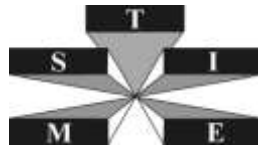


# THE INTERNATIONAL EMERGENCY MANAGEMENT SOCIETY



Australia, New Zealand & Oceania Region

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7 April 2011

Committee Secretary  
Senate Standing Committees on Environment and Communications  
PO Box 6100  
Parliament House  
Canberra ACT 2600

## **Submission to the Senate Standing Committees on Environment and Communications**

This submission to the Senate Standing Committees on Environment and Communications (the Committee) is lodged on behalf of Australia, New Zealand & Oceania (ANZ&O) region of The International Emergency Management Society (TIEMS).

TIEMS (ANZ&O) fully supports the Question as put to the Senate by Senator Fisher on 3 March 2011 and notes that the Committee's Terms of Reference is to review various aspects of *'the capacity of communications networks and warning systems to deal with emergencies and natural disasters'*.

TIEMS is a not-for-profit organisation registered in Belgium and comprises representatives from police, emergency services, academia, and a variety of other organisations, involved in emergency and disaster management response and recovery operations, and providing related services.

A number of TIEMS (ANZ&O) members were involved with the recent disaster events in Queensland. TIEMS members were in the affected community at the time, and part of the police and emergency services operational response following the flooding events in Brisbane and Rockhampton, and Cyclone Yasi in the Tully region.

It is the opinion of TIEMS (ANZ&O) members that the Committee should also consider the adequacy of the communications technology, networks, processes, and applications available to the police and emergency services in Australia to support emergency and disaster management operations in the review.



The voice and data communications networks, and related technologies and applications of Australia's law enforcement agencies and emergency service organisations are integral to providing effective planning, preparation, response and recovery operations for emergencies and disaster events, particularly for natural disasters.

There is presently a level of disparity between the agencies, and within the agencies in some instances, as a combination of both analogue and digital technologies is utilised for radio communications. The level of interoperability between the states and territories, and some agencies within, therefore is limited.

During disaster response and recovery, and for day-to-day operations, analogue technology provides only a basic level of operational capability. Analogue also restricts communications operations to the specific geographic areas where the event is occurring, for example communications can only be performed from the affected region as there is no capability for communications / operations centres geography removed from the event to assist, either partly or in total. This also limits the options for business continuity and redundancy strategies.

Digital communications technology on the other hand, would provide the agencies the ability to significantly enhance their operations.

Wide-band data networks, such as would be available from networks in the 700 MHz (Digital Dividend) spectrum band, would provide the capability to transmit images and video which would be particularly useful for conducting rapid damage assessments and providing situational awareness in the immediate aftermath of a disaster, as well as when responding to routine emergencies.

Having wide-band data capability would also provide the agencies with the ability to implement complementary technologies that would greatly assist their day-to-day operations, for example, in-vehicle camera / video and the searching of corporate databases would be of benefit to all agencies, for example, pursuit management (police), situational awareness for damage assessment and resource allocation (fire), and transferring pre-hospital patient injury information (ambulance). This level of capability is representative of current global best practice in communications provided to law enforcement agencies (LEA) and emergency management organisations (ESO).

Dependent upon the configuration of the digital communications network implemented, communications / operations centres could be connected to form virtualised state and territory-wide networks with the ability to load-share between communications and operations centres. This would also provide for scalability within the radio network whereby additional operating channels could be allocated to a disaster / major event as required.

During disaster events, communications in the affected area could be conducted from any other part of the state thereby allowing some personnel in the affected area to be at home supporting their families should they need to be, or if their property has been affected. Additional resources can also be allocated to disaster operations immediately instead of having them transported to and accommodated within the affected area.

Virtualised telephony networks are used extensively by LEA and ESO, and the private sector globally and are of benefit not only in times of disaster by providing scalability, but also on a day-to-day basis. This is particularly relevant for ensuring Triple Zero calls are answered in a timely manner, especially when a major event or disaster is occurring. The bushfires in Victorian in 2009 demonstrated the need to be able to load-share during peak / spike call periods.

