



Australian Communications and Media
Authority's
Calling the Emergency Call Service—Review of
Arrangements Discussion Paper

Submission by Communications Alliance and the
Australian Mobile Telecommunication Association

Table of Contents

1	Introduction	3
2	Executive Summary	4
3	Objective-based regulation	5
4	Current arrangements	6
5	Future arrangements	7
6	Non-genuine calls	9
7	Obligations of service providers.....	9
8	112 emergency number	11
9	106 text emergency number.....	11
10	ESO performance.....	11
11	Force Majeure	11
12	Process improvement.....	12

Australian Communications and Media Authority's
Calling the Emergency Call Service—Review of Arrangements
Discussion Paper

Submission by Communications Alliance and the
Australian Mobile Telecommunication Association

1 Introduction

Communications Alliance and the Australian Mobile Telecommunication Association (AMTA) are pleased to have the opportunity to comment on the Australian Communications and Media Authority's Discussion Paper on *Calling the Emergency Call Service—Review of Arrangements* (the Discussion Paper).

Communications Alliance and AMTA believe it is in the best interests of all participants, customers and government that the industry takes responsibility for devising practical, self-imposed solutions that are developed by co-operative processes.

In doing so, Communications Alliance and AMTA seeks to facilitate open, effective and ethical competition between service providers while ensuring efficient, safe operation of networks, the provision of innovative services and the enhancement of consumer outcomes.

Communications Alliance

Communications Alliance is the peak telecommunications industry body in Australia. Its membership is drawn from a wide cross-section of the communications industry, including service providers, vendors, consultants and suppliers as well as business and consumer 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 behavior through industry self-governance.

Australian Mobile Telecommunication Association

AMTA is the Australian mobile industry's peak body. AMTA's members include mobile phone carriers, handset manufacturers, retail outlets, network equipment suppliers and other suppliers to the industry. AMTA's mission is to promote a socially, environmentally and financially responsible and

successful mobile telecommunications industry in Australia. For more details about AMTA, see <http://www.amta.org.au>.

2 Executive Summary

Communications Alliance and AMTA commends the Authority for the important initiative it has undertaken through the issuing of this Discussion Paper.

The themes presented in this paper reflect the views expressed by a number of industry members that contributed to a review session carried out by Communications Alliance and AMTA seeking a joint industry response to the ACMA discussion paper.

The structure of this submission reflects a number of overarching themes that surfaced during the discussions held. Many of the members of Communications Alliance have made submissions directly to ACMA following the question/answer format as presented in the ACMA paper. This submission is intended to be additional input to the submissions of individual members and not to derogate from the individual positions advanced.

It should also be noted that on occasion some of the issues raised in this submission may not represent 100% consensus by all of the participants. This may be evident when comparing to other submissions issued by individual industry members.

Noting the unavailability of a number of members that Communications Alliance approached, the themes have been formulated primarily from the major telecommunications operators, some of which have VoIP-based services. However, limited input has been provided by the smaller VoIP Service Providers. This in itself raises one of the ongoing challenges in engaging the smaller industry participants in ongoing discussions in the formulation of telecommunications regulation.

This submission presents the following ten themes:

- Objective-based regulation
- Current arrangements
- Future arrangements
- Non-genuine calls
- Obligations of service providers
- 112 emergency number
- 106 text emergency number
- ESO performance

- Force Majeure
- Process improvement

3 Objective-based regulation

One of the reoccurring themes identified centres around the current prescriptive approach of the ECS Determination. It has become evident in our discussions that the only effective and sustainable approach is for regulation to be based on high level principles, objectives and outcomes, being supported by industry Codes and Guidelines. Regulations need to be technology and service-type definition neutral, an approach consistent with the objectives of the *Telecommunications Act 1997*. Compliance with the ECS obligations should be based upon call capabilities rather than service types. In support of this approach the following points are made:

