



Submission:

Department of Communications

Review of the National Triple Zero (000) Operator
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INTRODUCTION

About AMTA

The Australian Mobile Telecommunications Association (AMTA) is the peak industry body representing Australia's mobile telecommunications industry. Its mission is to promote an environmentally, socially and economically responsible, successful and sustainable mobile telecommunications industry in Australia, with members including the mobile Carriage Service Providers (CSPs), handset manufacturers, network equipment suppliers, retail outlets and other suppliers to the industry. For more details about AMTA, see www.amta.org.au.

About Communications Alliance

Communications Alliance is the primary telecommunications industry body in Australia. Its membership is drawn from a wide cross-section of the communications industry, carriers, carriage and internet service providers, content providers, search engines, equipment vendors, IT companies, consultants and business groups.

Its vision is to provide a unified voice for the telecommunications industry and to lead it into the next generation of converging networks, technologies and services. The prime mission of Communications Alliance is to promote the growth of the Australian communications industry and the protection of consumer interests by fostering the highest standards of business ethics and behaviour through industry self-governance. For more details about Communications Alliance, see www.commsalliance.com.au.

Introduction

Communications Alliance and AMTA (the Associations) welcome the invitation to provide comments on the discussion paper *Review of the National Triple Zero (000) Operator* (the Discussion Paper) by the Department of Communications (the Department).

SECTION 1 – OVERVIEW

The Associations welcome the review of the National Triple Zero (000) operator.

The Associations agree that it is timely for all stakeholders to have the opportunity to consider options for future emergency communications and determine what role a national Triple Zero operator should have in a changed telecommunications environment.

The Discussion Paper raises a complex set of policy, regulatory, governance, technical and operational issues that the Associations consider warrant more detailed examination.

The objectives of this review should be to:

- progress with a tender to ensure the continued uninterrupted support of the existing voice-based emergency call service; and
- develop, outside of the tender process, a comprehensive policy for future emergency communications.

In light of this view, the Associations believe that the issues under consideration should be separated into the following two work streams (see sections 2 and 3).

SECTION 2 – WORK STREAM ONE: CONTINUED DELIVERY OF VOICE SERVICES

Voice services are expected to be the dominant means of communication with the Emergency Service Organisations (ESOs) for the short and medium term.

However, the Associations consider that the Emergency Call Service (ECS), while currently defined in section 7 of the *Telecommunications Act 1997*, is not linked to a clear set of policy objectives. We see that a set of policy objectives will also be valuable when evaluating the options for future next generation technologies to be used by Carriers and Carriage Service Providers (CSPs), the Triple Zero operator and Emergency Service Organisations (ESOs).

Therefore, the Associations support the first work stream considering how the continued delivery of the emergency call service – more commonly referred to as voice services for the Triple Zero operator – can be executed in the most efficient and effective way that does not prevent or limit opportunities to deploy next generation technologies.

Its purpose would be to deliver a set of parameters for the Triple Zero operator in preparation for the tender, due by 23 June 2016.

The terms of reference for this first work stream would include requirements to:

- recommend how the delivery of the overall emergency communications service could be made even more effective and efficient by specifically:
 - defining, with industry, what service the Triple Zero operator should or should not deliver; and
 - assessing options for the delivery of the Triple Zero operator function, including whether the responsibility could be devolved to industry or ESOs;
- provide a view on how to design flexibility into the tender process, and accommodate the transition to a future next generation platform for emergency communications; and
- consider what transition arrangements would be needed, including costs to Carriers, CSPs and ESOs to update or adapt networks to work with a new Triple Zero operator, and how transition issues should be managed, with the objective of ensuring that there is no disruption to the critical Triple Zero operator function. In considering any transition arrangements, the Associations note that the current Triple Zero operator service is being delivered effectively and efficiently by Telstra and recognise that any change of service provider or scope would need to be managed extremely carefully to ensure continuity of service.

The Associations also support clarity on governance arrangements, including the respective roles of TUSMA, the Department of Communications, the Australian Communications and Media Authority and the Triple Zero operator. This will be particularly helpful for the tender process and related contracts.

SECTION 3 – WORK STREAM TWO: A POLICY FOR FUTURE EMERGENCY COMMUNICATION SERVICE

The second work stream would take the outcomes of work stream one and address the issues associated with developing Australia's policy approach to future emergency communications.

