI ranges, and allows creation of customized lists (VIP list, exception list etc.). Within non-3GPP networks (e.g. Wi-Fi based) the PEI could also be a MAC address. The EIR functionality works across legacy and IP networks, supporting SS7/MAP as well as Diameter and HTTP/2 based IMEI / PEI checks. Based on available IMSI / MSISDN, 5G SUPI information, flexible service logic can be applied for (un)blocking devices based on e.g. IMEI-IMSI combinations. The latter allows networks to detect IMEI cloning. Furthermore the solution can detect SIM box fraud by cross-referencing location data with the IMEI and IMSI. Expiration can be applied for each entry in any of the black-, grey- and white-lists. Flexible service logic can be applied to trigger actions at expiration (e.g. move to blacklist or whitelist). Extensive options are provided for notification (via SNMP, HTTP, SMS) for all lists.

BroadForward - Equipment Identity Register (EIR)
https://www.broadforward.com/equipment-identity-register-eir

Nomios Belgium

nomios

The next generation EIR solution

EIR provides a Next Generation EIR enabling a single, unified access point for Mobile Equipment authentication in the network. The EIR solution is fully standards compliant, 100% software based, supporting 2G/3G, 4G/LTE and IT interfaces. It also offers an extensive feature set for implementing service logic, active triggering, reporting, alarming and more.

EIR supports black-, grey- and white-lists, as well as unlimited options for additional lists (VIP list, exception list etc.), for individual IMEIs and IMEI ranges. It works across legacy and IP networks, supporting SS7/MAPand Diameter IMEI checks. Based on available IMSI / MSISDN information, flexible service logic can be applied to (un)block devices based on e.g. IMEI-IMSI combinations. Expiration can be applied for each entry in any of the lists. Flexible service logic can be applied to trigger actions at expiration (e.g. move to blacklist or whitelist). Extensive options are provided for reporting and notification at black- and grey-list detection (via SNMP, HTTP, SMS). This includes device location (optional, based on additional HSS / HLR check).

Nomios Belgium - 5G & mobile solutions - Equipment identity register (EIR)
https://www.nomios.be/en/network/5g-mobile-solutions/mobile-security/equipment-identity-register

Tieto Tech Consulting

EIR to secure networks

An Equipment Identity Register (EIR) helps operators to protect their networks and revenues from stolen and unauthorized devices being used. In many countries, governments and telecom regulators demand the installation of EIR. In addition to fulfilling regulatory requirements, an EIR also provides operators with the opportunity to offer additional security services to subscribers.

Our EIR solution is a perfect fit for any operator. It ensures compatibility with all existing core network generations, 2G, 3G, 4G and 5G signaling networks, which are all simultaneously supported.

In addition to basic EIR functions such as black-lists, white-lists, grey-lists and GSMA blacklist database integration, our solution also enables the provision of associating a device with a specific subscription or a list of subscriptions. This way an operator can have white-lists of VIP subscriptions and ensure that identified black-list devices still function, but only for white-listed subscribers.

Tieto Tech Consulting – Telecom - Core Network & Signaling Systems Equipment Identity Register
https://www.tietoevry.com/en/create/telecom/network-products-and-solutions/equipment-identity-register

Further general information about EIR Whitelisting, Blacklisting and Greylisting options can be found in the resources below.

Oracle - EAGLE EIR User's Guide
https://docs.oracle.com/en/industries/communications/eagle/47.1/eir-user-guide/feature-description1.html

Nick vs Networking - The power of the PyHSS EIR – 24 May 2024
https://nickvsnetworking.com/the-power-of-the-pyhss-eir

EIR Option 1 – IMSI Whitelist/VIP List/Exception List

An alternative 'EIR Based option', would be to establish what's known as an **'IMSI Whitelist'**, this is also known as a **'VIP List'** ('Very Important Person' List) or **'Exception list'**.

(IMSI - International Mobile Subscriber Identity – i.e Sim Card Number/Identifier)

This approach would only exempt certain customer sim card identifiers/numbers (IMSIs) from the TAC Blocking rules and those specific customer sims would work in any device.

	IMSI (SIM Card) Whitelist Scenarios		
EIR Database Logic	**1. Blocked Device TAC No IMSI Whitelist**	**2. Blocked Device TAC IMSI Whitelist**	**3. Allowed Device TAC No IMSI Whitelist**
Device TAC Status	Blocked TAC	Blocked TAC	Allowed TAC
IMSI (SIM) Status in EIR	Regular IMSI	Whitelisted IMSI	Regular IMSI
EIR Block Decision	Blocked	Override by IMSI	Allowed
Result	**No Service**	**Full Service**	**Full Service**

In practice this would effectively be a 'BYOD' (Bring your Own Device) Service option that is only available for customers that **opt-in** and meet certain requirements.

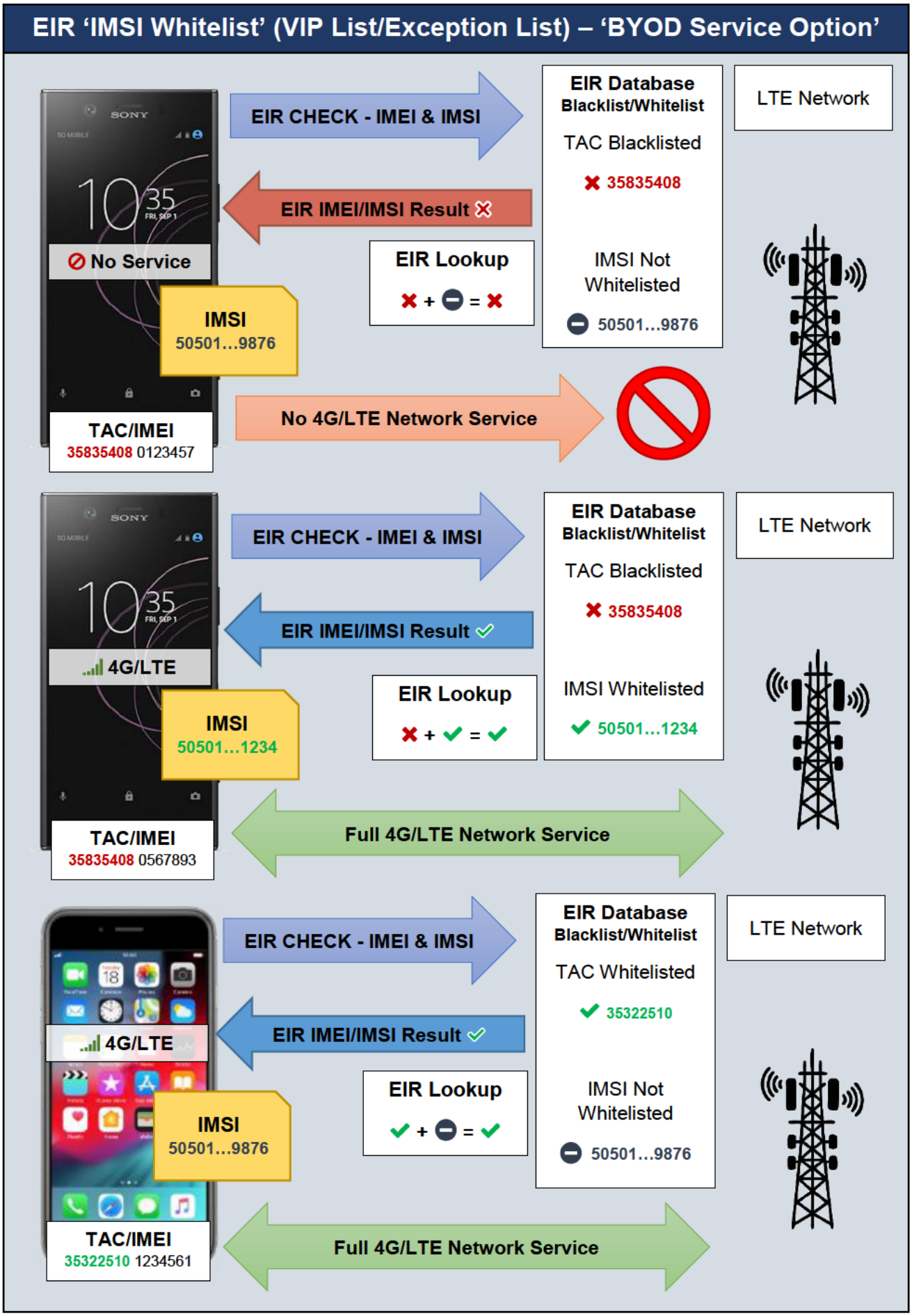
Those requirements could come with some limitations along with regular SMS messages about the 'BYOD' accounts status, along with alternative methods or phone numbers to contact Triple Zero.

The BYOD Service option could require manual renewal every 30-90 days to ensure users with a BYOD service plan are knowingly opted-in.

Non-Whitelisted (No 'BYOD') Sims would still be subjected to the TAC Blocking and could only be used in devices that are not blocked. (Which is the current blocking & policy settings)

A Whitelisted Sim IMSI would override the TAC Blocking logic within the EIR Rules and allow that customer to connect with that device or any device.

A more detailed visual diagram of this approach can be found on the page below.


EIR 'IMSI Whitelist' (VIP List/Exception List) – 'BYOD Service Option'
EIR CHECK - IMEI & IMSI
EIR Database
Blacklist/Whitelist
TAC Blacklisted
35835408
IMSI Not Whitelisted
50501…9876
LTE Network
EIR IMEI/IMSI Result
EIR Lookup
+ =
No Service
IMSI
50501…9876
TAC/IMEI
35835408 0123457
No 4G/LTE Network Service
EIR CHECK - IMEI & IMSI
EIR Database
Blacklist/Whitelist
TAC Blacklisted
35835408
IMSI Whitelisted
50501…1234
LTE Network
EIR IMEI/IMSI Result
EIR Lookup
+ =
4G/LTE
IMSI
50501…1234
TAC/IMEI
35835408 0567893
Full 4G/LTE Network Service
EIR CHECK - IMEI & IMSI
EIR Database
Blacklist/Whitelist
TAC Whitelisted
35322510
IMSI Not Whitelisted
50501…9876
LTE Network
EIR IMEI/IMSI Result
EIR Lookup
+ =
4G/LTE
IMSI
50501…9876
TAC/IMEI
35322510 1234561
Full 4G/LTE Network Service

EIR Option 2 - IMEI-IMSI Binding

The other variation of this approach (which is more involved) is to do what's known as an IMEI-IMSI Binding or Pairing.

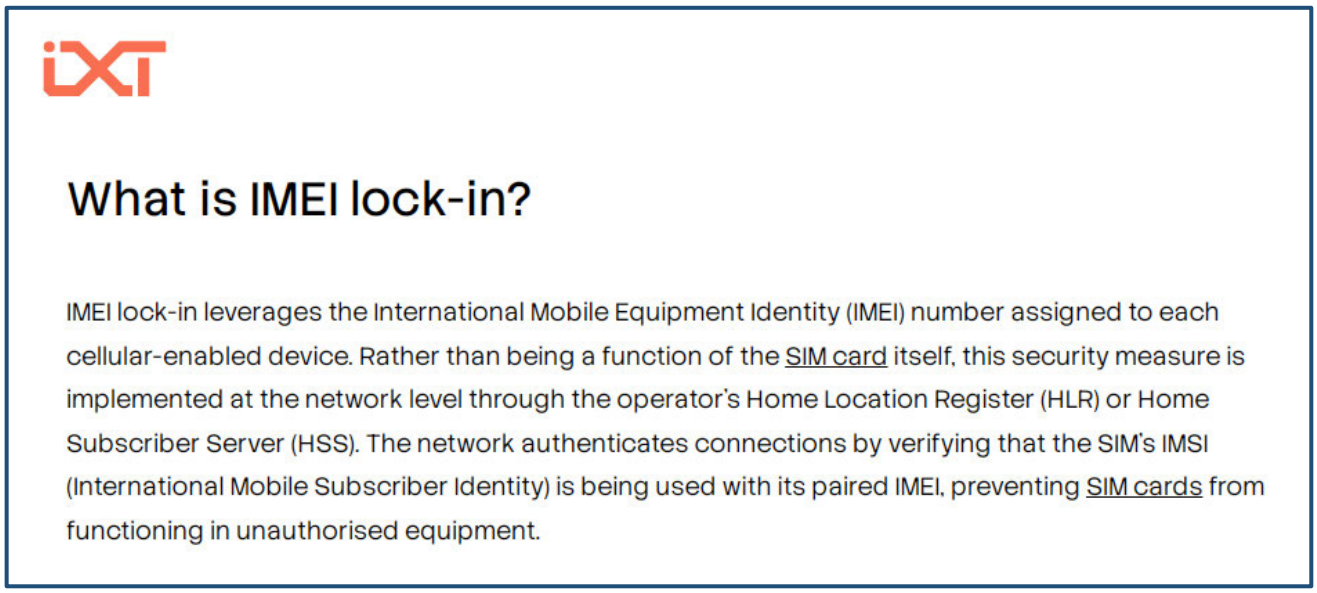
With an 'IMEI-IMSI' binding solution, a specific (blocked) device could only be used with a specific sim. So unlike with an 'IMSI Whitelist' or 'VIP Exception' list. A sim card (IMSI) and device IMEI combination would be jointly 'whitelisted' so the blocked device will only connect with a specific sim card installed.

A visual example of how that would work is below.

IMEI	IMSI	IMEI-IMSI Bound Pair	Result
 35835408 0567893 **Blocked TAC – Paired IMEI**	**IMSI** 505012345671234 505012345671234 **(Paired IMSI)**	Yes	✔ **Allowed**
 35835408 0567893 **Blocked TAC** **IMEI Paired with other IMSI**	**IMSI** 505019999999876 505019999999876 **(Unpaired IMSI)**	No	✖ **Denied**
 35322510 1234561 **Normal TAC**	**IMSI** 505019999999876 **Any IMSI**	N/A	✔ **Allowed**

Carriers (especially in the IoT sector) frequently lock SIMs to specific devices, often including backup data sims in Broadband Modems, or in some cases with prepaid.

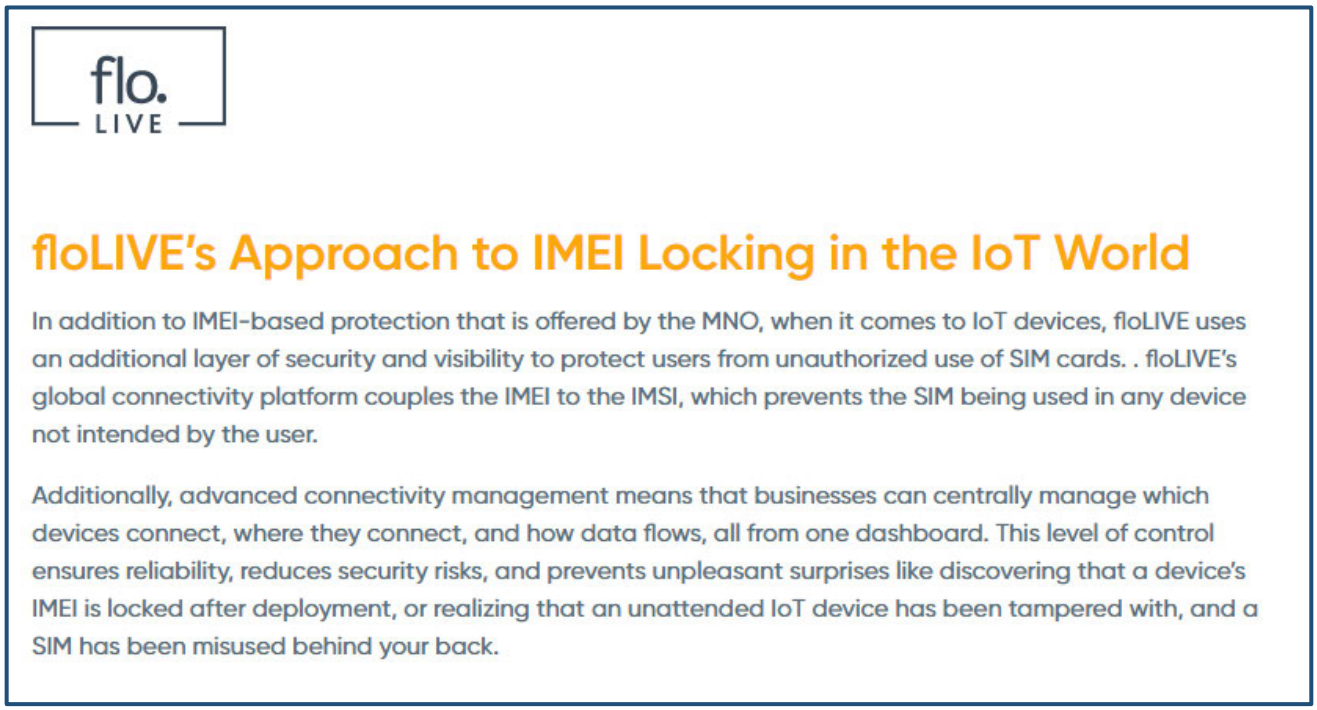
So the above 'IMEI-IMSI' solution is similar in nature and is supported by EIR platforms that are available. *As shown in the above 'Nomios' EIR information page.*



What is IMEI lock-in?

IMEI lock-in leverages the International Mobile Equipment Identity (IMEI) number assigned to each cellular-enabled device. Rather than being a function of the SIM card itself, this security measure is implemented at the network level through the operator's Home Location Register (HLR) or Home Subscriber Server (HSS). The network authenticates connections by verifying that the SIM's IMSI (International Mobile Subscriber Identity) is being used with its paired IMEI, preventing SIM cards from functioning in unauthorised equipment.

IXT IoT - How IMEI lock-in boosts security for IoT SIM deployments
https://ixt.io/blog/how-imei-lock-in-boosts-security-for-iot-sim-deployments



floLIVE's Approach to IMEI Locking in the IoT World

In addition to IMEI-based protection that is offered by the MNO, when it comes to IoT devices, floLIVE uses an additional layer of security and visibility to protect users from unauthorized use of SIM cards. . floLIVE's global connectivity platform couples the IMEI to the IMSI, which prevents the SIM being used in any device not intended by the user.