1. Reliance of service-type definitions is unworkable due to the continuing merging of technologies. For example, combinations such as VoIP and PMTS, VoIP and satellite, satellite and PMTS are expected to become available in the short to medium term. To independently consider network types and services that operate over these networks is becoming less relevant as the provision of discrete telecommunications services becomes more blurred.
2. There is a risk that in specifying obligations on a per service basis the ECS Determination will become outdated with ongoing technological changes and service developments. Consequentially this could impact the technical and commercial feasibility of new services being able to comply with any ECS obligations and also limit innovation.
3. From a service provider perspective, an objective-based approach will facilitate new entrants in understanding and complying with their obligations and facilitate the introduction of new technologies.
4. Having detailed requirements for particular services, the ECS Determination will require ongoing attention to maintain its coverage of those services in the market place. The risk is that the regulation of these services will lag behind new services entering the market.
5. There will be decreasing utility in differentiating VoIP service providers from other telecommunications service providers as VoIP services will be provided in the future by a variety of carriers and service providers. Services will be provided over broadband networks, the public internet and carrier grade IP telephony services provide by an IP/MPLS network which will replace existing circuit switched PSTN and mobile networks.
6. As the market evolves, it will be increasingly difficult and beyond our expertise to effectively draft proscriptive regulations imposing obligations 1) upon service providers who are not a part of the process and 2) upon services that may yet be introduced.

7. The approach of developing new definitions for services, an example being 'residential customer with single-line service' needs to be critically evaluated as this will lead to increasingly complex and convoluted obligations.
8. Communications services are becoming increasingly mobile. This applies to VoIP as much as any other service, and it may not be possible to determine if a VoIP call is nomadic or not. VoIP capable mobile devices (such as laptops with wireless broadband, mobile phones with Skype clients etc.) render any assumption that the user is at a pre-defined location invalid. The concern is that the benefit and flexibility of mobile devices may be limited. Femtocells, small cellular base stations, which may be portable, provide another example where regulations may restrain technological innovation.
9. Traditional fixed telephone services are often used as a benchmark for regulatory obligations, a concept that is becoming antiquated as there are now many more mobile services than fixed services in Australia.
10. The expectation from an end-user perspective is for services to work without having to be aware of the underlying carriage services and technological constraints. As an example, a desired outcome of the operation of satellite services would be to correctly support emergency calls with the correct Calling Line Identification (CLI).

An approach for a revised ECS framework could be structured along the following lines:

- an ACMA Determination based on high level principles and objectives
- consolidation of industry approaches within codes and guidelines
- CSP statements of how they meet the ECS Determination via an ECS Plan.

An ECS Plan of a CSP would identify how customers can access emergency services for each type of service offered, the degree to which the CSP follows applicable codes and guidelines and any technical and commercial limits that might apply.

4 Current arrangements

Under the existing ECS framework, a number of observations were made if current arrangements are to effectively support emergency services. Central to the framework is ensuring customer information captured in the Integrated Public Number Database (IPND) is current and reliable. It is acknowledged that the IPND has a number of functions beyond that of supporting emergency services and consideration of their relationship is not addressed in this submission. Notwithstanding the issues raised in Section 5 of this submission on the shortcomings of the current arrangements, the following points are made:

1. Currently, the ECS Determination does not sufficiently convey clear obligations to all segments of the industry. One of the issues for consideration is separating the objective for being able to contact the ECP from the role of ancillary services such as caller location.
2. For the IPND to support emergency services, the IPND needs to be populated by service providers with accurate information such as customer name and address information and service type and service location. It is apparent that there scope for errors in the IPND, in particular with the information of customers using VoIP services.
3. The Alternate Address Flag (AAF) and the Standardised Mobile Service Area (SMSA) code of 98x were only introduced as interim measures.
4. The AAF is just one indication, to be used in conjunction with other information, primarily assisting in directing calls to correct State ESO. It should be set to 'true' for all nomadic VoIP services.
5. IP calls must always carry the 98x SMSA code.
6. Emergency Service Organisations (ESOs) need to ensure that their systems are capable of receiving the SMSA for VoIP (the 98x code) and the AAF field flag from the Emergency Call Person (ECP).
7. The CLI of Type 2 VoIP services (call out only) is a media gateway CLI. The VoIP Service Provider needs to provide accurate information of the name of the Provider and the location of the Media gateway to the IPND.