The Associations consider that this is a critical piece of public policy that needs sufficient time to be developed and not linked to an arbitrary deadline set to the release of a tender for Triple Zero operator services.

It is the view of the Associations that there is no set policy objective for the delivery of emergency communications in Australia and that the current arrangements for emergency communications lack an appropriate governance and decision making framework and a technology selection process.

Therefore the Associations recommend that the starting point for the second work stream should be for the Australian and State and Territory Governments to develop the policy objective of migrating to a new national next generation network that would be capable of delivering a range of next generation emergency communication services.

The policy statement would be similar to the 'New and Emerging Technologies 9-1-1 Improvement Act of 2008'¹ that the US Federal Government passed in 2008 in support of:

*'a national plan for migrating to a national IP-enabled network capable of receiving and responding to all citizen-activated emergency communication and improving information sharing among all emergency response entities'*²

The Associations consider that the terms of reference for the second work stream should focus on the following sets of issues:

- addressing the limitations of the current emergency call service, including:
 - a voice centric regulatory framework;
 - the lack of an overall governance structure;
 - no cost benefit analysis of the current Triple Zero operator because delivery is largely based on a regulatory requirement;
 - the inability to introduce without regulation new and innovative technologies to support the emergency call service;
 - a lack of alignment with developing international standards;
 - changing community expectations; and

¹ <http://www.gpo.gov/fdsys/pkg/PLAW-110publ283/pdf/PLAW-110publ283.pdf>

² source: New and Emerging Technologies 9-1-1 Improvement Act of 2008, Public Law 110-283, sec.102

- recognition that efforts by industry to improve levels of community education, awareness and engagement have reduced unwanted calls to the Triple Zero operator and ESOs.
- a policy framework for future emergency communications services should include:
 - a flexible, timely, efficient and reduced regulatory framework that sets as its policy objective the delivery of a single national framework for emergency communications;
 - facilitation of new arrangements between ESOs and Service Providers that would ensure:
 - The role of any national Triple Zero operator be evaluated against each service used to communicate with ESOs;
 - ESOs are responsible for communicating with the originating callers;
 - Carriers and CSPs are responsible for delivering communications (via a national Triple Zero operator if required) to the ESO;
 - Carriers and CSPs are responsible for providing any relevant 'dynamic' service information; and
 - ESOs are responsible for accessing any relevant static service or customer information;
 - funding principles, as well as arrangements for cost sharing;
 - alignment of technical solutions with international standards; and
 - a view on:
 - user charges and service availability;
 - how future emergency communication services are determined and contracted;
 - how services are delivered for people with a disability or who do not speak English, including sign language; and
 - using the full capabilities of location based services.

Further details of the Associations views on the sets of issues that the second work stream should consider is provided below.

SECTION 4 – LIMITATIONS OF THE CURRENT EMERGENCY CALL SERVICE

The Associations consider that while the current emergency call service continues to provide a valuable service to the community, it does have limitations, as set out below. The overall impact of these limitations is expected to increase in coming years and therefore needs to be addressed.

A 'voice centric' regulatory framework

The regulatory framework for Carriers and CSPs for the emergency call service is tied to the definition of a Standard Telephone Service (STS). It is therefore not suited to a next generation technology environment.

Current examples include 'VoIP out only' services that are not required to supply access to Triple Zero, as the service does not meet the STS definition; and the inability to accommodate SMS, despite a requirement for text access from the hearing impaired community.

In addition, customer equipment and associated software applications (apps) are not included in the regulation of emergency communication services.

Lack of overall governance

The overall delivery of the emergency call service increasingly requires coordinated actions across Federal, State and Territory Governments, customer equipment suppliers, Carriers and CSPs, emergency call persons and the various State and Territory ESOs. The absence of a governance framework to direct policy coordination for the ECS has resulted in:

- no overall development of the end-to-end processes and practices required for the handling of emergency communications;
- 'efficiency and effectiveness' tend to be addressed by individual stakeholders rather than across the overall service;
- no formal mechanism to set targets for system enhancements/improvements;
- a lack of policy review before changes are made to the Triple Zero Operator;
- lack of coordination between TUSMA and the ACMA;
- no opportunity for the Triple Zero operator to innovate without regulation e.g. Push MoLI³ could not be implemented without regulating the Triple Zero operator, Carriers and CSPs.