Additionally, advanced connectivity management means that businesses can centrally manage which devices connect, where they connect, and how data flows, all from one dashboard. This level of control ensures reliability, reduces security risks, and prevents unpleasant surprises like discovering that a device's IMEI is locked after deployment, or realizing that an unattended IoT device has been tampered with, and a SIM has been misused behind your back.

floLIVE IoT - What Is IMEI Lock and How Does it Work?
https://flolive.net/blog/glossary/what-is-imei-lock-and-how-does-it-work

EIR Option 3 – Per IMEI Blocking Model

Complexity: Moderate - High

The other approach is to manage the blocking and unblocking of devices on a per IMEI basis, rather than based on Make & Model (TAC). Despite carrier discontent about the idea, it is entirely possible for them to do this. Per device and per service (IMEI & IMSI) is ultimately the best form of managing blocking.

In May 2025 the ACMA approached the carriers about moving to an IMEI blocking approach to accommodate tourists and it was rejected as essentially being too complex and resource intensive.

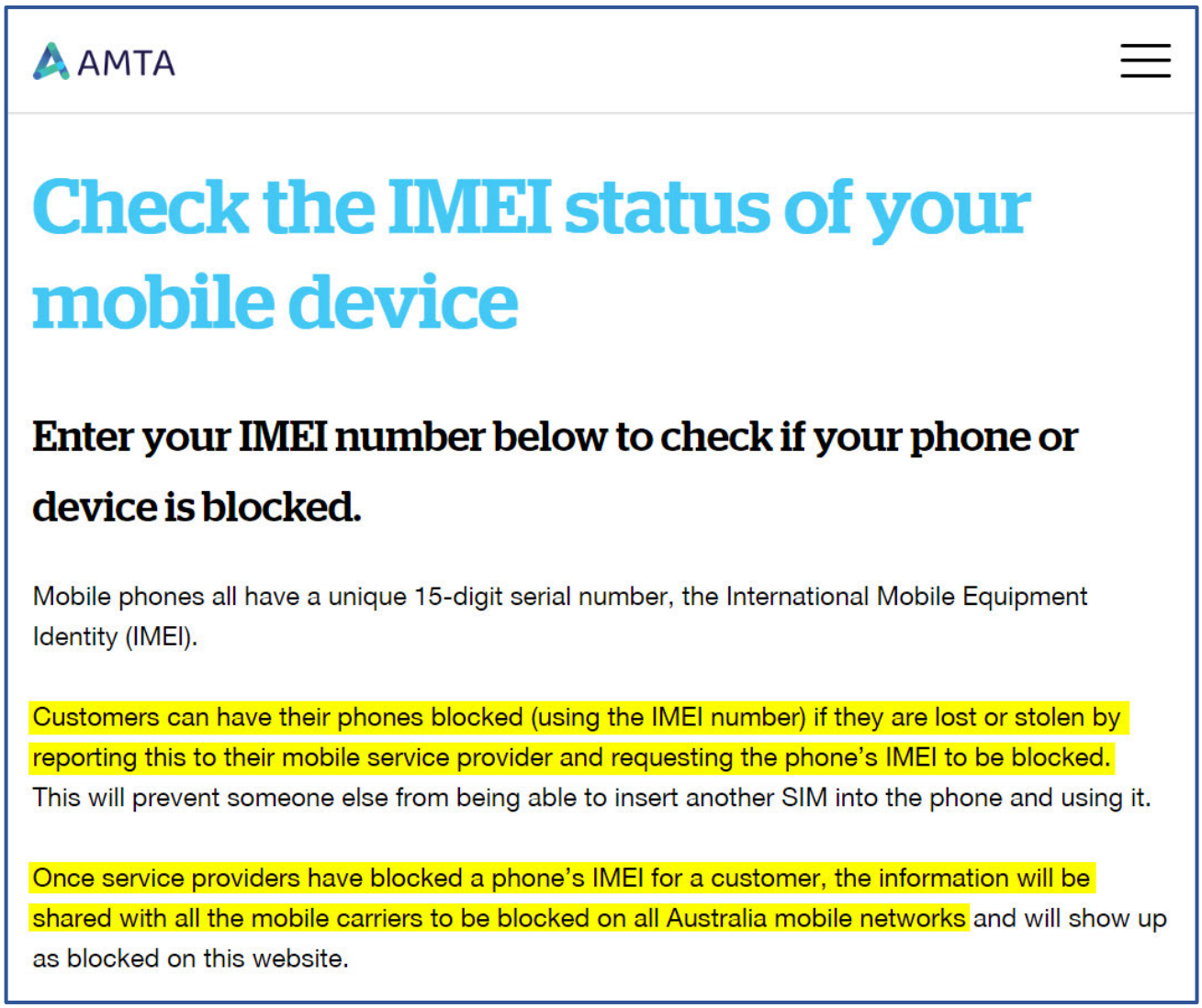
TPG/Vodafone IMEI Blocking Devices

However based on a number of online reports, emails and survey submissions from consumers, it appears that TPG/Vodafone has been IMEI Blocking brand new 5G phones they deem 'incompatible' or have 'unknown' capability.

This issue has been discussed online by impacted consumers.

Whirlpool Forums – 'Imei Blocked By Vodafone + iPhone XS Max' – 20 May 2026
https://forums.whirlpool.net.au/archive/9n111mm1

However TPG has effectively added many of these device IMEIs to the 'Lost & Stolen Device' register.

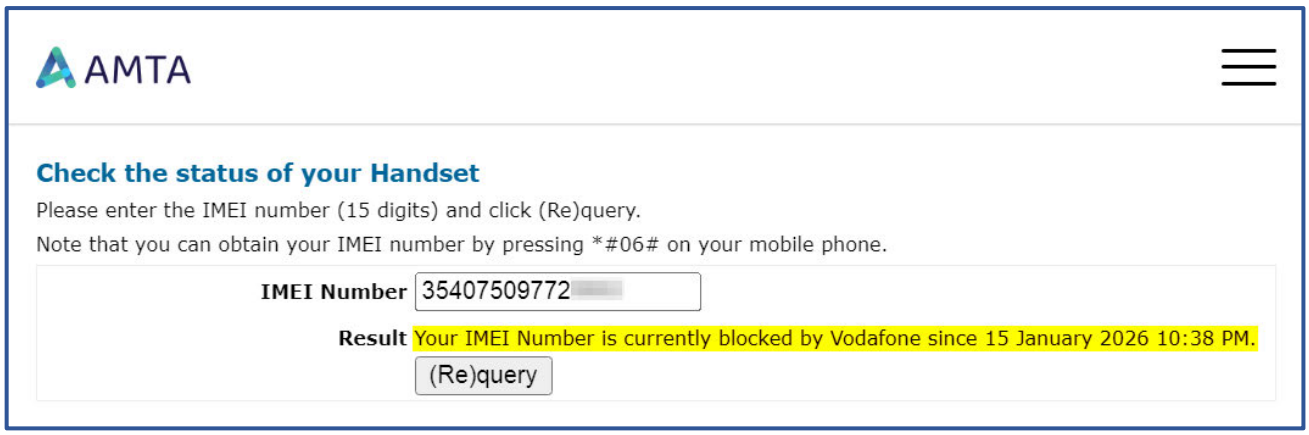


'Check the IMEI status of your mobile device' – AMTA – Lost & Stolen IMEI Checker
https://amta.org.au/consumer-advice/cyber/check-the-status-of-your-handset

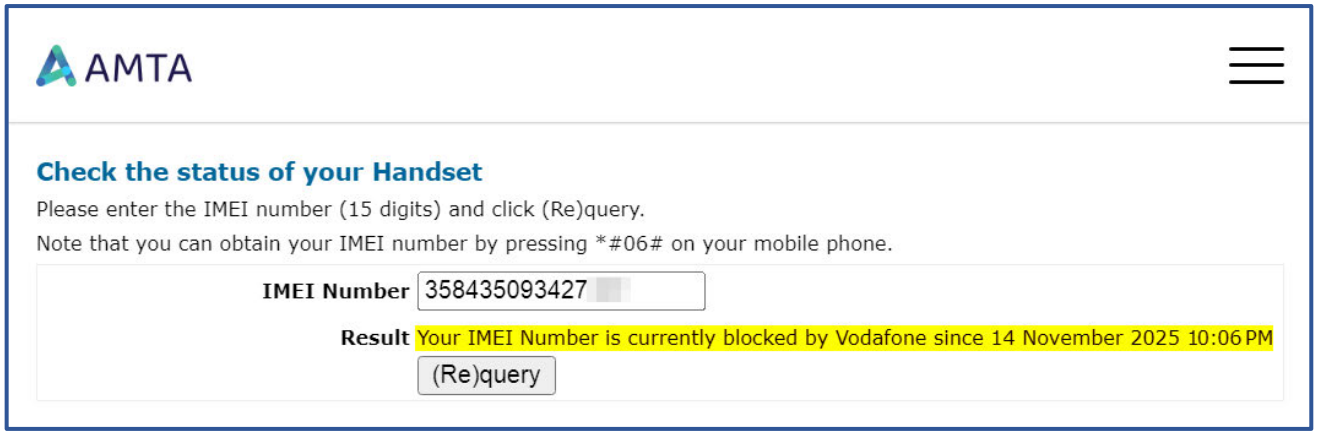
I only have a small number of device IMEIs that have been shared with me by impacted consumers, but from the data I do have I can see that Vodafone is very much in fact IMEI Blocking devices and placing them on the 'Lost & Stolen' Device register.

These IMEI blocks are then shared via AMTA with the other telcos who then IMEI block the phone from their networks, despite in some instances Telstra and Optus not blocking that Device TAC and saying it's not impacted.

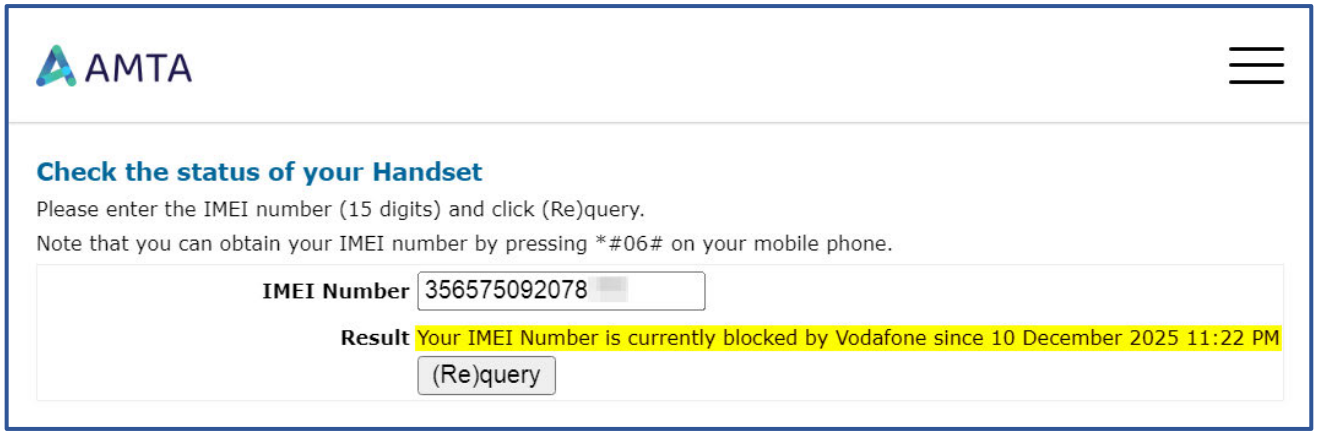
Vodafone IMEI Blocking 2025-2026



Samsung Galaxy Note 8 - SM-N950F - 35407509 – Vodafone IMEI Block 15 January 2026



Shift Phone - SHIFT5me – 35843509 – Vodafone IMEI Block 14 November 2025



Samsung Galaxy S9 Plus - SM-G965F – 35657509 - Vodafone IMEI Block 10 December 2025

A number of consumers with dual sim phones report they've found the IMEI of their device for Sim Slot 1 blocked by Vodafone, then later blocked on Telstra & Optus, despite both saying that TAC is supported.

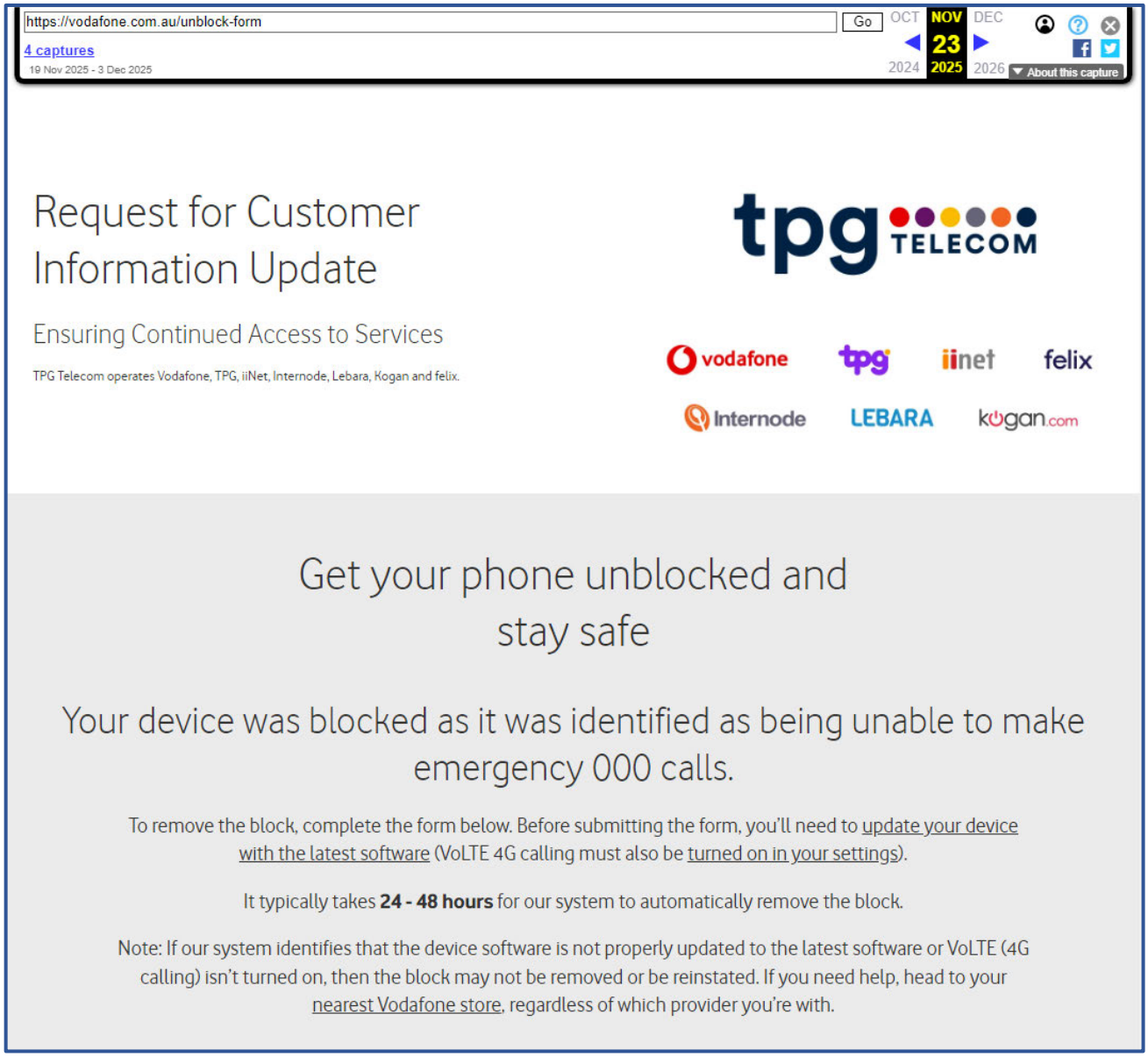
Whereas the IMEI for Sim Slot 2 (which has the same TAC) is not blocked from Telstra or Optus.

Vodafone IMEI Unblocking

Up until December last year Vodafone also had an online IMEI unblocking form, which has since been deleted and the last known archived copy from the Wayback Machine is from November.

The page was redirecting traffic to another page from early December.

This form was created following on from the October Samsung issue and allowed customers to submit their IMEI and account information to have their phone unblocked once it was updated.



Vodafone IMEI Unblock Submission Form - November 2025
https://web.archive.org/web/20251123022444/https://vodafone.com.au/unblock-form

'Not Operationally Feasible'

Again it's also of note because in May 2025 TPG said to the ACMA that blocking individual devices (IMEIs) was '..resource intensive..' and not operationally feasible.

tpg TELECOM

3. Details about what would be required to enable IMEI blocking for individual devices, including estimated cost and timeframe

Putting in place an IMEI-level blocking solution on a permanent basis would require significant investment and expenditure in system development, process redesign, and manual handling resources. However, beyond cost and resourcing, our primary concern is that no implementation model we have considered would allow for reliable and ongoing compliance with the Determination while managing IMEI blocking at scale. We do not believe such an approach is operationally feasible or aligned with the policy intent.