5 Future arrangements

Another theme which surfaced in discussions on ESC regulation is the current approach of defining, capturing and using customer information to support ECS. In the context of this discussion paper, it is generally considered that the concept of the IPND in its current form is not the right model for the future. There are many issues related to data population, data integrity and use which are challenging its ongoing role in relation to identifying customer's details and their location during an emergency call. This information is vital to ESOs and law enforcement agencies and therefore is still needed, particularly in the transition to all IP applications.

There is an apparent underlying assumption that traditional fixed PSTN telephone services should be the benchmark for assessing and evaluating supplementary information about the calls. It is debatable whether it is necessary to implement all the features of fixed PSTN telephone services in other services such as VoIP services. To place the discussion in context, it was noted that eventually the PSTN will be replaced by IP networks.

In the future, it has been suggested that, as one option, a common database (or 'black box') could be implemented that is customer-driven where location information can also be pushed by the provider and

subsequently retrieved by the ECP and ESO as required. ACMA is encouraged to consider such a customer-focused solution.

It was observed that although technical solutions may exist to meet future challenges, the Government should be prepared to consider future capital investment as it is a public good for the whole society rather the cost being borne solely by the industry.

In support of these observations the following points are made:

1. Technology and service concepts have evolved since the ECS Determination was created. There is a separation between IP network layers and the services that run over the networks such as VoIP. The end-to-end process needs to be re-examined to identify sources of information of benefit to ESO's and customers calling the ESO's, and the appropriate methods of conveying that information to ESO's. It was observed that, as an industry, ESOs are behind on adapting new technologies and thus consideration needs to be given on what information is required and how it is to be delivered to ESOs.
2. The current arrangements reflect to a large extent the technology of fixed telephony and associated support systems; the delivery of CLI as part of call signalling and the IPND as a source customer information related to printed directories.
3. Customer information is located with a number of providers involved in the delivery of a VoIP service. For example:
 - the Access Network Provider has the location and service number of physical connection to the ISP.
 - the Internet Service Provider has the IP Address that the ISP has allocated to the broadband Internet service.
 - the VoIP Service Provider has the IP Address of the caller and their Service Identifier.

This information could be fed into the 'black box'. The ECP and the ESO would need the capability to query the 'black box' prompted by the information that has been provided to them by the ECP in the data feed for a particular VoIP call.

4. Future requirements should see ESOs having the capacity to accept and utilise geographic location information that may be provided by VoIP Service Providers who provide nomadic services, or by any other Service Provider. Consideration should also be given to ESOs seeking location information from sources outside telecommunications industry such as such as Australia Post. Any move towards provision of real time information should also be supported by ESOs.
5. There is an increasing need to accommodate direct customer updates of their details and in real time (dynamically). Existing technologies for interfacing with customers over the Internet are prevalent today.

6. In an environment where customers may have links to various services across a variety of service types and service providers, management of potentially duplicated contact information becomes an issue. On the other hand, this also provides an opportunity for users to have the ability to identify alternative contact persons. These issues are particularly significant for ESOs, for example, in contacting persons during Caller No Response (CNR) situations.
7. There is currently no means to automatically and reliably identify the location of a user of a VoIP service. If the service has a nomadic capability and the customer moves location with the service, should the onus be on the customer to update an appropriate online record? To what extent should provision of information be the responsibility of the customer versus the responsibility of the service provider?
8. The ECP could become IP enabled, in other words to have an IP gateway and a VoIP entry point into the ECP. There is a need for a closer look at the way IP addresses can be used to provide location information.
9. There are other issues like security and privacy concerns which will dictate consumer behaviour regardless of the available technologies.

6 Non-genuine calls

Non-genuine calls are of significant concern to the industry. The following points are made:

1. There are currently insufficient measures to address the significant volume of hoax, nuisance, malicious and other non-genuine calls directed to the ECS that affect overall performance and drive industry costs higher than they reasonably should be.
2. These calls have a much greater impact on ECP resources and efficiency than other measures being considered.
3. Consideration should be given to the charging for non-genuine calls and suspending services of repeated non-genuine callers.
4. In the context of the ECS Determination it is suggested that CSPs (including VoIP Service Providers) should be empowered to take reasonable action if they believe that malicious attempts are being made to impede the legitimate activities of the ECS and access to the ECS by genuine emergency callers.

