

## **ACCC Regional Mobile Infrastructure Inquiry response**

### **What telecommunications services are used and/or needed for emergency services organisations?**

Emergency services use a range of communications, depending on strategic command and control, tactical level or administrative communications requirements.

Strategic communications often occur at long ranges for the coordination of state and federal resources, provision of situation updates and intelligence data. These are provided primarily over emergency services radio networks, satellite phones or mobile phones for voice, fixed networks or satellite and mobile broadband for data.

Tactical communications to coordinate response resources at an incident ground occurs over local area VHF and UHF point-to-point radio systems. However, mobile phones are still used extensively at this level, especially by volunteer resources. Increasingly important at this layer are mobile broadband services for the delivery of mapping/GIS data and incident management/decision support data for use by incident management team leaders.

Administrative communications relate to the logistical workload of ordering and delivering goods and materials used during the response and recovery phases of emergencies. Mobile phones and data networks are used extensively in coordinating these services to support emergency operations.

### **How do emergency services personnel communicate with each other and the general public during emergencies?**

A range of communication systems is used depending on the urgency and purpose. Urgent communications are primarily voice and occur on dedicated emergency services radio networks. However, call-out functions, especially to volunteer personnel, happen on smartphones prior to turn-out at stations when access to radio handsets and vehicle radios then take over.

Duress functions for first responder safety systems are dependent on data networks. However, vehicle roll-over alarms are automated and progress via mobile broadband or satellite data networks.

Communication with the general public occurs primarily via SMS on mobile networks and websites (Emergency WA/DFES Facebook) accessed with mobile broadband. Cell broadcast is being investigated as a future emergency communications path, again dependent on mobile networks for access. Radio broadcasts through the ABC are the main widespread backup.

### **What forms of telecommunications are most used or needed during a natural disaster or emergency (e.g. voice, SMS, data)?**

Depending on the phase of the disaster or emergency, various forms of telecommunications need to be used. In the initial planning and turn-out phase, SMS and mobile phones are in greatest use. During response, voice traffic via Land Mobile Radio (LMR) is critical. However, mobile and satellite phones are extensively used. Mobile data and SMS are also critical during this phase for public information and evacuation notifications.

Moving into the recovery phase, mobile phones and data become the most important to coordinate rebuilding and recovery operations.

**Do emergency services personnel and volunteers rely on their private mobile phone services, as well as established emergency service radio networks, and why?**

Primary reliance is on the Emergency Service Radio Network (ESRN) because it is a dedicated network for first responders. This reduces the issue of congestion over public networks in emergencies. However, this only works where networks have capacity or coverage. The footprint of ESRN is very small compared to public mobile networks.

Everyone owns a mobile phone but only a few personnel/volunteers are issued with or have access to an ESRN handset. Where these are not available, especially with volunteers, they shift to alternate communications on mobile phones either direct voice calls or through messaging apps.

**What is the time taken to restore telecommunications services after a natural disaster event?**

The time taken to restore telecommunication services varies depending on the geographic breadth of the disaster. For example, post the Tropical Cyclone Seroja recovery, full restoration of mobile services took over 14 days to complete.

Most telecommunication failures are caused by damage to power delivery infrastructure. Mobile tower sites currently only utilise small amounts of battery back-up, even in remote sites.

**What are the potential emergency management protocols around activating a state of temporary emergency roaming during natural disasters and emergencies, including liaising processes with telecommunications service providers?**

This would require a design process if required. Currently, the DFES State Operations Centre when activated for emergencies contains only one position for a Telecommunications Liaison Officer (Telstra). It is envisaged that the activation of emergency roaming would be done through the All-Hazards Liaison Group (AHLG) once 'trigger conditions' are reached. Without the other telcos being involved in the AHLG, this would be difficult to initiate without some form of automation. The preferred solution would be something like the Emergency Alert (EAP4) system that is accessed via a website.

An alternate option to manage would be a select group of roaming enabled SIMs that are able to roam at any time for use by emergency services only.