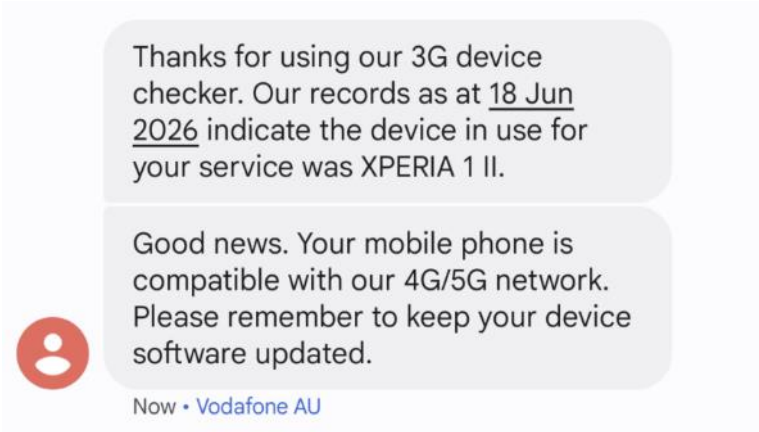
ACMA FOI Log 169: Request for documents relating to the Emergency Call Service Determination – TPG - 23 May 2025
https://www.acma.gov.au/foi/2025-08/log-169-request-documents-relating-emergency-call-service-determination

So if it's not 'operationally feasible', **why are they doing it now?**
It clearly must be feasible for them to be doing it.

And why has the unblocking form been deleted? Is that why it's 'feasible' now?

Compounding things further TPG/Vodafone is the only provider that doesn't have any public device IMEI/TAC Checker Tool.

They only maintain the SMS 3498 checker, the only provider to do so.



Additionally the list of blocked & 'incompatible' devices they tabled following on from the December Triple Zero Senate hearings is now wildly out of date and Vodafone has rapidly moved to panic block all 'unknown' devices from their network.

Device IMEI Registration Regimes

Despite carrier discontent about the IMEI Blocking solution, it is entirely possible for them to do this.

Carriers across the globe are forced to manage the blocking and service allocation to devices at a per IMEI level.

It can entirely be done, there is software and systems that commercially exist for this.

It just requires more effort than the zero effort, zero care approach of bluntly TAC Blocking thousands of devices from all network service.

Many countries across the globe require at scale the manual IMEI registration of devices used by tourists or otherwise charge device registration import fees & tariffs on 'imported' devices.

All of this is done on a per individual device basis, not by make & model (TAC). Devices not registered within a given period of time are blocked from connecting to mobile networks in that country.

Such countries include:

- Turkey
- Indonesia
- Pakistan
- Chile
- Uzbekistan
- Nepal
- Azerbaijan
- Colombia
- Bangladesh

IMEI.info: Global Imei Registration Requirements: A Country-By-Country Breakdown
https://www.imei.info/news/global-imei-registration-requirements-country-country-breakdown

Bali Business Consulting - How to Register IMEI Phone in Indonesia -
https://balibusinessconsulting.com/how-to-register-imei-phone-in-indonesia

Universitas Gadjah Mada (Gadjah Mada University) – Indonesia – IMEI Information and Guidelines - 2022
https://admission.ugm.ac.id/wp-content/uploads/sites/330/2022/03/IMEI-procedure.pdf

Mobile Phone/IMEI registration | Sabancı University International Relations Office Turkey
https://iro.sabanciuniv.edu/en/imei-registration

Turkey IMEI Registration 2025: Tourist Guide & Tips
https://simology.io/blog/turkey-imei-registration-tourists-deadlines-fees-workarounds-2025

Yet Tourists coming to Australia (post 3G Shutdown and Device Blocking) can still find their 4G or 5G phone TAC blocked from some or all networks, even when using International 4G/5G Roaming.

This includes if the device is capable of Voice over LTE, VoLTE Emergency Calling has the latest software and along with an underlying chipset platform from a reputable vendor such as Qualcomm or MediaTek.

Such tourists are better off travelling to Bali than Australia, at least they wouldn't have to buy a new phone the moment they step off the plane.

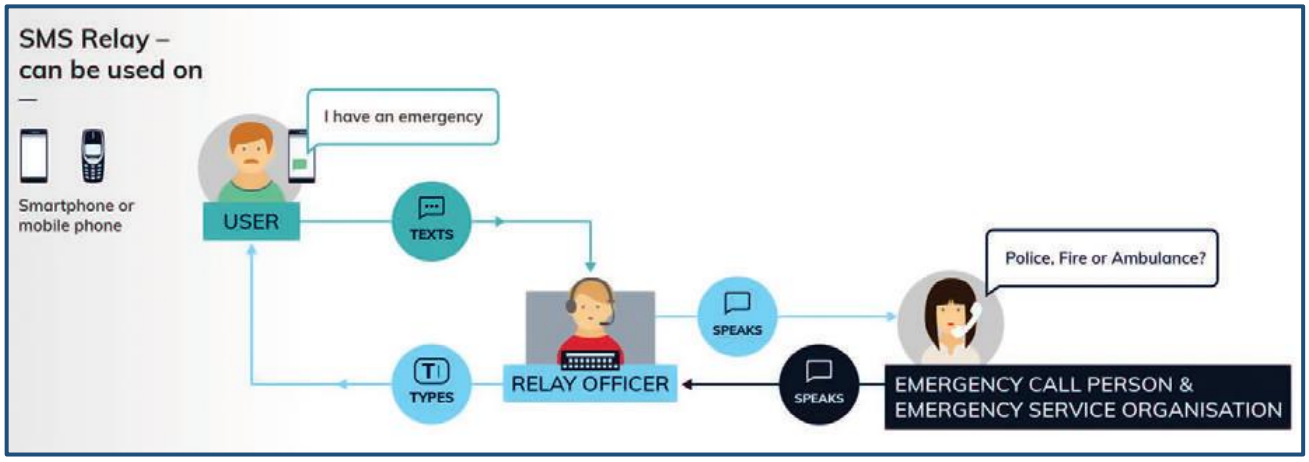
This must be resolved.

Improving Access to Emergency Services

SMS 000 Relay

Availability of being able to access Triple Zero via SMS (either directly or via an intermediary relay) would substantially mitigate the problem of someone being able to connect with and use a device that is entirely unable to contact Emergency Services via a terrestrial network voice call.

Either due to a device software issue or in the event of hypothetical repeat of a scenario similar to the 18 September 2025 Optus Triple Zero Call incident.



DITRDCSA – Triple Zero Inquiry - Answers to questions on notice public hearing 26 March 2026 (received 12 June 2026)
https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/TripleZero48P/Additional_Documents?docType=Answer%20to%20Question%20on%20Notice

Providing a text based alternative would provide an additional layer of redundancy and alternative access methods for those either unable to call (and use voice) or would prefer to communicate via text instead.

Beyond an SMS relay, direct to 000 should be considered as well. Text to 911 is available within the US.

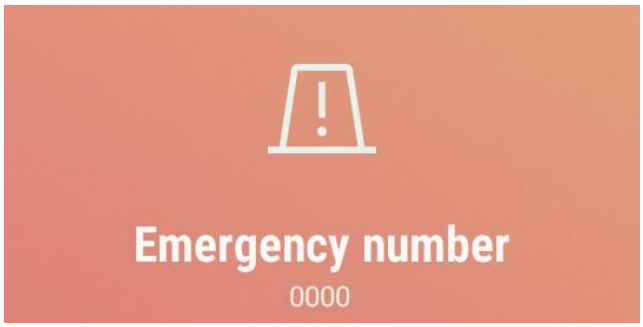
FCC - Text to 911: What You Need to Know
https://www.fcc.gov/consumers/guides/what-you-need-know-about-text-911

Alternative 'Non-SOS' number for Triple Zero

Noting there is consideration about the deployment of alternative numbers for the 'Triple Zero SMS Relay Pilot'. It does seem entirely appropriate that either the same or another number is enabled to call Triple Zero (and the ECP) as a standard 'IMS' Telephone call, rather than an 'SOS' Emergency Call.

For example the number **0000** (Quadruple Zero) could be configured to call the Triple Zero ECP as a standard IMS telephone call, rather than a **'urn:service:sos'** Emergency Call over the SOS Bearer.

Currently this number is deployed on Telstra's network as an alternative 'SOS' Emergency Number.



But (Quadruple Zero) **0000**, (Triple Zero One) **0001** or another number combination could be configured to provide access to Triple Zero (and the ECP) as a Standard 4G Telephone Call.

So provided a phone can make normal 4G VoLTE calls it would be able to call that number.

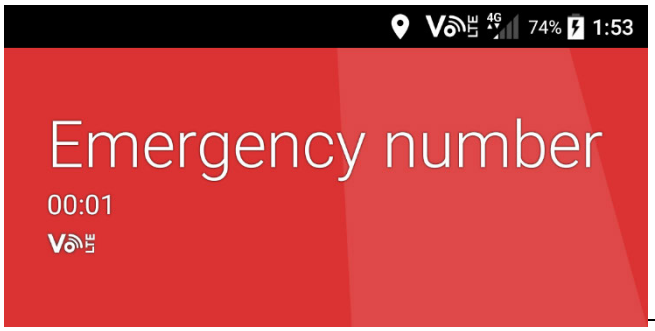
Which is an equivalent level of access to what's available with VoIP Landlines provided over NBN, either directly or from an ISP/RSP. Both are equally inoperative in a network failure or outage scenario.

It is currently possible to call Triple Zero as a Standard (IMS) Telephone call if the number is dialled with the country code **+61 000** or alternatively **+61 112**. (It must be +61)

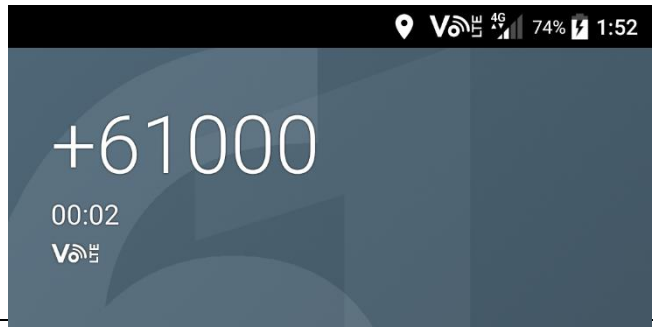
Dialling it with the country code on many devices actually calls the number
(over the IMS connection/'bearer') as opposed to establishing an 'SOS' call. *As shown below*.

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

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

In regards to the SMS relay number, other alternative number formats could include 000-767 (which spells '000 SMS'), or the reverse 767-000 ('SMS 000'). Both are simple short numbers and should be easy to remember and market. Alternatively there is 898-000 (TXT-000) or 898-2-000 'TXT-2-000'.

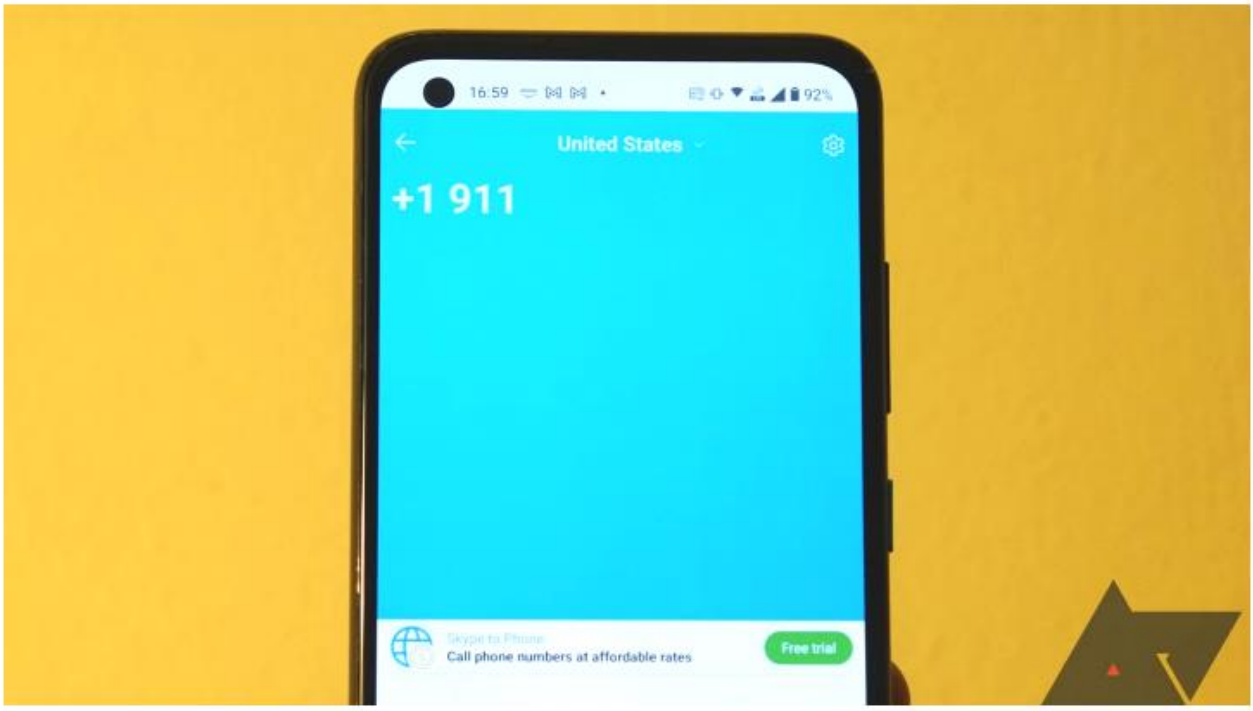
App Based Access to Triple Zero

Skype/VoIP Based Emergency Calling

Prior to its recent discontinuation, the Voice Calling App Skype also supported contacting Emergency Numbers. But such functionality is available in other VoIP/SIP based Apps such as Google Voice, TextNow and others. So availability via a dedicated VoIP app that provides 000 access is potentially feasible, though not without some limitations.

Android Police

You can now make 911 calls directly from Skype



By Jules Wang — Feb 17, 2022, 5:19 PM EST

Microsoft-owned Skype is out with a new app update on all of its platforms and it includes one feature that a few Android users might need to be wary about: emergency calling. Yes, the thing that Skype warned you not to do with Skype.

Version 8.80 of the mobile app — including for Android (download via APK Mirror) and iOS — includes an increased time limit of 5 minutes instead of two for voice messages and the ability to pinch and zoom in on a shared screen. In the U.S. (via XDA-Developers), callers can also now dial 911 to reach emergency services and allow the app to use your phone or tablet's location APIs to pass information along to dispatchers.

Android Police - You can now make 911 calls directly from Skype – 17 February 2022
https://www.androidpolice.com/you-can-now-make-911-calls-directly-from-skype

XDA - Skype now lets you make emergency calls in the United States – 17 February 2022
https://www.xda-developers.com/skype-emergency-calls-united-states

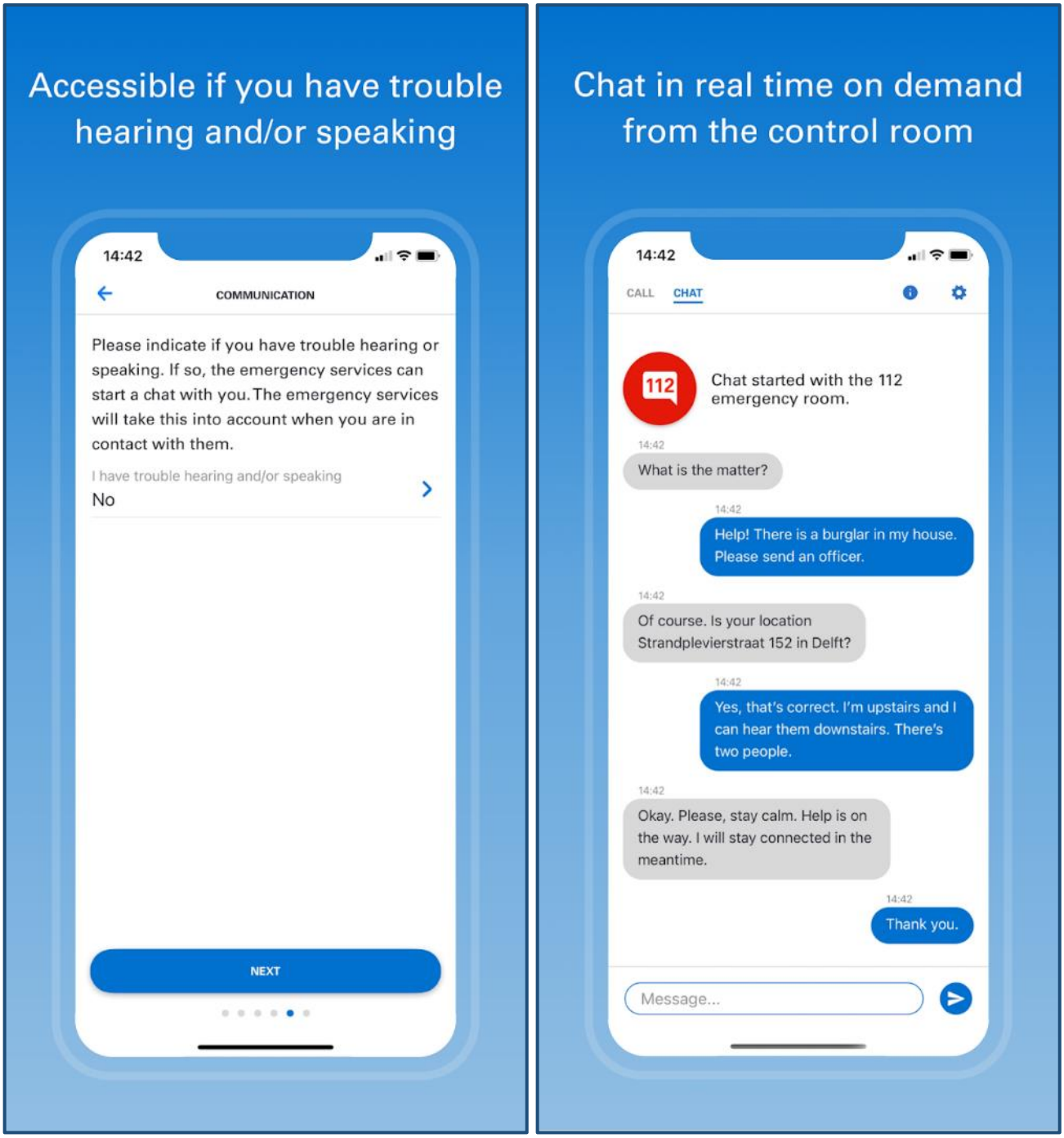
Microsoft - Skype Emergency Calling
https://support.microsoft.com/en-us/skype/skype-emergency-calling

National Emergency Services Apps & Messaging

112NL

In the Netherlands there is a downloadable app called **‘112NL’** that provides messaging connectivity to Emergency Services, along with additional useful functionality.