Cost benefit analysis of the current Emergency Communications Service function

The Triple Zero operator call answering operation is a major component of the overall cost of delivery of an emergency service to the caller. Other costs include network costs, call taker costs at the ESOs and the costs of ESO systems.

³ 'Push MoLI' refers to Mobile Location Information associated with an Emergency Call that is pushed from the Mobile Carrier to the ECP, and is defined in Communications Alliance publication **Location Information for Emergency Calls** (G557:2014). See <http://www.commsalliance.com.au/Documents/all/guidelines/g557>

It would be useful if the current system was compared with the option of the States and Territories taking on the call answering functions of Triple Zero operator in their respective State or Territory to determine which option results in the lowest overall national cost in the long term without detriment to emergency callers or ESOs. A factor to consider would be the quantity of emergency calls that require the attendance of multiple ESOs and where the separation of calls into fire, police and ambulance by the Triple Zero operator is not a value adding function.

Inability to use current technology to support emergency services

The current system is unable to exploit the capabilities of customer devices and applications or advanced technologies such as cloud based information in the supply of emergency assistance.

Examples of current capabilities that are not currently utilised are:

- the capability of apps to supply health information about the caller to ESOs;
- access to GPS location information on mobile devices;
- automated call systems e.g. cars, personal response systems and fire alarm systems;
- the supply of incident video, photos etc. directly to ESOs;
- health or other relevant information that may have been posted or stored by customers and accessed by ESOs.

Lack of alignment with international standards

Australia would appear to be behind international developments in the adoption of policy directions and technical frameworks for next generation emergency communication services which are well established in North America and Europe.

Changing community expectations

End users familiar with the use of particular technology devices or applications for their day to day communications may assume that access to ESOs is a 'built in' component or function of those communications but in fact are not.

There is growing expectation in the industry that Australia should have an emergency communications service that can adapt flexibly to changing communications patterns based on current and future end-user needs, including:

- use of next generation technologies for supply of communications and associated information to ESOs;
- the ability of ESO systems to dynamically accept information from end users, communications providers and other sources of information; and
- the use of multimedia communications, noting that there will be an ongoing role for voice services.

SECTION 5 – POLICY FOR FUTURE EMERGENCY COMMUNICATION SERVICE

The outcome of the assessment of the benefits and limitations of the current framework for emergency communications services will need to be factored into the development of a new policy for future services.

The Associations support the development of a new framework including the following:

A flexible, timely and efficient regulatory framework

A new regulatory framework that encompasses the end-to-end perspective of emergency communications services, with an overarching governance framework that has the capability to improve the emergency communications service.

Central to the design of a new objective based framework will be consideration of whether there is a future role for a central Triple Zero operator. For example, will future emergency communications need a mechanism to supply centralised functionality, such as:

- bringing together information and communications from multiple service providers;
- optimising the quantity of physical links into ESOs;
- assessing costs, based on a principle to optimise overall costs, with parties predominantly bearing their own costs; and
- any centralised functions supplied directly by industry.

The Associations also support the development of a set of policy objectives that can be implemented via a governance framework as suggested above. To truly support a world class national emergency call service into the future, including technical innovation, there is a need for greater overarching governance with consideration also given to having the Triple Zero Operator and all ESOs participate in a national governance forum with regard to emergency call handling and response performance.

A governance framework could also lead to strategic planning for the Emergency Call Service including the future technology roadmap.

The adoption of any new service for emergency communications is expected to be linked to an overall benefit to the community. However, some of those services may not have the same underlying technical characteristics as the existing voice service to Triple Zero. A potential roadblock for service providers supporting the use of new services for emergency communications is the liability issues that may arise due to those different characteristics.

It is preferable to avoid the scenario where liability concerns override the delivery of the new emergency communications service and the benefits to the community. The Associations therefore recommend that liability issues be examined as part of the overall governance framework, with specific consideration of whether liability can be limited by the ACMA under existing provisions (e.g. s46 of Division 8, Part 1, Schedule 3 of the *Telecommunications Act 1997*) or excluded, similar to the provisions of section 313 (5) (a) of that Act.

Finally and perhaps most importantly there is a need for an appropriate funding model that supports innovation now and into the future.

The Associations consider that this approach will ensure greater flexibility and responsiveness to manage the delivery of future emergency communication services.

Such an approach will also ensure industry can be responsible for delivering more effective measures to, for example reduce nuisance and malicious calls into the ECS.