7 Obligations of service providers

Under Section 4 of this submission, it was noted that the ECS Determination does not sufficiently convey clear obligations to all segments of the industry. For example, VoIP Service Providers are CSPs and need to comply with all the existing applicable STS obligations. Concern was noted that in attempting to

lower the compliance bar and pass costs onto traditional carriers, the industry was moving away from a level playing field. A need for better industry education of their obligations was noted. The following points are made in support:

1. The obligations currently in place in legislation and in the industry Code are not considered to be onerous. VoIP Service Providers, like any other Service Provider, must comply with the same obligations as do carriers and CSPs. This includes both audit requirements and compliance with the IPND Industry Code (ACIF C555:2007) and IPND Data Industry Guidelines (ACIF G619:2007).
2. All voice service providers within the industry need to be identified. One approach considered which would achieve this result was in having an obligation upon all voice service providers to submit ECS plans (proposed in Section 3) but on the other hand, service providers should not be allowed to avoid their obligation because they failed to submit an ECS Plan.
3. In applying the obligations fairly, the relationships between ISPs, VoIP Service Providers and end-users (and access to information by the different parties) need to be taken into account.
4. There is a need for greater customer awareness that the service address information captured by the VoIP Service Provider at the point of sale or activation may be used by the ESO in times of an emergency. Customers are entitled to be informed if VoIP Service Providers or service providers do not send reliable and accurate service location information to the IPND. Similarly, information on VoIP services that do not work due to power failure or the customer is unable to make a free call to an ECP or ESO, must be clearly and prominently disclosed to customers.
5. VoIP Service Providers need to have rigorous systems and processes in place to provide reliable CLI and capture a customer's service address information so that the service address information can be sent to the IPND.
6. Existing loopholes in the ECS Determination which create uneven regulatory obligations on service providers competing in the same market will ultimately undermine the integrity of the ECS regime. For example, the construction of a 'bundle' comprised of a *voice out only* service and a *voice in only* service should not be accepted by the regulatory framework as a method of avoiding responsibility to provide connectivity to the ECS.
7. With respect to the 'unreasonableness' test, the thresholds for basic call access to the ECP should be set high. In other words, it should only be the most exceptional of cases where basic call access is not provided on the basis of 'unreasonableness'. The threshold for additional capabilities or information, such as current location, should

be set lower and evaluated against the overall benefit in having basic call access to the ECS via the service in question.

8 112 emergency number

Access to 112 from fixed networks should be allowed if the access provider wishes to enable that access, but only on the provision that it is not advertised. Such access should not be mandated and there should be no obligation to provide as a free call if this is not technically feasible. The following points are made:

1. In Australia, 112 has been reserved for access to emergency services in the numbering plan, so to open access within the fixed network would not be difficult.
2. The boundary between mobile and fixed devices is becoming more blurred which may cause greater confusion to callers when requiring emergency assistance.
3. The use of wireless devices in homes along with local services supported on mobile networks can give rise to inconsistent outcomes.

9 106 text emergency number

The ECS Determination should enable access to 106 in circumstances where the Service Provider is able to provide connectivity and is technically feasible. For example, one approach could be for text calls from VoIP/ToIP services to the 106 ECS number where offered by VoIP Service Providers. The arrangements for text calls to 106 should enable equivalent outcomes to those for voice calls to 000.

10 ESO performance

All emergency calls answered by the ECP should be able to be transferred to ESO within a specified timeframe so that there is to be no queuing of calls between the ECP and ESOs. It has been suggested that ESOs should comply with a guarantee of service that matches the provision in s43 of the ECP Determination.

11 Force Majeure

The ESC Determination contains absolute obligations on carriers and CSPs to provide end users with access to the emergency call service and on the ECP to ensure specified percentages of calls are answered within a set time.

There are no exceptions for force majeure events. Force majeure provisions are not a new concept in the context of telecommunications services provision, e.g. they are included in the Customer Service Guarantee.

A force majeure protection should be included in the ECS Determination given the ECP carries significant obligations and exposures without reward.

12 Process improvement

Currently there is a lack of end-to-end governance in regards to process improvement of the ECS. The ECP has a national focus on process improvement for the Emergency Call Service. The ECS arrangements should be defined at a national level. Consistent with the objectives in s13 of the ECS Determination, adjustment in the ESC arrangements to State and regional preferences should be minimised.