Response to the Discussion Paper

Review of the National Triple Zero Operator

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australian communication exchange
ACN 003 044 899 ABN 72 003 044 899

Introduction

The Australian Communication Exchange (ACE) has a strong track-record delivering national contact centres with multiple communication channels.

For over 18 years, ACE has provided the National Relay Service (NRS) under a Commonwealth Contract. As part of the NRS contract, ACE delivers 3.2 million call minutes a year at over 99.99% uptime meeting and exceeding Key Performance Indicators which apply to Emergency Call Facilities.

In February 2013, ACE was announced as securing the NRS call centre contract for a further 5 – 8 years.

ACE was selected for its exemplary NRS delivery record, our innovation expertise and our deep appreciation for the needs of our communities. We have worked in collaboration with the Government to produce what will be the most advanced range of services our constituents have ever accessed.

ACE's main premises are a designated Emergency Call Facility under Section 6 of the Telecommunication (Interception and Access) Act 1979. Furthermore, as part of its NRS arrangements, ACE has established triple redundancy. There is both an onshore and offshore disaster recovery centre with complete redundancy of all technical infrastructure and equipment.

ACE welcomes the opportunity to respond to the discussion paper for the review of the National Triple Zero (000) Operator.

The Triple Zero service of the future

Question 1: Community expectations

It is commonly accepted that community expects the triple Zero service to be contactable anytime, anywhere, easily, quickly and free of charge.

Are these your expectations of the triple Zero service now and into the future? Are your expectations currently being met? Why or why not?

The expectation of the community is for the service to be contactable anytime, anywhere, easily, quickly and free of charge.

The reality is that the service is limited to a legislated voice only and TTY only access channel. The Deaf and hearing impaired community don't have access to an emergency service answering point when they are away from their TTY (the TTY must be connected to a power supply and a fixed telephone line). Currently our community does not have access to emergency services when they are away from their home. Our community needs a mobile text based emergency service access channel.

Due to an ageing population the need for alternative communication methods is rapidly increasing. At present the ration of the population with hearing loss is 1:6. By 2030 this figure is predicted to be 1:4 as the population increases.

For the Deaf and hearing impaired sector of the community, the current legislative channel does not meet the need.

Question 2: Challenges facing the triple Zero service

Ongoing changes in the communications landscape, and certain expectations in the community regarding the nature of the service, present challenges for the Triple Zero Service. These challenges include locating callers, the quality and prioritisation of VOIP calls, extreme call volumes during disasters and non-emergency calls.

What are your views on these challenges and what further steps could be taken to address them? What other challenges need to be considered?

ACE's main premises are a designated Emergency Call Facility under Section 6 of the Telecommunication (Interception and Access) Act 1979.

In the financial year July 2013 to June 2014 ACE handled 611,500 calls. This includes E106 the only legislated text based channel for the Deaf and hearing impaired community.

There were 559 emergency calls made during this period of which 155 (28%) were made via the legislated channel.

Users find that other text based communication channels such as SMS and internet are preferred.

ACE has triple redundancy which includes an off shore Disaster Recovery Centre (DRC). The decision to have an off shore DRC was taken following the Queensland floods of 2011. This ensures continuity of delivering a 24/7 service in difficult times.

In terms of location, there are a number of different positioning technologies that can be used, GPS, Mobile Location Information (MoLI), Wi-Fi-based positioning system (WPS) and bluetooth 'beacon/tag' location systems, amongst others. The challenges mainly relate to the achievable accuracy of the specific technology and then concerns around 'time to fix' (i.e. how long each technology takes to get an accurate location) and if there is an opportunity for emergency service personnel to remotely re-receive the location data if the estimate of error is high. For the Deaf and hearing impaired community this location information must be delivered via a text interface to the user and the emergency service answer point automatically (i.e. the user should not need to 'read out' the location).

The main obstacle at the moment for VoIP calls is the missing location information of the calling VoIP user and the fact that not all ISP's who provide VoIP services provide can guarantee the prioritisation or the actually delivery of these calls to emergency services. This fragmentation of VoIP providers and varying levels of emergency access will create confusion for users and channel call traffic via random routes (depending on internet traffic loads etc.) and or ISP infrastructure that is not as robust as the current PSTN network, could reduce reliability of the call getting through to emergency services. Consequently, consideration should be given to standards that provide direct access to the emergency service answer point from the device without the need of a VoIP Service provider. Furthermore, compared with current regulations, future regulations on emergency access might have to widen its scope beyond PSTN networks and services and include legislation that supports a text interface via public IP / internet access networks and internet service providers.