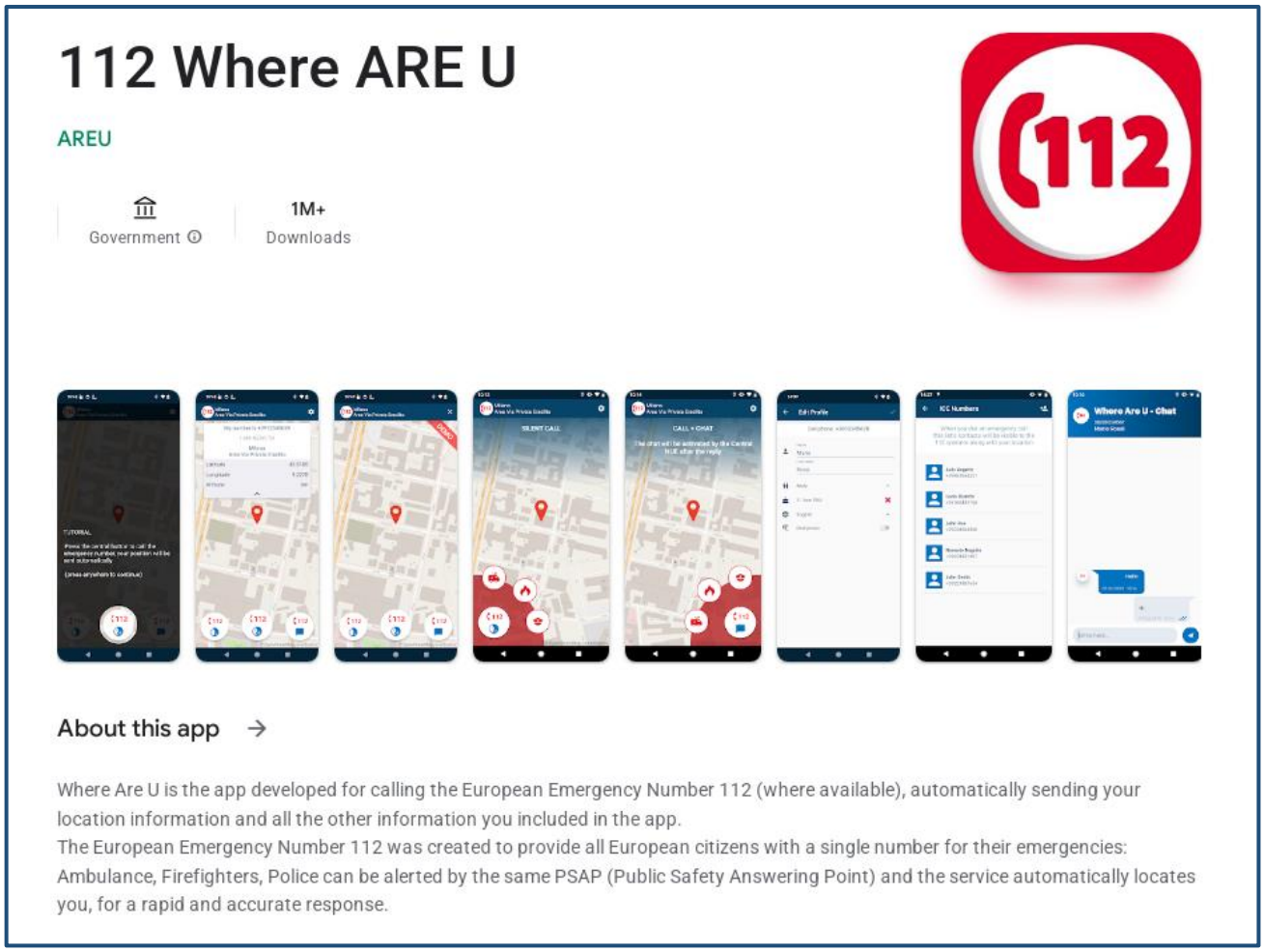
Dutch emergency services 112NL App – Google Play Store
https://play.google.com/store/apps/details?id=org.landelijkemeldkamer.app112



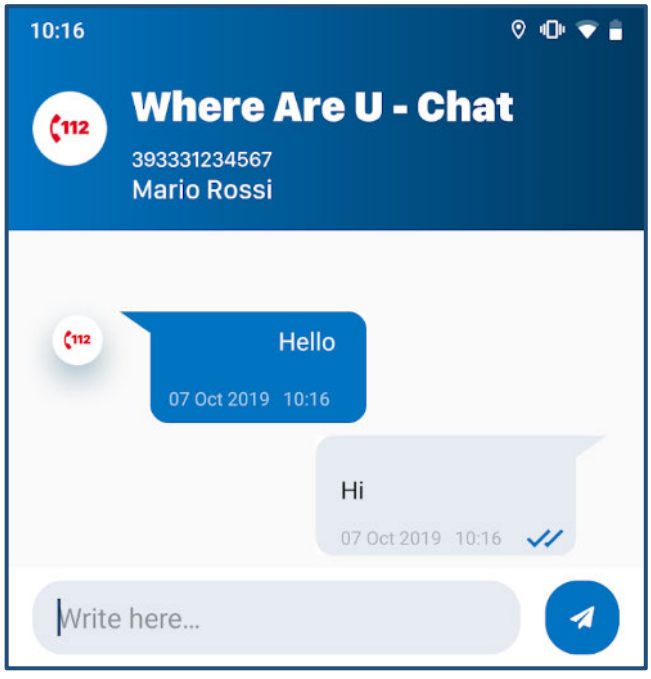
Dutch emergency services 112NL App – Google Play Store - Screenshots

112 Where ARE U

There is also the App Called '112 Where ARE U' *(developed by 'Agenzia Regionale Emergenza Urgenza' in Italy)* which provides similar functionality to the official 112NL app.

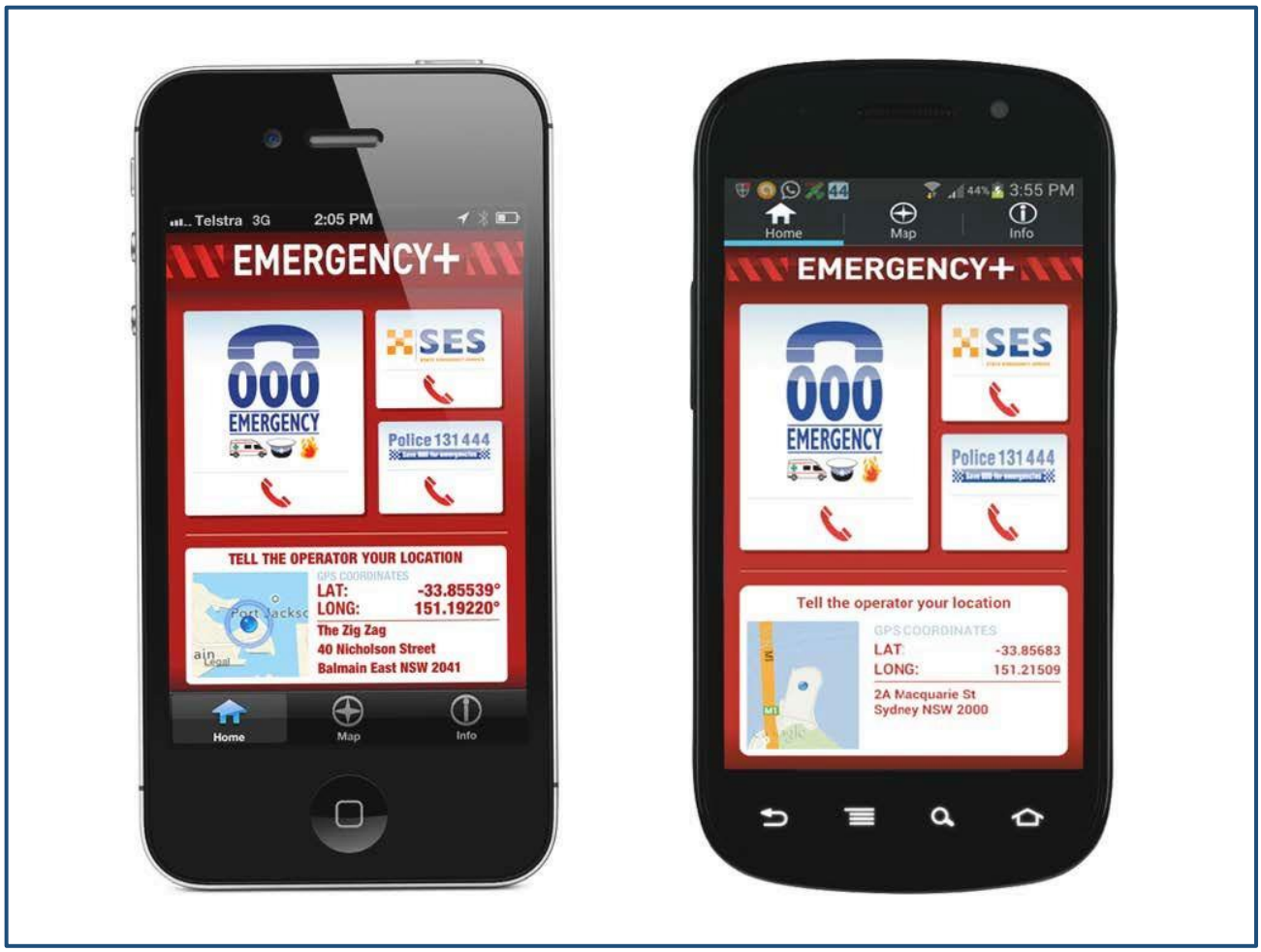


112 Where ARE U – Google Play Store
https://play.google.com/store/apps/details?id=it.Beta80Group.wheareu&hl=en



Australia's 'Emergency Plus' app

In Australia we have the 'Emergency Plus' app which was originally released in 2013 and was last overhauled several years ago.

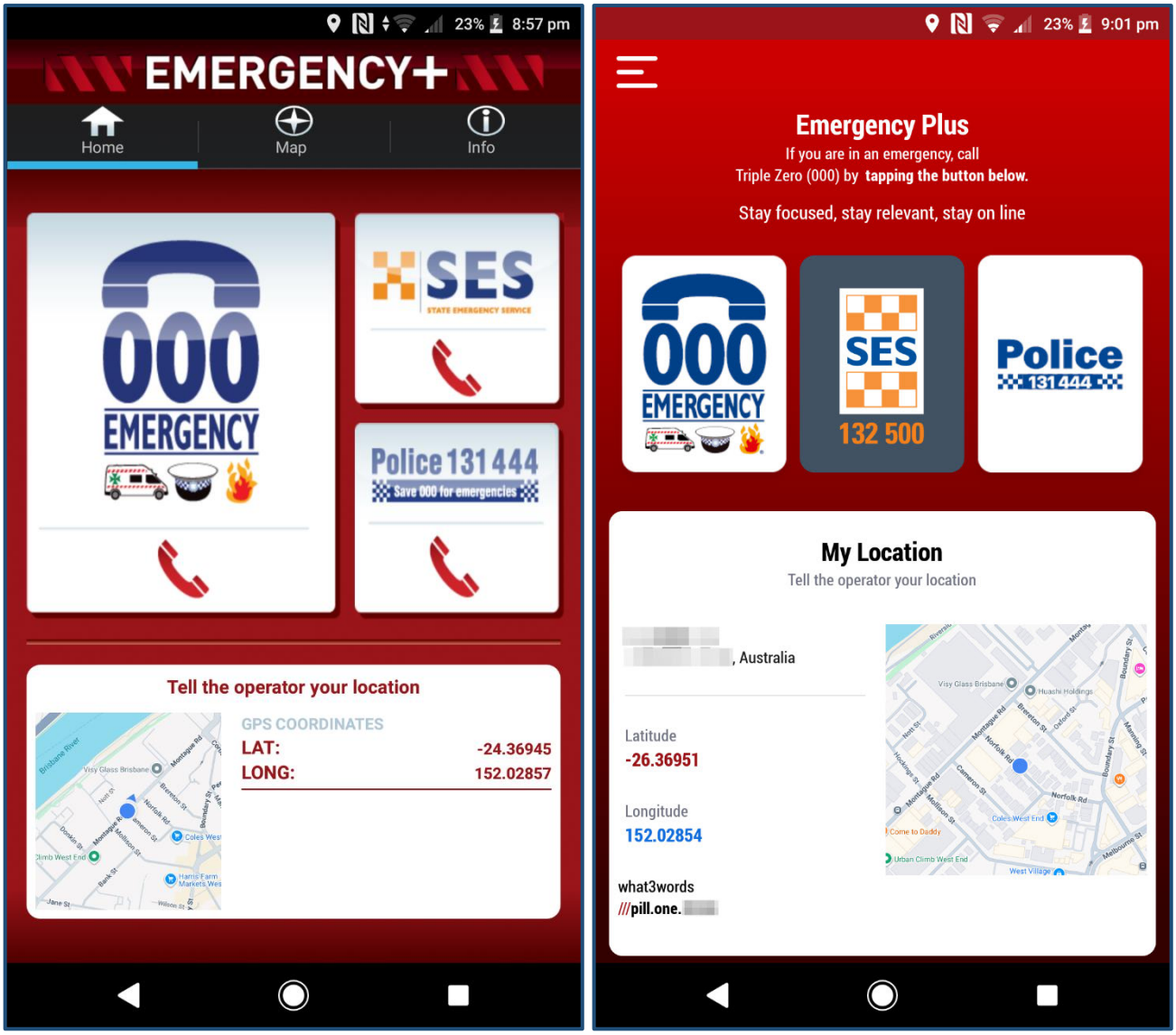


Emergency Plus App – 2013 Release Imagery

However in my view the Emergency Plus app in its current form is almost entirely useless, and is functionally no different to the version released in 2015.

It also lacks features found on Emergency Apps in other countries and regions in the world such as direct messaging to Emergency Services and the ability to store personal 'ICE' (In Case of Emergency) Contacts and other information.

Though some of that device functionality is now also present within the native 'ICE/Emergency' Contacts information within Android & iOS.



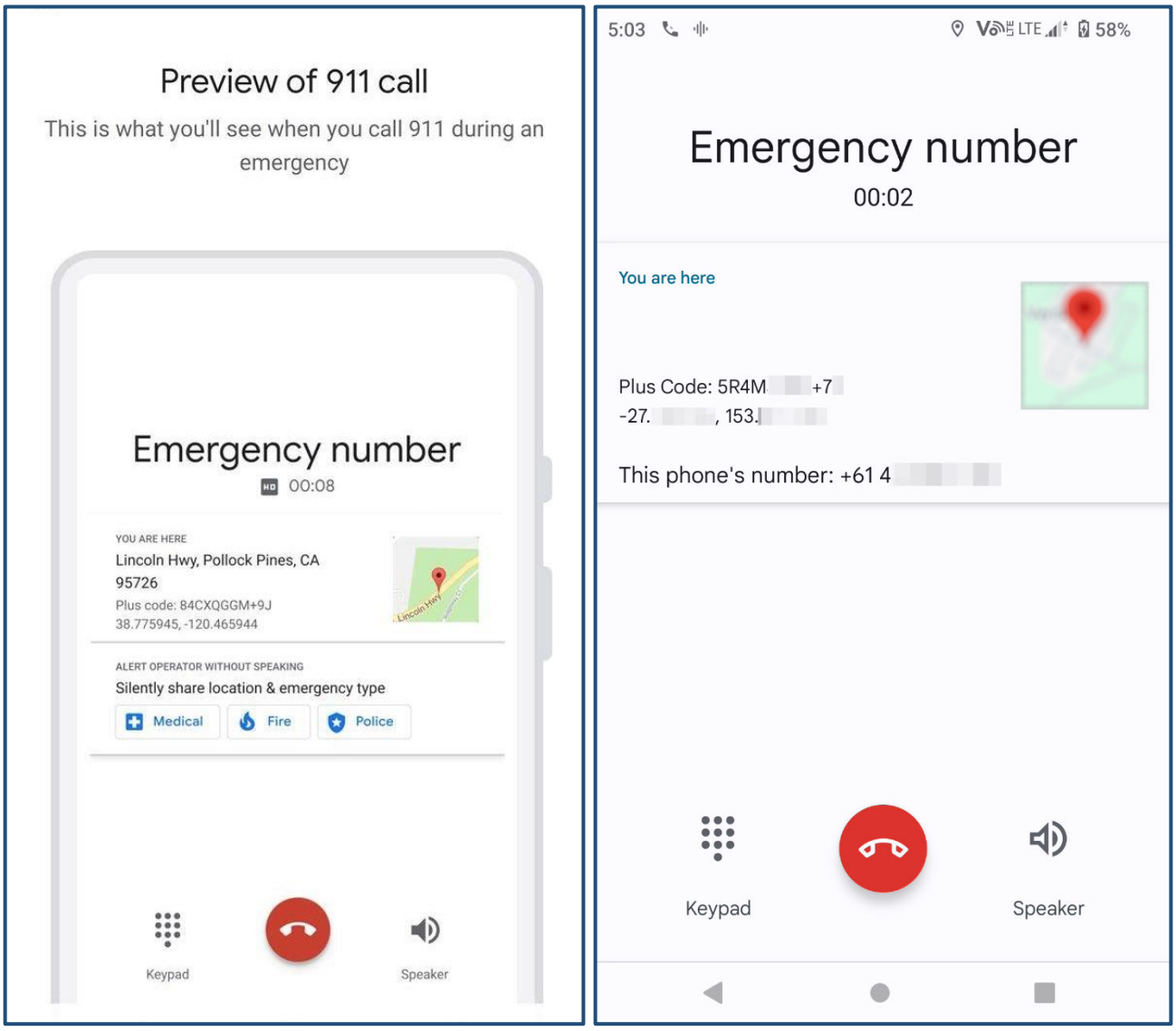
Emergency Plus App – 2015 Application Version (left) – (right) Current Version (2020 – Present)

The entire app needs to be overhauled and be adapted to be on par with similar apps available in other regions in the world.

