

On November the 1st the direction made by Minister Rowland on the 21st of August of this year to the Australian Communications and Media Authority (Emergency Call Service Determination) will come into force, resulting in the forcible disconnection of hundreds of thousands of 4G and 5G mobile devices from all Australian mobile networks.

This action, though made with the best of intentions, will have massive and far reaching consequences, most of which will be impossible to predict until after the fact. At the very least it will cause disruption and inconvenience to many and countless tons of e-waste, and at worst it will endanger lives.

Though you have been in consultation with the Telecommunications providers about this issue, it has become abundantly clear that they are either unwilling or unable to fully explain the ramifications of what is coming. And why implementing the directive as written is virtually impossible in a technical sense without terminating a huge number of services with little or possibly no reasonable mitigations in place. This will not just affect mobile handsets as intended, but modems, medical devices, road-signs, ATM's, elevators, and countless other connected devices.

Basically the issue is, in simple terms:

4G was never designed to operate in this way. It was built for data only, with VoLTE calling "bolted on" after the standard was already defined. As such, virtually all implementations are carrier dependent, and not compatible.

VoLTE Emergency Calling has never been standardized. The global telecommunications governing body (GSMA) is scrambling to define a standard, but we are still years away from a workable implementation. As such, there is almost no device in existence today that can be trusted to make a VoLTE Emergency call on every network in the world.

There does not exist a way for carriers to actually determine a devices capabilities. All mobile devices are uniquely identified globally by their IMEI number. This string of numbers is unique to every GSM device ever made, and is tied specifically to the hardware of that device. Though this number can in some cases be used to determine a devices specific hardware model, there is no provision for device type or firmware/software capabilities.

Many smaller manufactures do not regularly provide the global governing bodies with updates of their devices IMEI's. As such, many low volume or specialized devices use IMEI's that, although valid, are unknown devices on many providers networks.

Come November 1st, my fear is that carriers will simply forcibly disconnect all devices who's IMEI's do not appear on their list of "approved and tested" devices.

Any device purchased locally or overseas that was never sold by the carrier directly, despite being fully compatible with all connections involved. Even devices that are completely incapable of making calls at all, such as EFTPOS machines will likely be affected, as the carriers have no way of knowing what they actually are.

For devices that are on the "approved and tested" lists, the carriers have no way of knowing the capabilities of the specific device in question. If a devices IMEI is approved, but that device is running

non-carrier specific firmware, there is no way to know if it is actually capable of making an emergency call, either from the carrier end or the user end.

Such an eventuality cannot be allowed to pass. The results of this will make the Nov 2023 Optus outage seem insignificant by comparison.

You are the only one who can do something about this, and you must act now.

Please reach out if you require any additional clarification or details.

A very, very concerned citizen,

Ryan Deas

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