Quality issues on VoIP normally relate to 'voice quality' and voice compression algorithms around high bandwidth voice calls over slow or poorly performing, internet connections. An automated text interface will require significantly lower bandwidth and therefore operate more efficiently on slow or poorly performing, internet connections.

Opportunities

Question 3: Other ways of requesting emergency assistance

The only way of contacting Triple Zero is with a voice call and this is likely to remain the primary way of requesting emergency assistance. However, people use a range of other ways to communicate, including SMS, email, instant messaging, video calls and social media.

In addition to voice calls, is it desirable to have other ways of requesting emergency assistance? If so, what ways and what challenges do you forsee?

In the Deaf and hard of hearing society there are a variety of communication methods currently being used within the National Relay Service. These include:

- SMS relay
- Internet relay – including two way internet
- Captioned telephony – web based and handset
- Video relay by skype
- Under development for release later this year – a mobile application

The population is embracing technology with mobile phones, tablets and the internet becoming an everyday essential means of conducting business. The new Triple Zero service should include a range of text and video based communication channels and not limit itself to a voice only channel.

In developing text based options opens the door for a range of members of the community such as the speech impaired and people who are in dangerous situations that need to contact Triple Zero whilst remaining silent.

By developing new channels of communication gives the user choice and contributes to Triple Zero being contactable anytime, anywhere, easily and free of charge.

Question 4: Improving information

It is important that emergency service organisations, as well as callers, have the information they need in an emergency. Changes in technology offer opportunities to improve the information available, however, these changes also present some challenges.

What information is essential to emergency service organisations and callers in an emergency and what information is desirable?

The information that would be required would be:

Essential	Desirable
• Service required • Location where the service is required • Details and severity of the emergency situation	• Automatic identification of the individual Automatic delivery of any additional information about the individual that may assist emergency service personnel (i.e. medication currently being taken by affected person) and any information regarding the incident itself.

In the development of new mobile communication technologies there is the ability to program profile information into devices. This can include a range of medical information regarding conditions, medication being taken, allergies. Along with Global Positioning Software (GPS) which can locate an individual.

A key issue is the ability to transfer information automatically to the emergency service answering point as text.

Determining how we get there

Question 5: The role of the national Triple Zero operator

A tender for the national Triple Zero operator is required to be issued by June 2016. The aim of this review is to ensure that the arrangements for the national Triple Zero operator continue to support a world class Triple Zero service into the future.

What criteria should be used to determine the functions of the national operator?

The Triple Zero operator should be able to provide as many different channels as possible for the population to use to contact the emergency services.

This should include text and video based solutions. The provider should be innovative to continue to explore emerging technologies and the impact that they may have on the current service delivery.

Question 6: The role of telecommunications providers

Telecommunications providers have regulatory obligations in relation to Triple Zero, recognising their importance in the delivery of the service. However, it is important to consider whether regulatory framework remains appropriate given changes in technology and the telecommunications industry, the likely direction of the Triple Zero service, and the Government's commitment to reduce the regulatory burden on Industry.

Is the current regulatory and funding framework for the Triple Zero service appropriate now and for the future? If not, what changes should be made and why?

Legislation needs to be amended to include a broad range of text and video based access to Triple Zero.

The Universal Service Obligation is on Telstra to deliver the Triple Zero and is fully funded by Telstra.

However, government should consider a new funding model. For example the National Relay Service is funded by a levy on the telecommunications carriers.

To fund the Triple Zero government may consider a similar levy on all telecommunication providers including Internet Service Providers and NBN.

Question 7: The role of innovators

Innovative ideas to improve emergency assistance may come from a range of parties such as app developers, device and car manufacturers, research organisations, community service providers and individuals.

What sorts of innovations would most improve the Triple Zero service? How can innovation and third party innovators be supported while ensuring the reliability and integrity of service?

The development of text based communication channels would greatly enhance the Triple Zero service. This could be expanded to include video channels.

Innovators need to be encouraged through investment incentives. There needs to be clearly defined parameters in relation to liability issues so that innovation is not stifled due to developers being risk adverse to potential liabilities associated with their innovations. The innovation framework needs to encourage development of new ventures.