Google Android Dialer Functionality & Location Information

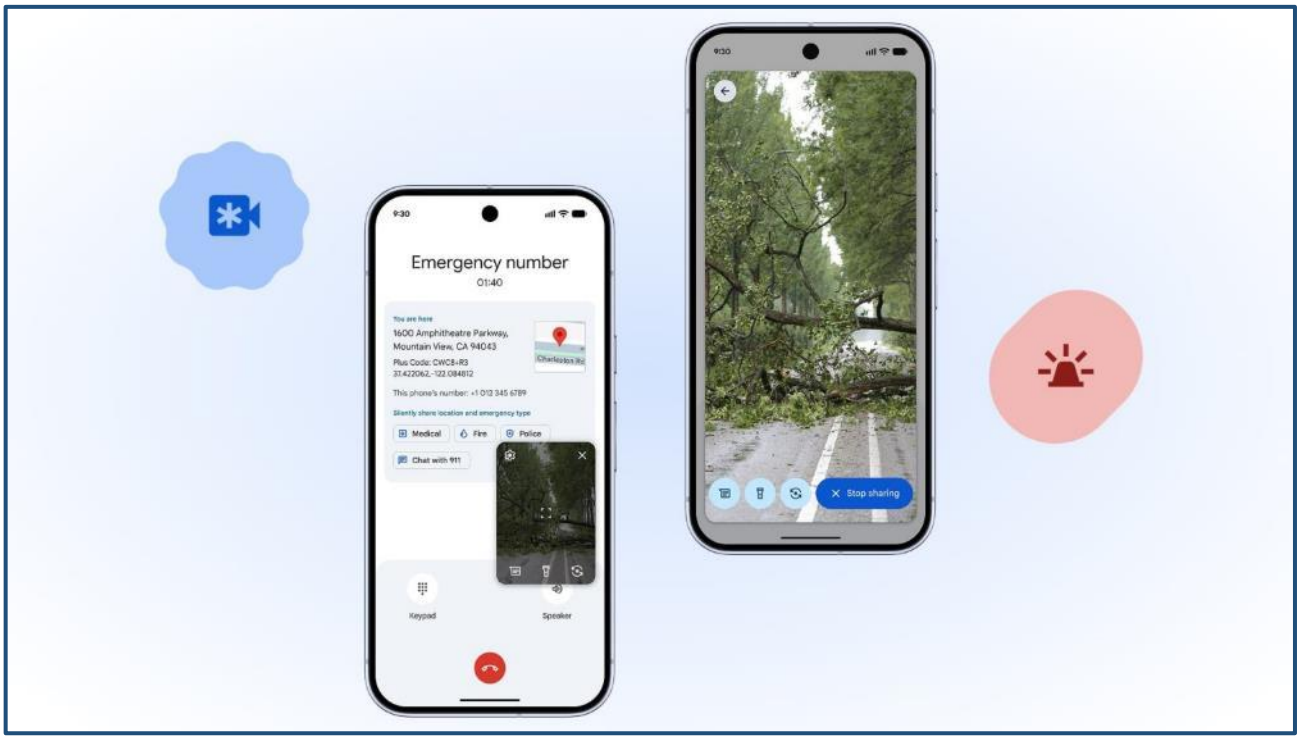
Further to that, calling Location Coordinates are now typically automatically displayed within the native Android phone dialler when calling an Emergency Number.

So the Emergency+ app is increasingly irrelevant in its current form.



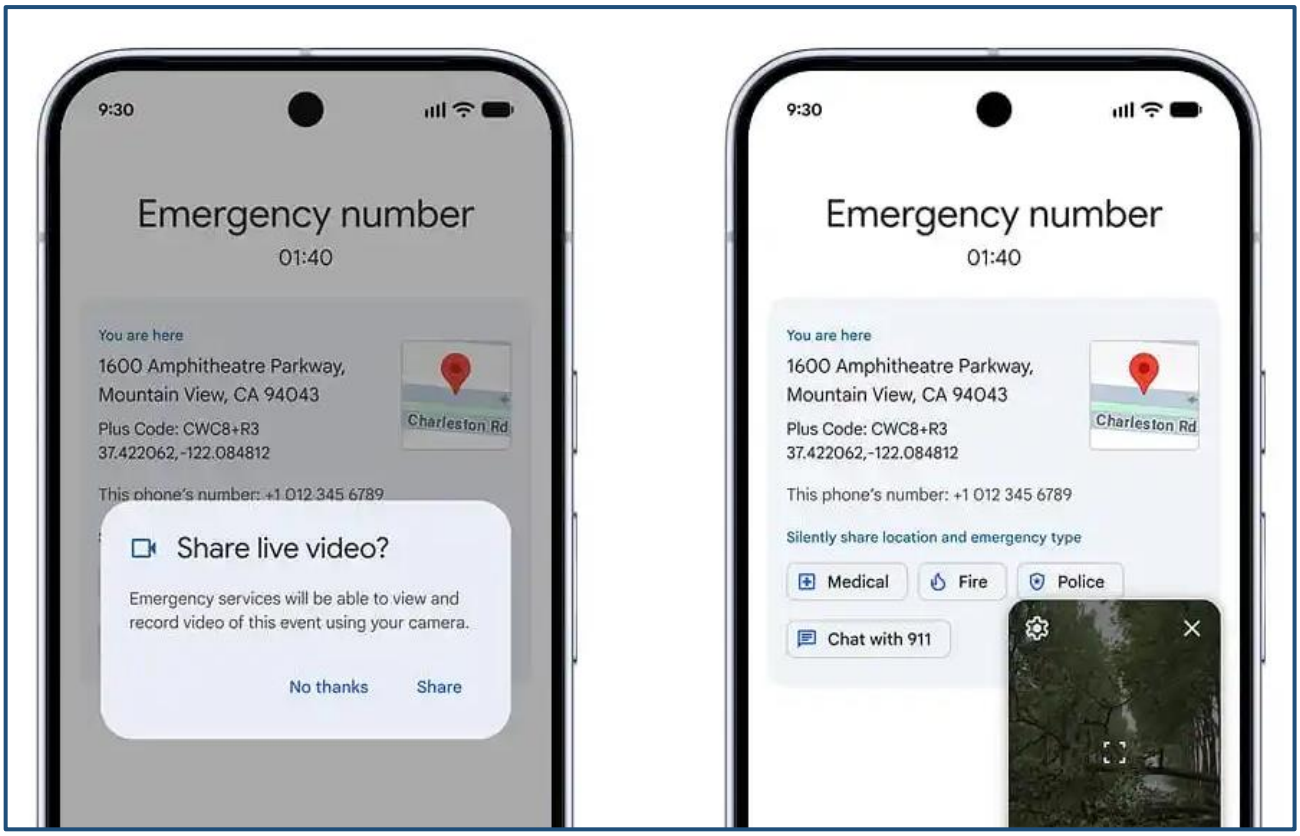
Google Native Phone Dialer – Emergency Number Location Information

That function is in addition to the recent expansion of Emergency Live Video sharing natively within Android.



9to5google - Google rolling out Android Emergency Live Video sharing – 10 December 2025
https://9to5google.com/2025/12/10/android-emergency-live-video/

The Emergency Live Video feature has been rolled out across the US on all Android 8 (2017+) Devices (with Google Play Services), along with select regions of Germany and Mexico.

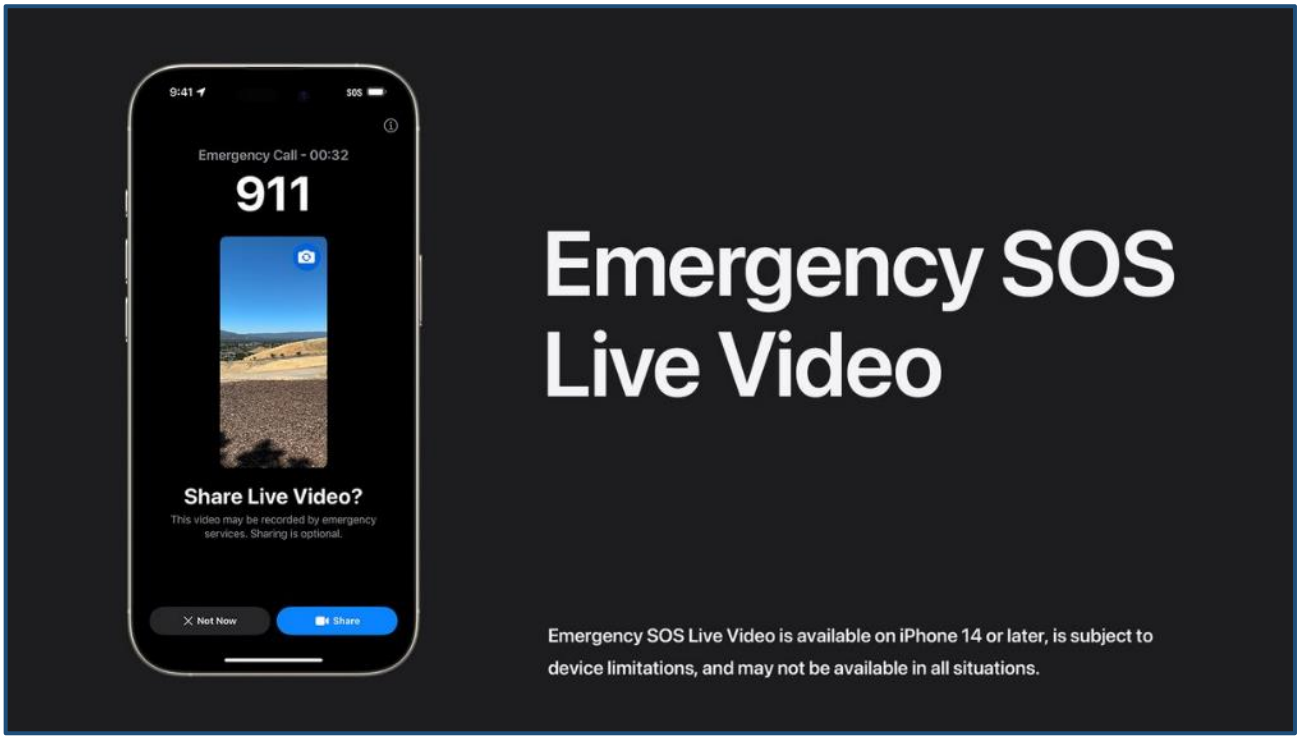


Google Blog - Share live video with emergency services to get the help you need – 10 December 2025
https://blog.google/products-and-platforms/platforms/android/emergency-live-video

Apple iOS Emergency SOS Live Video

With the release of iOS 18 Apple rolled out support in the US for ‘Emergency SOS Live Video’ on iPhone 14 or later models.

This function like the Google ‘Emergency Live Video’ option allows for people to share a live video feed with the PSAP.



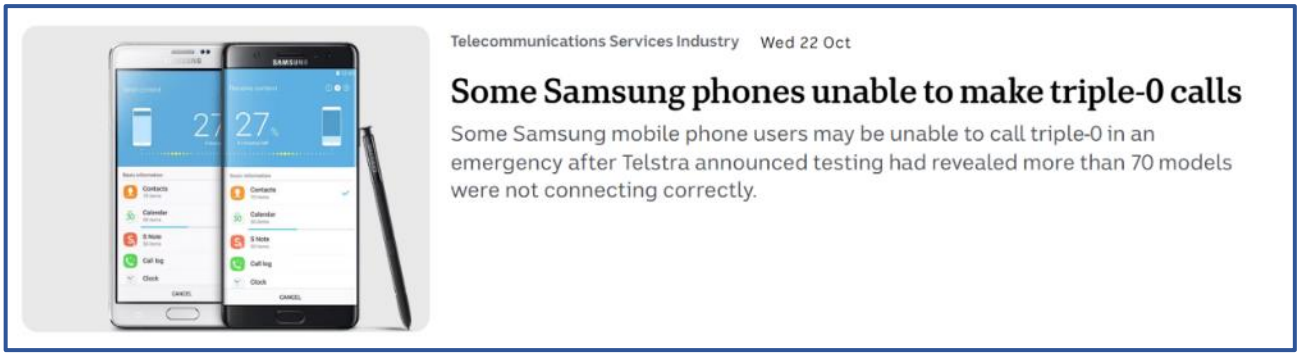
The rollout of these technologies in Australia should be considered as the functionality offered is far better than what’s available with BluLink.

BluLink by contrast requires someone to receive a text message and open a web link to then start streaming video, it’s not a native function of the dialer application and software on the device, be that iPhone or Android.

BluLink - NSW Police
https://www.police.nsw.gov.au/safety_and_prevention/policing_in_the_community/blulink

The Samsung Issue

As the Department & Custodian would be aware, in October there was reporting about a technical problem with Samsung devices that would prevent the phone from being able to Call Triple Zero on the Vodafone 4G Network.



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 - 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

Starting in October Telstra and the telcos moved to rapidly identify and block these incompatible devices.

Then in December another incident on 24 September 2025 with a Samsung device was made public at the Triple Zero Outage Senate Inquiry.

ABC - TPG Telecom boss says second person may have died due to Triple Zero failure – 2025-12-09
https://www.abc.net.au/news/2025-12-09/triple-zero-outage-senate-hearing-tpg-telecom-second-death-link/106118690

This original 24 September event was the original incident that prompted the testing by Telstra and the eventual Samsung blocking.

Given this review is looking at the effectiveness and appropriateness of the device blocking arrangements and the Emergency Call Service Determination, I thought it important to outline some more technical detail regarding the Samsung device at the centre of the incident.

The Wentworth Falls Incident

In the context of the 24 September 2025 Wentworth Falls Incident, based on available reporting the device at the centre of that incident & fatality was a Vodafone Prepaid variant of the 2018 Samsung Galaxy J2 Pro (SM-J250G – TAC: 35406209).

The customer of that device was able to make standard 4G VoLTE Calls on the Vodafone network (including to the NRS) but not to Triple Zero.

Reportedly the device did not have the latest software update installed available for that model.

ABC - TPG Telecom boss says second person may have died due to Triple Zero failure – 9 December 2025
https://www.abc.net.au/news/2025-12-09/triple-zero-outage-senate-hearing-tpg-telecom-second-death-link/106118690

In Telstra's Supplementary December 2025 Submission to the Triple Zero Senate Inquiry they confirmed that they obtained a Galaxy J2 Pro (SM-J250G) with Vodafone Firmware installed from Samsung in order to carry out device testing following on from that incident.

With their testing they identified the test device was unable to call Triple Zero on 4G on the TPG/Vodafone network with a Telstra sim inserted into the phone.

4.3 Telstra's further investigations concerning Samsung devices following the Wentworth Falls Incident

As Telstra explained to the Committee, Telstra conducted further investigations on Samsung devices following the Wentworth Falls Incident of 24 September 2025, because Telstra considered it unusual that the device was able to make other calls on the TPG network, but was not able to make a Triple Zero call.

Telstra's first priority was to confirm that Telstra customers would not be prevented from making calls to Triple Zero due to the same issue that had arisen with the TPG customer's Samsung device (the **Wentworth Falls Issue**). We decided to conduct our own tests using a Samsung Galaxy J2 Pro, SM-J250G device sourced from Samsung which was configured with the same Vodafone firmware and hardware version as the device that experienced the Wentworth Falls Issue. The device used for testing was supplied by Samsung. These tests revealed that version of the device, with a Telstra SIM card, was unable to camp-on and make triple zero calls on the TPG network. The Telstra testing revealed that the issue impacted all TPG customers using the particular Samsung devices to call Triple Zero. The testing also revealed that the issue impacted Telstra and Optus customers in the very rare circumstances where neither Telstra nor Optus networks were available in a location. Telstra proceeded with notifying the ACMA, Minister's office and Department on 20 October 2025, once we had confirmed the scope of the issue and root causes, as well as the device numbers impacted.

APH - Triple Zero service outage – Public Submissions - #7.1 Telstra Supplementary submission - 22 December 2025
https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/TripleZero48P/Submissions

In the submission Telstra advised they notified the ACMA, Minister's office and Department on 20 October 2025 once they had confirmed the scope of the Samsung compatibility issue and root causes, along with the numbers of devices impacted.