Facilitation of new arrangements between ESOs and Service Providers

As discussed above in section 3, the Associations support a review of the relationships between ESOs and service providers that would see a new regulatory framework ensuring:

- ESOs are responsible for communicating with their end customer;
- Carriers and CSPs are responsible for delivering communications to the ESO;
- Carriers and CSPs are responsible for providing any relevant 'dynamic' service information; and
- ESOs are responsible for accessing any relevant static service or customer information.

Funding principles, cost sharing and user charges

The Associations strongly support agreed funding arrangements between the Australian and State and Territory Governments, including agreement to direct Australian Government funding towards the development of sustainable, future based emergency communication capabilities.

This review would also consider how the costs of establishing new emergency communication services will be met. This review would require assessment of other policy parameters, including:

- the potential community that will be served;
- whether or not that community has alternatives (e.g. currently the hearing impaired community has no access to Triple Zero via SMS); and
- whether or not the service is likely to be sustained in the medium to long term.

It would also include a review of whether future emergency voice and other services remain free to all callers. It may not be technically possible to make all future modes of emergency communication to the ESOs completely free. For example, an 'Over the Top' VoIP service running over a mobile or fixed data service may incur data charges for the data service. Use of the 'Over the Top' service for emergency communications may not be possible if the underlying data service is suspended, for example, or if available credit is exhausted.

Further, devices such as mobile phones are built to identify emergency numbers (i.e. 000 and 112) and to permit calls to be made without an active service. No ability exists at this time for other service types to be used for emergency communications where there is no service. Likewise, emergency 'camp on' to the alternative mobile networks, where the home mobile network is not available, is only available for voice services. In the long term, changes to international standards may alter this situation, and Australia may need to contribute to the development of those standards.

Where calls to ESOs are not genuine emergency calls, the costs of servicing the call should be recoverable from the malicious or non-genuine caller. This is no different to the fire brigade charging for the attendance of vehicles to false alarms.

Alignment of technical solutions with international standards

The Associations support maximum utilisation in the new objective based framework of relevant international standards.

Locating users

The most accurate information currently available about the location of an end user of a mobile service is most likely to be contained in a smartphone with GPS capability turned on. Options for accessing this information and conveying that information to ESOs are currently being investigated, however an overall solution needs to be agreed by all stakeholders.

A technical solution for the location of VoIP users has not been determined in overseas markets. Options for the solution to this issue should be sought via investigation of working solutions deployed in other markets.

The supply of location information should take place within the agreed IP technical framework for future emergency communications services.

SECTION 6 – ACHIEVING THE OBJECTIVES OF WORK STREAM ONE AND TWO

For work stream one, the Associations suggest the Department of Communications manage the review process by developing a draft policy approach that addresses the terms of reference detailed under Section 2.

This would be followed by a consultation process with ESOs and industry with the objective of ensuring the review timetable can deliver a set of parameters for the Triple Zero operator tender, due by 23 June 2016.

In terms of work stream two, the Associations consider that in order to achieve the set policy objective it would likely necessitate:

- the establishment of a multi-stakeholder forum to overcome the various silos that currently exist which may inhibit the ability to deliver world class emergency communications in the future;
- taking into account work being:
 - led by the National Emergency Communications Working Group A/NZ (NECWG A/NZ) on developing an Emergency Communications Services (Triple Zero) policy, framework and standards;
 - undertaken to deliver location based services from mobiles for ESOs and SMS access to the Triple Zero service;
- developing a view on whether alternate access technologies for emergency communications are developed as additional primary access sources to existing voice services or serve only as a 'secondary support' option for ESOs, and whether or not an emergency call person is involved, while also considering practical options to manage liability concerns;
- developing Australia's roadmap for future access to emergency communications services and their alignment with international developments, particularly taking into account the work being undertaken in North America and Europe, on the basis that:
 - Australia is a technology taker, not maker;
 - international developments may drive community expectations, and set technical standards and have operational and technical implications for Carriers, CSPs and device manufacturers; and
- stakeholder agreement on a 'roadmap' of how and who funds these innovations and over what time frame the agreed 'alternate access model for triple zero services' would be implemented.

SECTION 7 – CONCLUSION

The Associations consider that the framework it has proposed is necessary to unpack the complex set of policy, regulatory, governance, technical and operational issues associated with Australia’s existing and future emergency communications services and ensure that this unique opportunity for reform is not lost.