Regional Mobile Infrastructure Inquiry

Emergency services and temporary mobile roaming consultation exchange - synopsis of discussions

Introduction

The [Regional Mobile Infrastructure Inquiry](#) (the **Inquiry**) is examining the costs and drivers of access to towers and associated infrastructure in regional, rural, remote and peri-urban areas within Australia. It is also examining the feasibility of temporary mobile roaming during natural disasters and emergencies. It is intended to provide an evidence base to the Australian Government to support future policy decisions.

As part of the Inquiry, the ACCC held three stakeholder forums (referred to as 'consultation exchanges') with three groups of stakeholders. The stakeholder groups were industry, consumer, and emergency services related stakeholders.

This document provides a summary of the issues discussed and raised during the emergency services and temporary mobile roaming consultation exchange. This exchange was held virtually via Microsoft Teams on Thursday 2 March 2023.

The purpose of the consultation exchange was to facilitate discussion between key stakeholders about temporary mobile roaming. Temporary mobile roaming refers to the ability for a consumer device to connect to a mobile network not owned or operated by their nominal mobile network provider, for a limited time and in a limited geographical area that is not determined by mobile network providers but specified by Federal/State Governments in consultation with emergency agencies.

The consultation exchange was chaired by Tara Morice, Acting General Manager, Mobiles Transmission and Consumer Branch at the ACCC. Stakeholders in attendance included representatives from key Commonwealth, State and Territory agencies responsible for the delivery and coordination of emergency services and/or disaster management.

In this summary, individual participants and their organisations are de-identified.

Mobile services are used to stay connected and informed during a natural disaster

Stakeholders noted there are three key types of communications in a natural disaster or emergency:

1. between emergency services personnel,
2. within the community, and
3. between Emergency Services Organisations (**ESOs**) and the community.

Stakeholders shared their experiences of how telecommunications services are used 'on-the-ground' during natural disasters. Generally, emergency services personnel augment their radio networks with mobile services. ESOs tend to rely on radio networks primarily for official voice to voice communication. Several stakeholders commented that volunteers primarily use SMS or mobile applications that support calls and text. call-out. Several stakeholders commented that emergency services personnel will often have multiple phones or dual SIM phones.

Stakeholders commented that mobile data is required for Internet of Things (**IoT**) technology built into emergency vehicles, in addition to handheld devices. Examples include fire trucks fitted with mobile terminals and sensors that connect to mobile networks. A number of stakeholders also commented that they are installing vehicle hubs with press-to-talk capability and Wi-Fi hot-spotting capability.

Stakeholders suggested that temporary mobile roaming would be extremely beneficial to ensuring the public receive emergency communications, such as evacuation orders, in a timely manner.

Data-driven decision-making is increasing demand for mobile service during natural disasters

There is widespread agreement among stakeholders that mobile services are an important back-up to radio. Mobile services support data-based applications which are increasingly relied on to share and communicate information for both the community and emergency services. This includes social media and mobile applications.

Stakeholders noted that data services are needed for both report systems and the emergency response. Services are online and require data and Wi-Fi access.

> *'Our responses are far more data intense than they have ever been. We are needing to set up coordination centres on the ground that require lots of data for damage assessment, report systems and emergency response. Everything is online and requires Wi-fi and data access.'*
>
> Attendee at the Emergency Services Consultation Exchange

Multiple telecommunications options are needed during natural disasters

While stakeholders broadly support a temporary mobile roaming capability, stakeholders noted a range of telecommunication redundancy systems are required for emergency situations. These include redundancy systems for mobile and radio networks, as well as landline. Stakeholders also noted that different services may be required before, during and after a natural disaster.

A number of stakeholders discussed other solutions they are investigating, including satellite services for backhaul or Wi-Fi systems. Stakeholders also shared examples testing satellite solutions during recent flooding events. They noted satellite does not have the same capacity or coverage as fixed infrastructure.

Power supply and back-up needs to be considered if implementing a temporary mobile roaming capability

Stakeholders noted that the majority of network outages are due to power failures. Several stakeholders commented that delays in restoring power are often caused when technician crews are unable to safely access a site during or after an emergency. For example, one stakeholder explained being required to deploy aircraft to access sites to resupply and repair sites as the access roads had been damaged. One stakeholder also recounted having advocated for having additional power back-up requirements at base stations in bushfire/disaster prone areas to mitigate delays in delivering fuel and generators to a site.

Network capacity may need to be actively managed

Several stakeholders expressed concern around how the activation of temporary mobile roaming would manage additional network congestion caused by visiting network traffic. They noted that network congestion is already an issue for some rural and regional areas, with one stakeholder commenting that they regularly experience issues with the primary carrier's network being unusable during peak times due to congestion.

Protocols are needed to active/deactivate temporary mobile roaming

Stakeholders provided views on the protocols required to activate and deactivate temporary mobile roaming. The Inquiry heard that these protocols need to be flexible and dynamic, and that temporary mobile roaming activation triggers should not be attached to a disaster declaration. Moreover, stakeholders noted that temporary mobile roaming needs to be available as soon as possible when a network becomes disabled. Stakeholders also commented that an end date for 'turning off' temporary mobile roaming would be difficult to predict, especially in an event where emergency services and technicians were unable to access a site to restore the network.

Stakeholders observed that while there are currently no protocols for temporary mobile roaming in 4G, these could be modelled off existing guidelines and processes and some bespoke additions. Stakeholders noted the need for clear protocols and systems to be in place prior to an emergency situation although it was noted that temporary mobile roaming should not be activated until a network is disabled. This is because it can result in severe signalling storm situations due to devices authenticating back and forth between networks, call drops, and strain on power resource at the base station and the battery in the device.

The regulatory framework may need further review

Stakeholders agreed that the development of a regulatory framework for the provision of a temporary mobile roaming capability should be led at a federal level as telecommunications is within the Commonwealth's jurisdiction. Several stakeholders commented that there are existing provisions in the *Telecommunications Act 1997 (Cth)* around carriers being required to provide emergency assistance, which are currently being reviewed.

Emergency services require the ability to prioritise their devices over other users on the network. Traffic prioritisation mechanisms on one network cannot be maintained if that service is disrupted and those users then roam onto another carrier's network. Two options raised were firstly for a central government agency to maintain a central register of International Mobile Subscriber Identities (**IMSI**s) for devices registered to ESOs that could be made available to all MNOs in a disaster situation and prioritised. Secondly, emergency services personnel could be issued with dual SIM phones which would maintain existing priority arrangements on each of the networks, assuming at least one of the networks remains operational.

Other matters

Stakeholders suggested a working group consisting of industry representatives and key stakeholders could explore how to implement a temporary mobile roaming capability. This working group could develop the activation triggers and frameworks required.

Several stakeholders noted a preference for a Public Safety Mobile Broadband (**PSMB**) capability for emergency services. Stakeholders noted that while a PSMB is related, it is outside of the scope of this Inquiry.