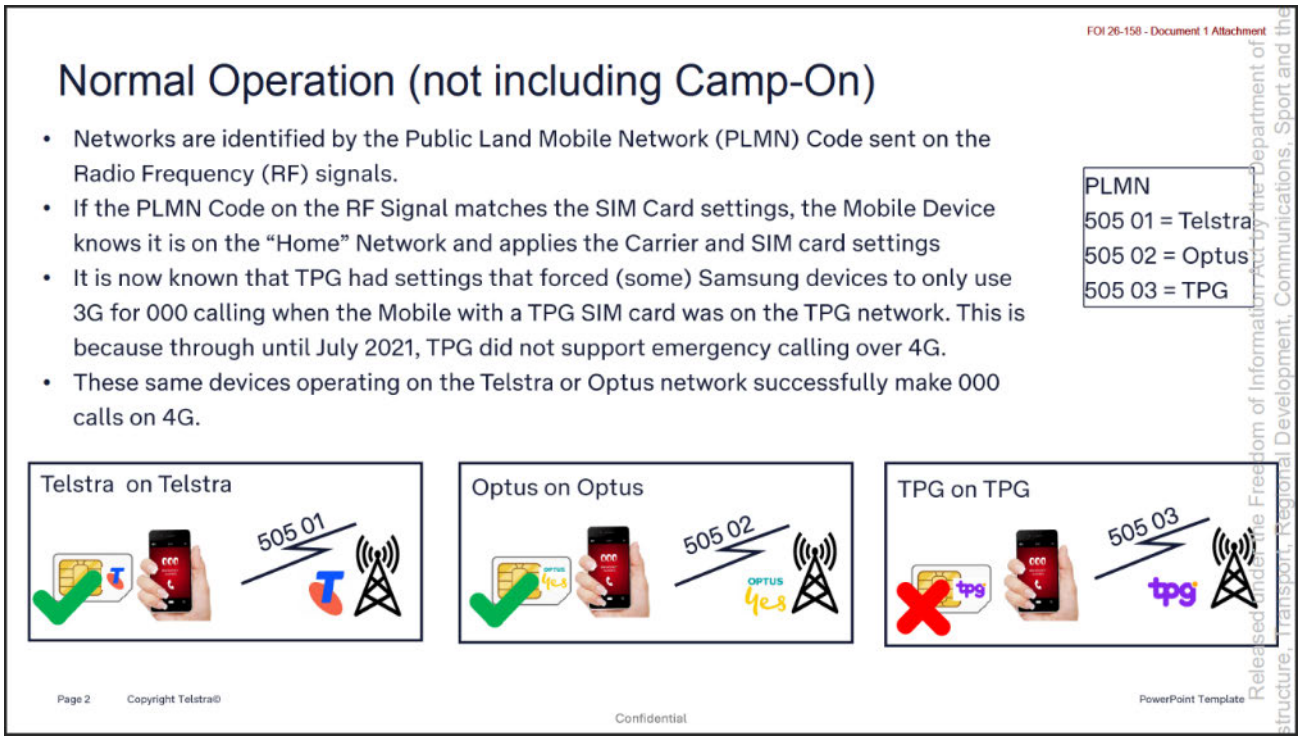
Telstra's Incorrect 'Samsung and TPG Camp-on' Report

In early 2026 a copy of Telstra's October 2025 Report on the TPG Samsung 'Camp-on' issue was published within FOI Requests related to Triple Zero issues with Samsung devices.

However that report contains multiple technical errors and **very significantly over diagnoses the actual problem**. Telstra's report is fundamentally incorrect in the nature and scale of the issue.

The report asserts 'all Pre November 2021 Samsung Models' are impacted and without an update are unable to Call 000 on Vodafone with 4G. Along with the forced device behaviour "ignores/overrides all Carrier and SIM card settings".

However all that is entirely incorrect and is provably wrong.



Issue and Finding

Issue

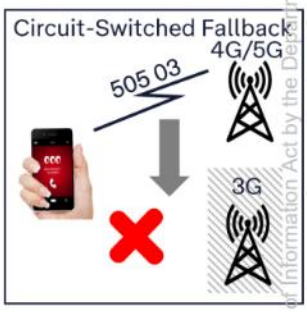
- We became aware a Samsung J2 device experienced a 000 call failure on TPG's network (with a TPG SIM Card).

Investigation

- Telstra proactively initiated extensive testing to confirm operation of Samsung J2 with a Telstra SIM Card on the TPG Network.

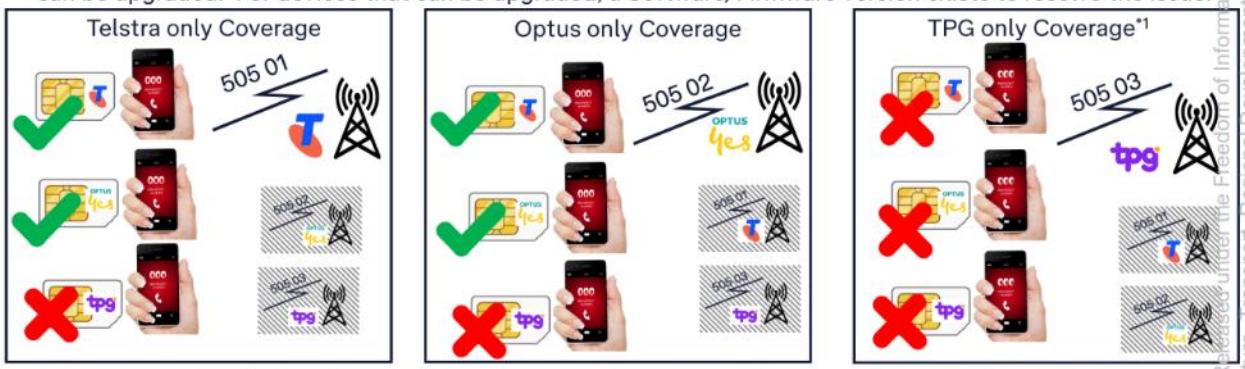
Finding

- 000 Calls were failing when attempting to use the TPG network on a Samsung device, *even with a Telstra SIM Card.*
- Samsung has since confirmed that Software/Firmware of all devices (pre - November 2021) are coded so that whenever the TPG PLMN code is seen (505 03), 000 calls are forced to perform a "Circuit Switched Fallback" operation which requires a 3G network to be available. Because there is no 3G network, the 000 call fails.
- We have also become aware that TPG directed Samsung to implement the forced use of 3G for 000 calling when on TPG's network.
- This forced behavior, because it is in the software/firmware, ignores/overrides all Carrier and SIM card settings.



Impact

- All Samsung Devices released prior to November 2021 have in their software/firmware the forced operation for 000 calls whenever the device sees TPG's PLMN Code, regardless of the SIM card inserted and carrier setting loaded.
- We are waiting on Samsung to advise which Device Models and Software/Firmware versions are impacted.
- To resolve, a Software/Firmware update is required (supplied by Samsung). However, not all impacted devices can be upgraded. For devices that can be upgraded, a Software/Firmware version exists to resolve the issue.



  *1 Telstra also impacted when there is no Telstra coverage, and TPG's signal is stronger than Optus'

Department of Infrastructure FOI 26-158 – Telstra Samsung and TPG Camp-On Report – 20 October 2025
https://www.infrastructure.gov.au/sites/default/files/documents/foi-26-158_documents_released_dl.pdf

ACMA – FOI Log 191: TPG Triple Zero call failure and related ACMA regulatory activity – 27 March 2026
https://www.acma.gov.au/foi/2026-03/log-191-request-documents-about-tpg-triple-zero-call-failure-and-related-acma-regulatory-activity

My Samsung Device Testing

For reference, in late November I acquired a large number of reportedly impacted Samsung devices, including many that were due to be e-wasted as a result of the blocking. *Those devices were otherwise going to be refurbished and donated to charitable causes.*

Based on extensive firmware analysis and real-world testing I have carried out, my findings show that Telstra's report materially overstates the scope of affected Samsung devices.

These inaccuracies and incorrect advice from Samsung to Telstra appear to have contributed to the unnecessary blocking of thousands of 4G Samsung handsets that are, in fact, capable of making Emergency Calls over 4G on all Australian networks, including Telstra, Optus and TPG/Vodafone.

Including when Telstra Sim Cards are inserted into the phone.

I have personally tested 15 different Samsung models sold between 2015 and 2021, including devices with alternative firmware (CSC) variants.

'CSC' – 'Country Specific Code' is the Samsung Term for Different Carrier Software Firmware Variants

Australian Samsung Firmware 'CSCs' - Country Specific Code *(i.e. Carrier Customisation)*		
Telstra Network	**Optus Network**	**TPG/Vodafone Network**
TEL – Telstra Retail	**OPS** – Optus Retail	**VAU** – Vodafone Retail
TLP – Telstra Prepaid	**OPP** – Optus Prepaid	**VAP** – Vodafone Prepaid
XSA – Australian Unlocked Retail (All Networks)		

This testing includes Telstra, AU Retail & Vodafone variants Samsung Galaxy J2 Pro (SM-J250G), which is at the centre of the Wentworth Falls incident on 24 September 2025.

I have also tested a Telstra Sold Samsung Galaxy S6 with Android 7, Telstra Sold Galaxy S7 with Android 8, along with retail variants of the Galaxy S8, S9, Galaxy Note 8, Note 9, J5 Pro and more.

This includes software versions between Android 7 - 10, including AU and non-AU Market Variants.

This includes the below:

- Samsung Galaxy S6 - SM-G920I - TEL/XSA CSC (Android 7)
- Samsung Galaxy S7 - SM-G930F - Telstra CSC (Android 8)
- Samsung Galaxy S7 US/AT&T Qualcomm - SM-G930U (Android 8)
- Samsung Galaxy S7 Edge - SM-G935F - Optus CSC (Android 7)
- Samsung Galaxy S9 US - SM-G960U1 (Android 10)
- Samsung Galaxy S9+ - SM-G965F - OXM (AU) CSC (Android 8)
- Samsung Galaxy Note 8 - SM-N950F - OLN (AU) CSC (Android 9)
- Samsung Galaxy S8 - SM-G950F - XSA (AU) CSC (Android 9)
- Samsung Galaxy S8 - SM-G950F - TEL, VAU, OXM, XSA CSC (Android 9)
- Samsung Galaxy Note 9 - SM-N960F - OXM CSC (Android 10)
- Samsung Galaxy Note 9 - SM-N960F - BRI CSC (Android 10)
- Samsung Galaxy J2 Pro - SM-250G - TLP/VAP/XSA (Android 7.1.1)
- Samsung Galaxy J3 Pro - SM-330G – TNX (NZ) (Android 8)
- Samsung Galaxy J5 Pro - SM-J530Y – XSA CSC (Android 9)
- Samsung Galaxy J5 Pro - SM-J530Y - VAP CSC (Android 8.1)

2015 Model

Samsung Galaxy S6

Released 2015, April
138g, 6.8mm thickness
Android 5.0.2, up to Android 7, TouchWiz UI
32GB/64GB/128GB storage, no card slot

5.1"
1440x2560 pixels

3GB RAM
Exynos 7420 Octa

XSA/TEL CSC – Android 7

2016 Models

Samsung Galaxy S7

Released 2016, March 11
152g, 7.9mm thickness
Android 6.0, up to Android 8.0, TouchWiz UI
32GB/64GB storage, microSD

5.1"
1440x2560 pixels

4GB RAM
Exynos 8890 Octa

XSA/TEL CSC – Android 8

Samsung Galaxy S7 edge

Released 2016, March 11
157g, 7.7mm thickness
Android 6.0, up to Android 8.0, TouchWiz UI
32GB/64GB/128GB storage, microSDXC

5.5"
1440x2560 pixels

4GB RAM
Snapdragon 820

OPS CSC – Android 7

2017 Models

Samsung Galaxy J5 (2017)

Released 2017, June
160g, 8mm thickness
Android 7.0, up to Android 9.0, One UI
16GB/32GB storage, microSDXC

5.2"
720x1280 pixels

2/3GB RAM
Exynos 7870 Octa

VAP/XSA CSC – Android 8.1/Android 9

Samsung Galaxy S8

Released 2017, April
155g, 8mm thickness
Android 7.0, up to Android 9.0, One UI
64GB storage, microSD

5.8"
1440x2960 pixels

4GB RAM
Exynos 8895 Octa

TEL/VAU/OXM/XEU/XSA CSC - Android 9

Samsung Galaxy Note8

Released 2017, September
195g, 8.6mm thickness
Android 7.1.1, up to Android 9.0
64GB/128GB/256GB storage, microSDXC

6.3"
1440x2960 pixels

6GB RAM
Exynos 8895

OLN/XSA (AU) CSC - Android 9

2018 Models

Samsung Galaxy J2 Pro (2018)

Released 2018, January
153g, 8.4mm thickness
Android 7.1.1
16GB storage, microSDXC

5.0"
540x960 pixels

1/2GB RAM
Snapdragon 425

TLP/VAP/XSA - Android 7.1.1

Samsung Galaxy S9+

Released 2018, March
189g, 8.5mm thickness
Android 8.0, up to Android 10, One UI 2.5
64GB/128GB/256GB storage, microSDXC

6.2"
1440x2960 pixels

4/6GB RAM
Exynos 9810

OXM (AU) CSC - Android 8

Samsung Galaxy Note9

Released 2018, August 24
201g, 8.8mm thickness
Android 8.1, up to Android 10, One UI 2.5
128GB/512GB storage, microSDXC

6.4"
1440x2960 pixels

6/8GB RAM
Exynos 9810

OXM/XSA/BRI CSC - Android 10

Samsung Galaxy S9 (USA)

Released 2018, March 09
163g, 8.5mm thickness
Android 8.0, up to Android 10, One UI 2.5
64GB/128GB/64GB storage, microSD

5.8"
1440x2960 pixels

4GB RAM
Snapdragon 845

OYM/XAA (US) CSC - Android 10

In early December I made that testing data and results publicly available at the link below, and I published further testing updates in January after obtaining additional devices for testing.

The Missing Samsung Emergency Calling Settings for Vodafone AU
https://medium.com/@jamesdwho/the-missing-samsung-emergency-calling-settings-for-vodafone-au-8074282a944a

Testing Findings

My findings indicate that the issue is substantially narrower than represented in the Telstra report and what has subsequently been blocked, and specifically the below:

- The claim that all pre-November 2021 Samsung devices are hard-coded to 3G-only emergency calling on Vodafone without a software update is entirely incorrect.
- The issue primarily affects a limited subset of Australian CSC firmware variants, particularly Vodafone AU (VAP/VAU) firmware configurations and certain Android 9+ devices (largely AU Sales Codes/CSCs).
- Samsung devices running Android 7 or 8 sold by Telstra, Optus, or Australian retail channels (with those respective firmware CSCs) **are not** impacted, as those devices default to Telstra or Optus emergency calling profiles where the 'VAU Emergency' profile is absent. *This includes Telstra and AU Retail (XSA) variants of the Galaxy S6, S7 which are limited to Android 7 & 8 respectively, these devices have now been unnecessarily blocked.*
- AU Retail Samsung devices originally sold with Android 8 when updated to Android 9 lose the ability to call Triple Zero on the TPG Vodafone network due to a 'Profile Refresh' function in the Android 9 ‘IMS Service’ Samsung VoLTE code.
  For example an AU (XSA) Galaxy J5 Pro can call Triple Zero via 4G on the TPG/Vodafone Network when on Android 8.1, however when updated to Android 9 it cannot due to flawed device code and a failed 'Profile Refresh'.
- For Android 9 (and newer) devices, the international/global Firmware Variants (Non-AU CSCs) are not impacted if they are used with a Telstra or Optus sim in the phone.
- International/global Samsung firmware variants (many which have now been blocked) are explicitly **"SlotBasedConfig",** so provided a Telstra or Optus sim is in the phone the device will exclusively use those respective settings on every network for an Emergency Call. These devices do not require the 'VAU Emergency' profile update if used solely with Telstra or Optus.
- AU Firmware variants by contrast are not 'SlotBasedConfig' and instead perform an "In Case of No-Sim or AU Sales Code" Emergency Profile lookup function. Android 9+ Samsung Devices missing the 'VAU Emergency' Profile (& update) will fail to Call Triple Zero if connected to the TPG/Vodafone network (either via 'Camp-on' or with a Vodafone network sim in the device).

The above device firmware behaviour & findings can be directly verified through device log analysis and firmware examination.

My published testing includes direct data logs and network data extracted from Samsung devices.

My findings can be entirely replicated.

Why the Wentworth Falls J2 Pro didn't work

The Galaxy J2 Pro is an older Android 7.1.1 Samsung Device.

This model was sold in unlocked and prepaid network locked variants in a range of Australian Retailers. *The Vodafone variant is essentially a network locked model.*

The Galaxy J2 Pro only when running Vodafone Firmware CSC, is entirely unable to make 4G Emergency Calls on the Vodafone network, both with any sim or no sim.

The device can however make Emergency Calls on Optus and Telstra (with any carrier sim installed or no sim).

The Telstra (TLP) and Retail (XSA) variants of the J2 Pro do not require any update to Call Triple Zero on the Vodafone 4G Network.

Those firmware variants default to use the 'TEL Emergency' Profile if there is no 'VAU Emergency' Profile on the device.

So despite Telstra having tested a J2 Pro, it seems they didn't test the J2 they themselves sold. Had they done so they would have identified that the issue is entirely specific to the Vodafone CSC version.

With the Vodafone CSC version, the device goes looking for an Emergency Calling profile based on the network & queried MNO profile loaded on the device.

(i.e. Vodafone is essentially the default on the Vodafone FW CSC, it also has no Vodafone 000 settings on Pre 2021 SW)

Vodafone did not support VoLTE Emergency Calling officially until 2021, so some older Samsung devices (and older Vodafone Modem Configs) don't have settings for 4G Emergency Calling.

Depending on the model and Samsung Android Version (along with CSC) this isn't an issue if the device was used with a Telstra or Optus sim, but is an issue if the device was used on Vodafone.

The same Vodafone CSC firmware behaviour occurs with a Samsung Galaxy J5 Pro with Android 8.1 (and a Vodafone CSC Firmware Variant). The Vodafone firmware variant is unable to Call Triple Zero when connected to the Vodafone Network.

However the exact same device with Unlocked AU Retail Firmware will work on Vodafone and the device will use the 'TEL Emergency' Profile to place that Call.

When updated to Android 9 with AU Firmware the J5 Pro cannot call Triple Zero on the Vodafone network.

The Ingleburn NSW incident

There is no publicly available device model information about the subsequent 13 November 2025 Ingleburn incident with another Samsung phone and user on the TPG/Vodafone (Lebara) network.

But again based on my findings the issue would have either been due to that device being a Vodafone specific CSC without the VAU Emergency Profile on the device, or an Android 9+ AU CSC Model lacking the 'VAU Emergency' Profile on the device.

But it's important to note with this, as we no longer have any 3G coverage, attempted Emergency Calls from devices that require Circuit Switched fall back for 000 are now entirely invisible to carriers.

Failed calls from these devices will not show up in any 4G network diagnostics as the device will never connect in the first place.

At most it will appear if the devices have been turned off or gone out of signal range.