. **Question 8: Cooperation and decision-making**

There are a range of parties with interests and responsibilities in relation to Triple Zero. It is important that there are effective cooperation and decision-making arrangements in place amongst these parties so that the service can continue to adapt and respond to issues as they arise in the future.

What things do the current cooperation and decision-making arrangements for Triple Zero do well? What things do they not do well? What changes are needed so the service can better adapt and respond to issues in the future?

Generally the Triple Zero/106 stakeholders critical to the provision of the Triple Zero service, including but not limited to all ESO's, Triple Zero operator's, Telecommunications carriers and the National Relay Service, do their upmost to ensure the highest level of effective service is provided to respective customer bases. This ensures that during a life threatening time critical event that the response provided to the customer is of the highest calibre, particularly in relation to speed of response, accuracy in determining location, triage of the incident/issue and dispatch of the required emergency service personnel.

A national code has been developed as a guideline for carriage service providers, carriers and emergency call persons ECP's to ensure effective co-operative approaches to streamline the delivery of critical information to the appropriate ESO to effectively handle all Triple Zero/106 requests for assistance that require immediate responses to an incident that may be of a life threatening or time critical nature.

This Industry code C525:2010 was previously reviewed and enhanced by an industry working group in 2010 and it is underpinned by the Emergency Call Determination 2009 which also is regularly reviewed and amended as necessary.

It is positive to see that Industry and engaged stakeholders are regularly reviewing these guidelines and legislative instruments, however these only provide a minimum level of policy/procedural related assurances that are relevant to various key service delivery personnel.

The key area of concern with the current service delivery model is simply that as inherent technology changes and advances occur, i.e. the widespread use of mobile devices and software is now mainstream communication preferences, these instruments simply are not able to keep pace with User behaviour and trends in communication preferences.

There is much room for enhancement in the current service delivery model.

The National Emergency Communications Working Group - Australia / New Zealand (NECWG-A/NZ) formed the Triple Zero working group and has has identified numerous examples where known critical incidents and preferred communication preferences with the existing model are simply unsupported and therefore creates significant unacceptable risk to the public.

Examples include:

- A hearing impaired person who is assaulted in the street, uses their Smartphone or tablet to contact 000, either through an App or by sending a SMS message
- A doctor is carjack, put in the boot of their car and the offenders drive off. He sends an SMS to 000, which also provides his GPS co-ordinates. He keeps giving updates to the police operator who is conversing with him via SMS and who is relaying the co-ordinates to police
- A person who has severe heart problems, collapses in the street. From his Smartphone App he contacts 000, relaying his location & also his health data, which is relayed directly to the Ambulance that has been despatched to attend.
- A young girl who is caught in a drain; sends a Facebook message to 000 from her phone to be rescued.
- A cash in transit van is held-up. Witnesses ring 000 and at the same time send video footage of the incident which they have filmed, which is then relayed to attending police.
- The vehicle you are driving is involved in an accident. The car automatically dials 000, provides the vehicle's location co-ordinates and streams video footage of the accident.

Whilst these technological challenges will consistently emerge, the new service delivery model needs to be aligned with the National Emergency Working Group Australia and New Zealand vision associated to the Next Generation Triple Zero.

This vision is **"Any Device, Any Where, Any Time."**

Unfortunately the current Triple Zero model does not have a central focus on Consumer education and information.

This is a critical area that must be resourced appropriately to ensure that the wider community along with niche areas of our community, i.e. Deaf or Hearing Impaired are not left behind and have a central place to being informed.

An Outreach model similar to that currently in place for the National Relay Service needs to be adopted with haste.

The functionality of this critical service delivery gap in the current model would include the following aspects of consumer awareness across the Emergency Service Organisations and the public:

- Next Generation Triple Zero website management
- National Early Warning notifications

- Instrumental in the formation of a framework in which to monitor consumer behaviour, proactively identify, prioritise, and/or coordinate research and consumer feedback to support continuous improvement of the ECS to support Next Generation Triple Zero (NG000)
- Development of a standardisation, and common policy for the co-operation and interaction of the ECS stakeholders to address current and future community expectations including:
    - The primary and alternative communication channels for Triple Zero (000)
    - legislative or regulative reform on the use and provision of accurate location identification via various voice and non-voice channels to Triple Zero (000) Services
    - The Standards for interaction with ECS from all channels, in particular; in-vehicle telematics devices and other approved automated communication devices
    - Triple Zero (000) operational resilience
    - the contemporary requirements and function of the Emergency Call Person (ECP)