With the frequency and intensity of disaster events increasing, along with the numbers of people potentially impacted by the events, the effectiveness of community education and emergency alerting / warning systems is becoming increasingly important. The more people who receive early warning messages, the greater the likelihood that the number of people at risk during an event will be reduced.

Communicating risk to the community in times of emergency will seldom be 100% effective. Even when warnings are distributed early and widely and via multiple communications mediums simultaneously such as SMS (texts), commercial radio and television, the internet (websites of agencies responsible for providing early warning (e.g. Bureau of Meteorology) and social media (e.g. Facebook and Twitter), recorded voice announcements to fixed and mobile phones and sirens, some people may still remain at risk. Doorknocking by emergency personnel may not even guarantee the locating all the people who might be in an impact zone at the time.

Thus there will always be some people who, for one reason or another, will not receive the warning and thus be at risk. Consequently, these people may require urgent assistance from the law enforcement and emergency service agencies.

These people, when they realise their situation, may use the Triple Zero network to call for urgent assistance. The Triple Zero network therefore needs to be robust and the calls answered and dealt with as quickly as possible.

In relation to the answering of emergency (Triple Zero) calls by law enforcement and emergency service organisations, the general national and international standard (KPI) for call answering is that at least 90% of calls are to be answered within 10 seconds, and all calls are answered on the 'first presentation'. This standard is also believed to be adopted by the Australian National Emergency Communications Working Group (NECWG).

Telstra's Triple Zero Call Centre is an Emergency Call Answering Point under the *Telecommunications (Emergency Call Service) Determination 2009* (the Determination). The *Determination* is issued by the Australian Communications and Media Authority (the ACMA) under s. 147: 'Provision of emergency call service' of the *Telecommunications (Consumer Protection and Service Standards) Act 1999* (Cwth). These two documents are both publicly available on the Australian Government websites.

Specifically, Section 34: 'Speed, efficiency and reliability for numbers 000 and 112 – emergency call person' of the *Determination* provides the benchmark for the performance measurement (KPI) that emergency call persons at the emergency call answering points (Telstra Triple Zero Call Centre) must achieve. The KPI in the *Determination* in respect to the answering of emergency calls is for 85% to be answered within 5 seconds, and 95% in 10 seconds.

The community have high expectations that Triple Zero calls will be answered with the utmost urgency, and this is reflected in the *Determination*.

People in emergency situations, 'end-users', experience the Triple Zero service as an 'end-to-end service'. That is, the service does not stop once the Triple Zero call is answered at Telstra Triple Zero Call Centre.

Telstra is required under the *Determination* to report performance against the KPI to the ACMA, however, the *Determination* contains no reporting requirement for efficiency with which Triple Zero calls are transferred (handed over) to the police and emergency service organisations.

Delays in the handover of Triple Zero calls from Telstra to ESOs was identified as an issue during the Review of the April 08 Windstorm Melbourne, Victoria conducted by Bruce Esplin, the Emergency Services Commissioner (Victoria). Specifically, Recommendation 17 of that Review Report<sup>1</sup> recommended that:

'The Emergency Services Telecommunications Authority, in partnership with Telstra, consider technical solutions to streamline the handover process for Triple Zero calls'.

Notwithstanding that this is a Victorian example TIEMS (ANZ&O) submits that the Committee should consider reviewing the handover processes and performance on a national basis.

TIEMS (ANZ&O) believe that the inclusion of the issues identified in this submission is within the scope of the Committee's Terms of Reference for the review.

Improving the communications networks for law enforcement agencies and emergency services organisations, and emergency call answering processes, will provide not only an improved operational response capability for the public safety agencies, but would also enhance the operational safety of police and emergency response personnel in-the-field, along with that of the wider community.

Yours Sincerely

(submitted on-line)

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<sup>1</sup> Esplin, B., 2008, *Review of the April 08 Windstorm Melbourne, Victoria, August 08 (Final)*, Office of the Emergency Service Commissioner, Melbourne, Victoria. pp. 44-46.