Galaxy J2 Pro CSC Firmware Test Results

000 Call Testing Galaxy J2 Pro - A7.1.1 AU XSA CSC 09/2020	Telstra Sim	Telstra Sim (Inactive)	Optus Sim	Optus Sim (Inactive)	Vodafone Sim	Vodafone Sim (Inactive)	No Sim
Telstra Network	Yes	Yes	-	Yes	-	Yes	Yes
Samsung IMS Profile Used	TEL Emergency	TEL Emergency	-	TEL Emergency	-	TEL Emergency	TEL Emergency
Optus Network	-	Yes	Yes	Yes	-	Yes	Yes
Samsung IMS Profile Used	-	OPS VoLTE Emergency	OPS VoLTE Emergency	OPS VoLTE Emergency	-	OPS VoLTE Emergency	OPS VoLTE Emergency
Vodafone Network	-	Yes	-	Yes	Yes	Yes	Yes
Samsung IMS Profile Used	-	TEL Emergency	-	TEL Emergency	TEL Emergency	TEL Emergency	TEL Emergency

Galaxy J2 Pro – SM-J250G **XSA/TEL (AU Retail/Telstra)** CSC Android 7.1.1 **(September 2020 Firmware)** Test Results — No VAU Emergency Profile Support

000 Call Testing Galaxy J2 Pro - A7.1.1 AU VAP CSC 09/2020	Telstra Sim	Telstra Sim (Inactive)	Optus Sim	Optus Sim (Inactive)	Vodafone Sim	Vodafone Sim (Inactive)	No Sim
Telstra Network	Yes	Yes	-	Yes	-	Yes	Yes
Samsung IMS Profile Used	TEL Emergency	TEL Emergency	-	TEL Emergency	-	TEL Emergency	TEL Emergency
Optus Network	-	Yes	Yes	Yes	-	Yes	Yes
Samsung IMS Profile Used	-	OPS VoLTE Emergency	OPS VoLTE Emergency	OPS VoLTE Emergency	-	OPS VoLTE Emergency	OPS VoLTE Emergency
Vodafone Network	-	No	-	No	No	No	No
Samsung IMS Profile Used	-	No VAU 000 Profile	-	No VAU 000 Profile	No VAU 000 Profile	No VAU 000 Profile	No VAU 000 Profile

Galaxy J2 Pro - SM-J250G **VAP (Vodafone Prepaid)** CSC Android 7.1.1 **(September 2020 Firmware)** Test Results — No VAU Emergency Profile Support

000 Call Testing Galaxy J2 Pro - A7.1.1 AU VAP CSC 07/2021	Telstra Sim	Telstra Sim (Inactive)	Optus Sim	Optus Sim (Inactive)	Vodafone Sim	Vodafone Sim (Inactive)	No Sim
Telstra Network	Yes	Yes	-	Yes	-	Yes	Yes
Samsung IMS Profile Used	TEL Emergency	TEL Emergency	-	TEL Emergency	-	TEL Emergency	TEL Emergency
Optus Network	-	Yes	Yes	Yes	-	Yes	Yes
Samsung IMS Profile Used	-	OPS VoLTE Emergency	OPS VoLTE Emergency	OPS VoLTE Emergency	-	OPS VoLTE Emergency	OPS VoLTE Emergency
Vodafone Network	-	Yes	-	Yes	Yes	Yes	Yes
Samsung IMS Profile Used	-	VAU Emergency	-	VAU Emergency	VAU Emergency	VAU Emergency	VAU Emergency

Galaxy J2 Pro - SM-J250G **VAP (Vodafone Prepaid)** CSC Android 7.1.1 **(July 2021 Firmware)** Test Results — **VAU Emergency Profile Update Installed**

Samsung's Android 9 'Profile Refresh' function for the AU Market

Separate from the specific VAU/VAP CSC Firmware Emergency Calling issue with Android 7 & 8 devices (like the Galaxy J2 Pro), there is a separate (somewhat related) flaw in Samsung's Android 9 version of their IMS Service Application.

Within the Android 9 version of the Samsung 'IMS Service' Application there is a line of code that was added specifically for the Australian Market that refreshes the Emergency Profile selected by the device when calling Triple Zero.

A change likely introduced to improve the Emergency Calling functionality of the device contains a fatal flaw should a carrier's 4G Emergency Calling Profile & settings be missing.

For reference all AU Sales Code (CSC) Samsung models have an 'In Case of No Sim or AU Sales Code' Emergency Profile lookup function.

The below is the code from Samsung's IMS Service Application from an Android 9 device.

The code instructs the device to refresh the Emergency Profile Selection ONLY if the DevMno (Device MNO – Firmware CSC) is an Australian Market Firmware.

```
        if (sm.getDevMno().isAus()) {
            Log.d(LOG_TAG, "startEmergencyRegistration: refresh Emergency profile...");
            this.mAuEmergencyProfile[i] = null;
        }
```

```
    private ImsProfile getEmergencyProfile(int phoneId) {
        IMSLog.d(LOG_TAG, phoneId, "getEmergencyProfile:");
        ISimManager sm = getSimManagerFromSimSlot(phoneId);
        if (sm == null) {
            return null;
        }
        Mno mno = sm.getDevMno();
        if (sm.hasNoSim() || mno.isAus()) {
            IMSLog.d(LOG_TAG, phoneId, "getEmergencyProfile(no SIM): profile in case of no SIM or AU sales code");
            if (sm.hasNoSim() && !mno.isAus()) {
                mno = sm.getNetMno();
            }
            String mnoName = handleExceptionalMnoName(mno, phoneId);
            if (mno.isAus() && !mnoName.equals(Mno.DEFAULT.getName()) && this.mAuEmergencyProfile[phoneId] != null) {
                return this.mAuEmergencyProfile[phoneId];
            }
```

imsservice apk Code - Samsung Galaxy S8 - Android 9
Source: classes.dex/sources/com/sec/internal/ims/imsservice/RegistrationManagerBase.java

The list of AU MNO Sales Codes (CSCs) is hard coded within the IMS Service Application.

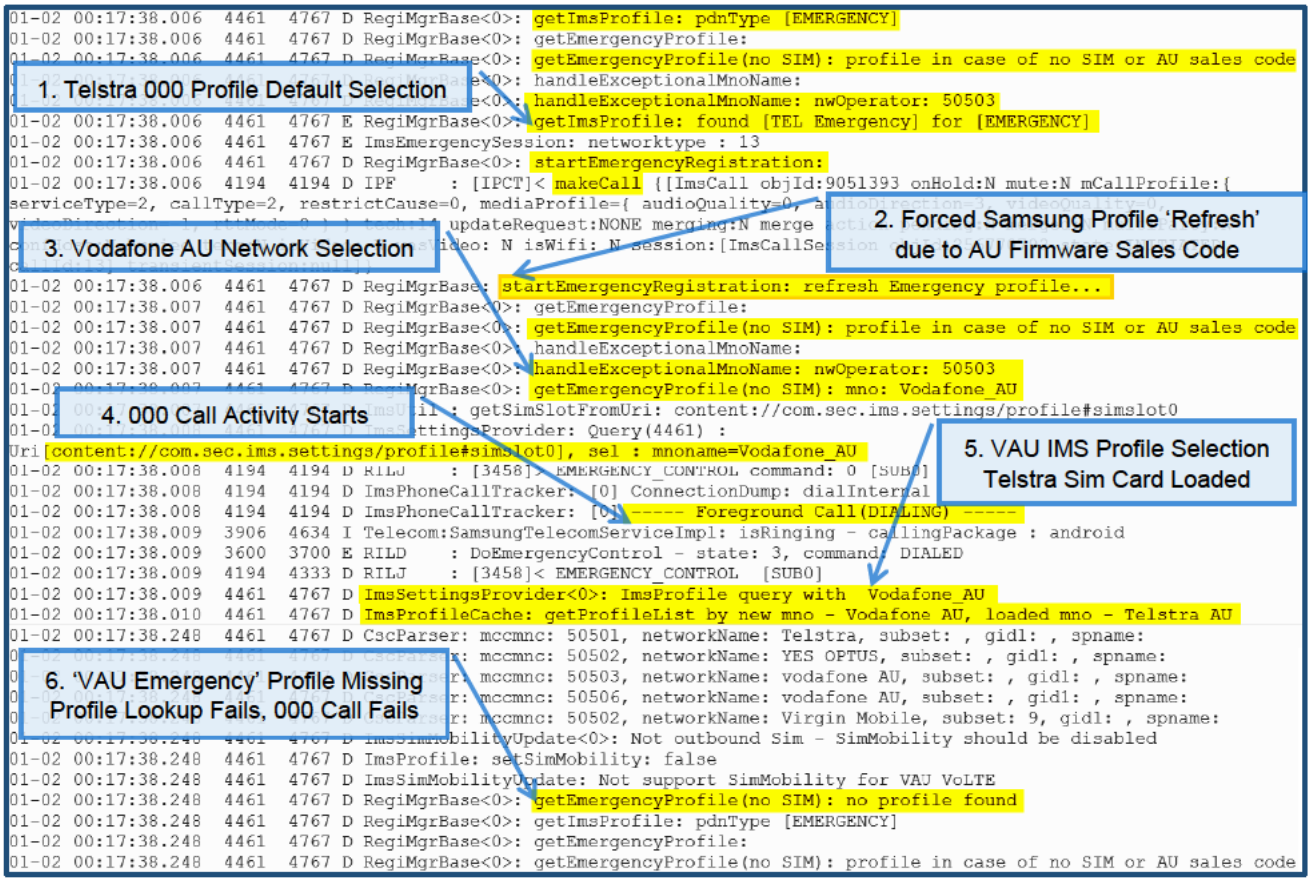
Australian Samsung Firmware 'CSCs' - Country Specific Code *(i.e. Carrier Customisation)*		
Telstra Network	**Optus Network**	**TPG/Vodafone Network**
TEL – Telstra Retail	**OPS** – Optus Retail	**VAU** – Vodafone Retail
TLP – Telstra Prepaid	**OPP** – Optus Prepaid	**VAP** – Vodafone Prepaid
XSA – Australian Unlocked Retail (All Networks)		

```
static Mno TELSTRA = new Mno("Telstra_AU", "TEL,XSA,TLP", Region.OCEANIA, Country.AUSTRALIA);
static Mno OPTUS = new Mno("Optus_AU", "OPS,OPP", Region.OCEANIA, Country.AUSTRALIA);
static Mno VODAFONE_AUSTRALIA = new Mno("Vodafone_AU", "VAU,VAP", Region.OCEANIA, Country.AUSTRALIA);
```

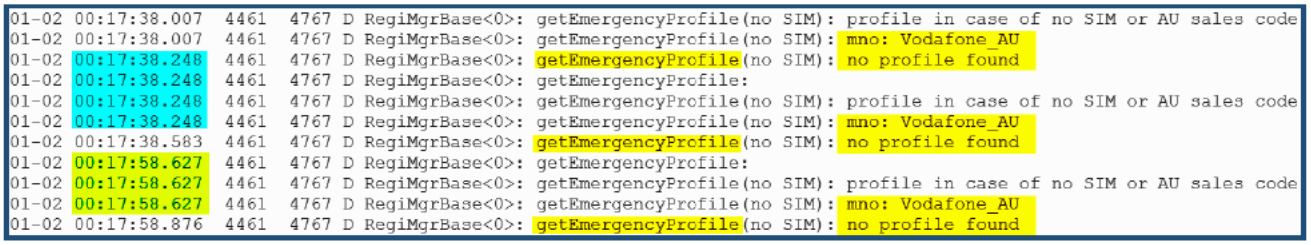
Australian MNO Sales Codes - Decompiled imsservice apk code - Samsung Galaxy S8 - Android 9
Source: classes.dex/sources/com/sec/internal/ims/util/Mno.java

Android 9 AU Sales Code - Vodafone Emergency Call Failure Device Log

The below outlines what happens on Android 9 and newer 'AU Sales Code' Samsung Devices that are missing the 'VAU Emergency' VoLTE Profile and attempt to Call Triple Zero when connected to the TPG/Vodafone Network (PLMN 50503).



Samsung Android 9 Software Device Log – (AU) XSA Sales Codes – No VAU Emergency Profile



Samsung Android 9 Software Device Log – Vodafone AU Emergency Profile Lookup – Loop – AU (XSA) Sales Codes

000 Call Testing Galaxy Note 8 - A9.0 OLN/XSA CSC - 07/2022	Telstra Sim	Telstra Sim (Inactive)	Optus Sim	Optus Sim (Inactive)	Vodafone Sim	Vodafone Sim (Inactive)	No Sim
Telstra Network	Yes	Yes	-	Yes	-	Yes	Yes
Samsung IMS Profile Used	TEL Emergency	TEL Emergency	-	TEL Emergency	-	TEL Emergency	TEL Emergency
Optus Network	-	Yes	Yes	Yes	-	Yes	Yes
Samsung IMS Profile Used	-	OPS VoLTE Emergency	OPS VoLTE Emergency	OPS VoLTE Emergency	-	OPS VoLTE Emergency	OPS VoLTE Emergency
Vodafone Network	-	No	-	No	No	No	No
Samsung IMS Profile Used	-	No VAU 000 Profile	-	No VAU 000 Profile	No VAU 000 Profile	No VAU 000 Profile	No VAU 000 Profile

Galaxy Note 8 — N950F OLN/XSA CSC Android 9.0 Test Results — No VAU Emergency Settings

International 'Non-AU' Firmware Variants

By contrast International and Non-AU (Australian Market) Sales Code (CSC) Firmwares are explicitly **'SlotBasedConfig'**.

So if a Telstra sim is in the phone it will use the **'TEL Emergency'** Samsung VoLTE profile on every network for an Emergency Call.

These devices do not even require the update with the 'VAU Emergency' Profile, unless you intend to use the device on the TPG/Vodafone Network.

Yet many of these international variants have now been blocked on Telstra & Optus, despite being unaffected when used on those networks, as shown below.

```
00:50:00.939  4446  4785 D RegiMgrBase<0>: getImsProfile: pdnType [EMERGENCY]
00:50:00.939  4446  4785 D RegiMgrBase<0>: getEmergencyProfile:
00:50:00.939  4446  4785 D RegiMgrBase<0>: getEmergencyProfile: from SlotBasedConfig
00:50:00.939  4446  4785 D RegiMgrBase<0>: getEmergencyProfile: profile: TEL Emergency
00:50:00.939  4446  4785 E RegiMgrBase<0>: getImsProfile: found [TEL Emergency] for [EMERGENCY]
00:50:00.939  4446  4785 D Mno      : fromName: Telstra_AU
00:50:00.939  4446  4785 D Mno      : fromName: found mno : Telstra_AU, AU
```

Galaxy S8 G950F OXM - XEU (United Kingdom) CSC - Android 9 - Log Dump

000 Call Testing Galaxy S8 - A9.0 XEU (UK) CSC 07/2022	Telstra Sim	Telstra Sim (Inactive)	Optus Sim	Optus Sim (Inactive)	Vodafone Sim	Vodafone Sim (Inactive)	No Sim
Telstra Network	Yes	Yes	-	Yes	-	No	No
Samsung IMS Profile Used	TEL Emergency	TEL Emergency	-	OPS VoLTE Emergency	-	No VAU 000 Profile	Profile Lookup Failed
Optus Network	-	Yes	Yes	Yes	-	No	No
Samsung IMS Profile Used	-	TEL Emergency	OPS VoLTE Emergency	OPS VoLTE Emergency	-	No VAU 000 Profile	Profile Lookup Failed
Vodafone Network	-	Yes	-	Yes	No	No	No
Samsung IMS Profile Used	-	TEL Emergency	-	OPS VoLTE Emergency	No VAU 000 Profile	No VAU 000 Profile	Profile Lookup Failed

Galaxy S8 - G950F XEU (UK) CSC Android 9.0 Test Results - No VAU Emergency Profile - SlotBasedConfig CSC

Samsung Galaxy S8 - G950F

```
        IMSLog.d(LOG_TAG, phoneId, "getEmergencyProfile: from SlotBasedConfig");
        List<ImsProfile> list = SlotBasedConfig.getInstance(phoneId).getProfiles();
        if (ImsUtil.isNullOrEmpty((Collection<?>) list)) {
            IMSLog.e(LOG_TAG, phoneId, "getEmergencyProfile: ProfileList is Empty");
            return null;
        }
        synchronized (list) {
            for (ImsProfile profile2 : list) {
                if (profile2.hasEmergencySupport()) {
                    IMSLog.d(LOG_TAG, phoneId, "getEmergencyProfile: profile: " + profile2.getName());
                    return profile2;
                }
            }
            IMSLog.d(LOG_TAG, phoneId, "getEmergencyProfile: no profile found");
            return null;
        }
    }
```

imsservice apk Code — Samsung Galaxy S8 SM-G950F - Android 9
Source: classes.dex/sources/com/sec/internal/ims/imsservice/RegistrationManagerBase.java

000 Call Testing Galaxy S9 (USA) - A10 OYM/XAA CSC - 03/2022	Telstra Sim	Telstra Sim (Inactive)	Optus Sim	Optus Sim (Inactive)	Vodafone Sim	Vodafone Sim (Inactive)	No Sim
Telstra Network	Yes	Yes	-	Yes	-	Yes	Yes
Samsung IMS Profile Used	TEL Emergency	TEL Emergency	-	OPS VoLTE Emergency	-	VAU Emergency	TMobile E911
Optus Network	-	Yes	Yes	Yes	-	Yes	Yes
Samsung IMS Profile Used	-	TEL Emergency	OPS VoLTE Emergency	OPS VoLTE Emergency	-	VAU Emergency	TMobile E911
Vodafone Network	-	Yes	-	Yes	Yes	Yes	Yes
Samsung IMS Profile Used	-	TEL Emergency	-	OPS VoLTE Emergency	VAU Emergency	VAU Emergency	TMobile E911

Galaxy S9 (USA) — G960U1 OYM/XAA CSC Android 10 (Mar 2022 FW) - Test Results — SlotBasedConfig CSC

Samsung Galaxy S9 (USA) - G960U1

Once again please refer to the full testing information available linked below.

The Missing Samsung Emergency Calling Settings for Vodafone AU
https://medium.com/@jamesdwho/the-missing-samsung-emergency-calling-settings-for-vodafone-au-8074282a944a

Identifying these devices

Based on the device model blocking data I have, it appears what the telcos have largely done is block any Samsung device TAC released between 2015-2021 that also didn't receive the 'VAU Emergency' Profile Update, or do have the 'VAU Emergency' Settings in the base firmware but are not AU CSC (Firmware) Variants.

Samsung - Network Support Table - '000 Impacted' Devices - as of October/November 2025
https://isthisphoneblocked.net.au/samsung-000-impacted

Samsung Devices - Network Support Table
https://isthisphoneblocked.net.au/device-brands/samsung

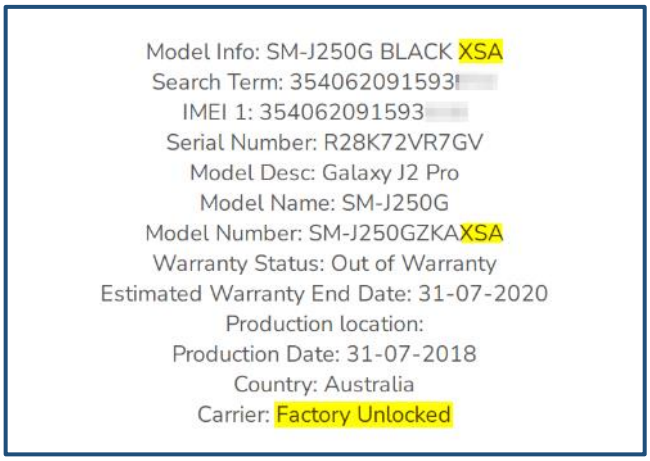
However the problem impacts a far narrower and limited set of devices than what has been blocked.

The issue largely impacts Vodafone Firmware Android 7/8 devices and AU Firmware Variants with Android 9 and newer.

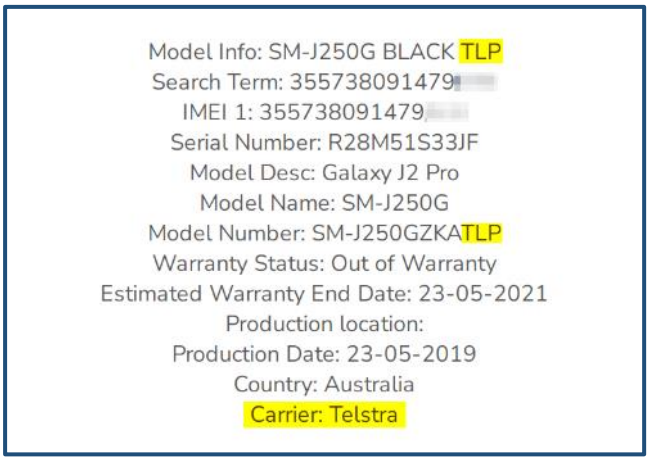
However it is entirely possible for the Telcos and Samsung to identify these impacted devices by their unique IMEI (rather than TAC) as the exact CSC Firmware information devices were sold with is on record alongside the device IMEI. *This can be seen from publicly available IMEI checkers.*

That's in addition to Telstra specific variants of these devices having their own Telstra Specific TAC and different names in Telstra's Database.

Samsung IMEI Sales Code Results

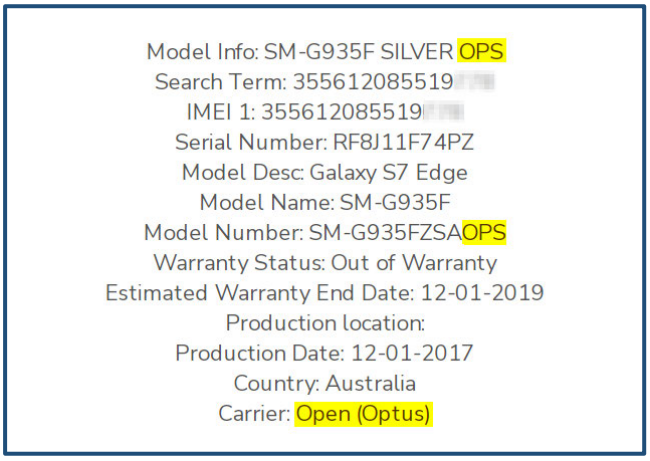


Galaxy J2 Pro – 'XSA' Retail Australia

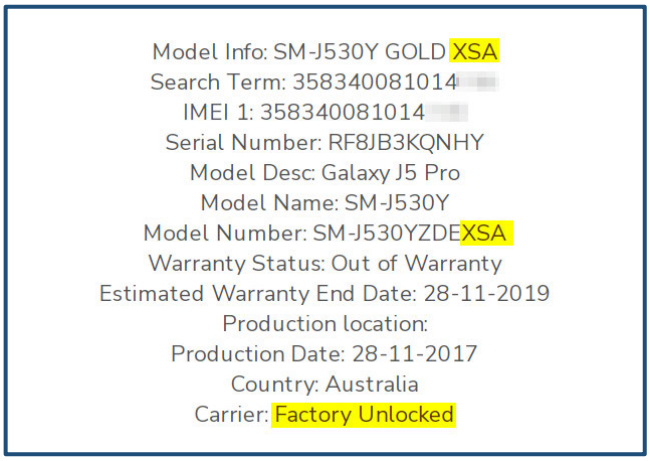


Galaxy J2 Pro – 'TEL' Telstra Prepaid Australia

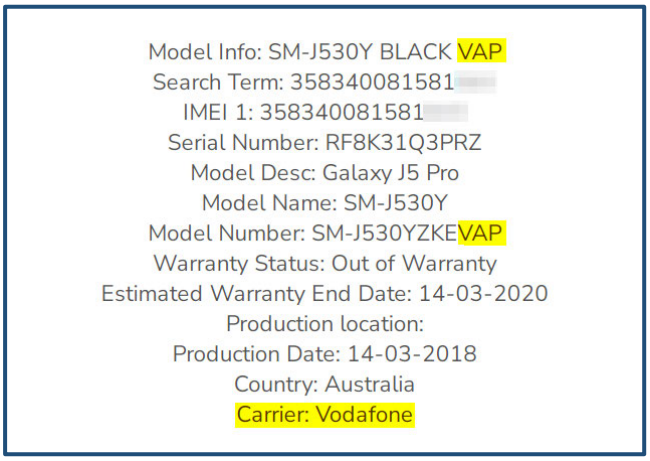
Galaxy S7 – 'TEL' Telstra Retail Australia



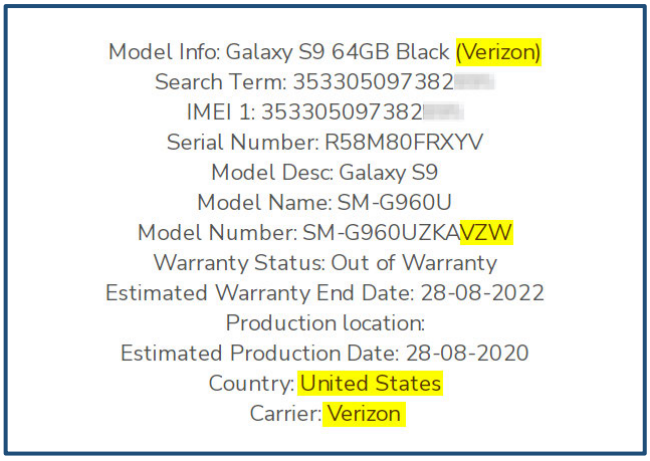
Galaxy S7 Edge – 'OPS' Optus Retail Australia



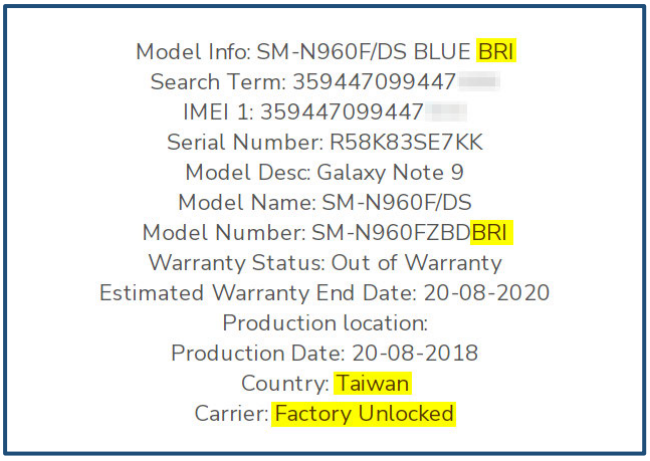
Galaxy J5 Pro – 'XSA' Retail Australia



Galaxy J5 Pro – 'VAP' Vodafone Prepaid Australia



Galaxy S9 G960U – 'VZW' Verizon Retail USA



Galaxy Note 9 N960F – 'BRI' Retail Taiwan

Samsung IMEI Check Results: https://imeicheck.com/imei-check

Telstra Specific Samsung Device TACs – Android 7/8

The below Telstra sold devices are not impacted by the Vodafone Emergency Calling issue as they are limited to Android 7/8 which does not have the Android 9 AU 'profile refresh' issue.

Any Telstra-sold Samsung instead has the Marketing Name instead of the model number in the Telstra Database.

These devices will default to use the 'TEL Emergency' Profile to make an Emergency Call.

TAC	Telstra Model Name	June 2025 Status	October 2025 Status
35361207	Samsung Galaxy Note 5	Not Blocked	Blocked
35640407	Samsung Galaxy Note 5	Not Blocked	Blocked
35958506	Samsung Galaxy S6	Not Blocked	Blocked
35984706	Samsung Galaxy S6	Not Blocked	Blocked
35984806	Samsung Galaxy S6	Not Blocked	Blocked
35913906	Samsung Galaxy S6 Edge	Not Blocked	Blocked
35967206	Samsung Galaxy S6 Edge	Not Blocked	Blocked
35388607	Samsung Galaxy S6 edge+	Not Blocked	Blocked
35388707	Samsung Galaxy S6 edge+	Not Blocked	Blocked
35650307	Samsung Galaxy S7	Not Blocked	Blocked
35851407	Samsung Galaxy S7 Edge	Not Blocked	Blocked
35851507	Samsung Galaxy S7 Edge	Not Blocked	Blocked

Telstra Database Block Changelog — June 2025 - October 2025
https://isthisphoneblocked.net.au/telstra/changelog

000 Call Testing Galaxy S7 - A8.0 AU TEL CSC 07/2022	Telstra Sim	Telstra Sim (Inactive)	Optus Sim	Optus Sim (Inactive)	Vodafone Sim	Vodafone Sim (Inactive)	No Sim
Telstra Network	Yes	Yes	-	Yes	-	Yes	Yes
Samsung IMS Profile Used	TEL Emergency	TEL Emergency	-	TEL Emergency	-	TEL Emergency	TEL Emergency
Optus Network	-	Yes	TAC Blocked Cannot Test	Yes	-	Yes	Yes
Samsung IMS Profile Used	-	OPS VoLTE Emergency	*OPS VoLTE Emergency*	OPS VoLTE Emergency	-	OPS VoLTE Emergency	OPS VoLTE Emergency
Vodafone Network	-	Yes	-	Yes	TAC Blocked Cannot Test	Yes 3G/CSFB First	Yes
Samsung IMS Profile Used	-	TEL Emergency	-	TEL Emergency	-	TEL Emergency	TEL Emergency

Galaxy S7 - G930F TEL CSC Android 8.0 Test Results - No VAU Emergency Profile Support

'Best Endeavours' Requirements

Under the device blocking amendments introduced into the Emergency Call Service Determination in 2024, the carriers are supposed to (and in fact must) use 'best endeavours' in identifying if a device is unable to access Triple Zero on their own and other networks.

> **68 Requirement to identify whether a current customer's mobile phone can no longer access the emergency call service – carriage service providers**
>
> A carriage service provider must use its best endeavours to promptly identify if a mobile phone that is accessing, or attempting to access, the provider's own mobile network is, on or after 2 November 2024, no longer configured to access the emergency call service using both:
>
> (a) the provider's own mobile network; and
>
> (b) if the provider's own mobile network is unavailable, the mobile network of other carriage service providers who provide carriage services to the public.

legislation.gov.au - Telecommunications (Emergency Call Service) Determination 2019 – Section 68
https://www.legislation.gov.au/F2019L01509/latest/text

If I was able to get my hands on these Samsung devices and test them and find out their categorisation and analysis is wrong, then whatever they've done **is not 'best endeavours'.**

I think that is quite clear based on all of the available data, and with the full datasets the telcos have it would be even more obvious.

Summary/Closing

In closing, it's clear there are significant technical, regulatory and policy issues affecting Triple Zero and Emergency Calling in Australia and these issues require serious attention.

Australia's telecommunications landscape has changed dramatically over recent years, especially following on from the 2024 shutdown of the 3G Mobile Network.

A shutdown transition that was not well prepared for and resulted in many unintended consequences.

As mobile technologies and networks change, the legislative and regulatory frameworks that underpin access to Triple Zero must also evolve to ensure they remain fit for purpose and continue to operate in the public interest.

Based on the issues outlined throughout this submission, it is evident that the current arrangements are not delivering on those outcomes, and haven't for some time.

Consumers have lost access to telecommunications services, been forced to replace perfectly functional devices, and in many cases have borne significant financial costs because of inaccurate, overly broad, overly blunt blocking requirements and deeply flawed carrier assessments.

Policy settings around device blocking must be proportionate, evidence-based and consumer-focused.

The current policy implementation to block 'incompatible' devices from all network services is highly corrosive and harmful to consumers.

It has impacted tourists, competition and the overall accessibility of mobile services.

Carriers **cannot** be allowed to be the sole arbiters in deciding what phones their customers are allowed to use, particularly when those decisions lack any transparency or independent oversight.

This is an unacceptable conflict of interest.

Consumers must be allowed to use any individual device that is technically compatible regardless of the model, brand or where it was sold. There must be a system to address the capabilities of devices 'where customers bring their own'.

There must be transparency of device classification data, transparency of process and recourse for consumers when the carriers get it wrong.

Consumers have a right to transparent information, meaningful avenues to challenge incorrect device classifications, and timely remedies when carriers make mistakes.

There must be real accountability for carriers and industry who do the wrong thing, or get things wrong and do not address them.

It should not require lengthy ombudsman disputes, legal action in civil tribunals or participation in class actions simply to obtain fair treatment or restore access to essential communications services.

Letting carriers block 4G & 5G devices of their choosing from all network services is not and was not a real solution. That policy change merely shifted the burden of the industry's failure to address these issues onto consumers.

We need policies that respect the rights of consumers, ensure fair accessibility to telecommunications services and require the industry to actually fix the problems.

Outside of blocking requirements, the industry needs to be required to follow best practice adoption and implementation of global industry standards that maximise interoperability and minimise incompatibility between devices and networks.

We need to ensure Australia mobile carriers align with internationally recognised telecommunications standards & industry initiatives that maximise compatibility between devices & networks.

Rather than relying on any proprietary or 'Australia-specific' approaches that unnecessarily disadvantage consumers, competition and technological innovation.

Australia is not in a position (and should not try to be in a position) to impose or create new technical standards for the global telecom sector & handset vendors to adhere to.

It's important future policy settings related to Triple Zero are designed to prioritise public safety, consumer rights and fair access to telecommunications services, and above carrier commercial interests.

While also ensuring regulators have the flexibility, oversight and powers necessary to respond quickly when new issues emerge. Public safety systems cannot rely on commercial decisions made by carriers alone, there must be public interest oversight of the whole system.

Robust regulation, independent oversight and consumer-focused policies are essential to maintaining confidence in Australia's emergency communications system.

This review presents a very valuable opportunity to establish a modern regulatory framework that can adapt as technologies continue to change and set Australia up for the future.

Once again, as part of this consultation and review I would be more than happy to make myself available to the Department & Custodian to discuss my submission and any other related matters.

I would appreciate the opportunity to provide constructive input to both help ensure fairness for consumers and effective public safety outcomes going forward.

I care deeply about these issues and want to see them resolved.

Additionally I would also be more than happy to discuss any matters with the ACMA.

I hope this process leads to meaningful reform that strengthens public safety, improves consumer protections, and ensures Australia's emergency systems remain fit for purpose well into the future.

Thank you for your time.

Regards

James Parker

As part of this review, I would encourage the following reforms:

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. *Device 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 GSMA standards for VoLTE Emergency Calling, including support for both IPv4 and IPv6 and any other settings or industry protocols available to ensure maximum interoperability with as many devices as possible.

5. **Improve Consumer Protections & Require MNOs to supply free like-for-like replacements**
   The Determination should be modified to ensure not just information on 'low or no cost' handsets is available for impacted consumers, but consumers can obtain devices at no cost that are fit for purpose for their needs. There should also be stronger consumer protections for individuals adversely affected by regulatory or carrier-driven blocking decisions.
   These should apply irrespective of hardship circumstances. Such requirements would put the burden on carriers to ensure they invest in the right tools to validate the capabilities of devices in use by customers, rather than block anything they didn't test or sell. The carriers also must be required to correctly re-categorise 000 capable 4G/5G devices they have blocked in error.

6. **Targeted Alternatives to Full Network Blocking**
   Consider whether more proportionate and nuanced measures could achieve public safety objectives without allowing the telcos to block what they see as 'incompatible' devices from all network services. For example forced outbound messages or 'outbound call blocking' when making calls rather than blocking devices from all network services. Allowing devices to connect in some form again will allow for better 'real-world' post shutdown analysis of device capabilities.

7. **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.

8. **Future Emergency Communications Capability & Alternative Methods for Triple Zero**
   Consider future emergency communications models that support additional methods of contact beyond traditional voice calling, including messaging, data-based and accessible communications options where appropriate. This could include enabling access to Emergency Services via alternative contact methods such as via SMS, Mobile Data/Mobile Apps.

Attachments List

PDF Documents provided alongside this Submission.

Table of Contents