

**COMMUNICATIONS  
ALLIANCE LTD**



INDUSTRY GUIDELINE

G557.1:2014

Location Information for Emergency Calls

Part 1: General

## **G557.1:2014 Location Information for Emergency Calls**

First published as G557.1:2014

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## INTRODUCTORY STATEMENT

The **Location Information for Emergency Calls** Specification (G557:2014) replaces the **Standardised Mobile Service Area and Location Indicator Register** Specification (G557:2009).

The purpose of the changes are to:

- Group together a number of existing specifications of location indication; and
- Add requirements for Push Mobile Location Information (MoLI) (i.e. in part 5).

G557 consists of the following parts under the general title **Location Information for Emergency Calls**:

- *Part 1: General (this document);*
- *Part 2: Standardised Mobile Service Area and Location Indicator Register (previously G557:2009);*
- *Part 3: Location Independent Communications Service Location Indicator for Emergency Services Signalling (previously G629:2009);*
- *Part 4: Mobile Location Information (MOLI) Processes For Emergency Calling And Rescue Coordination (previously G643:2012); and*
- *Part 5: Push Mobile Location Information (MoLI) Interface To Enhanced Calling Line Identification System (ECLIPS).*

The **Location Information for Emergency Calls** Specification (G557:2014) is designed to:

- group together a number of existing specifications of location information for emergency calling; and
- define an interface for the transfer of Push MoLI between a Mobile Carrier and ECLIPS for an Emergency Call.

James Duck  
Chair

**Push Mobile Location Information Working Committee**

MARCH 2014

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# 1 GENERAL

## 1.1 Introduction

- 1.1.1 The development of the Specification has been facilitated by Communications Alliance through a Working Committee comprised of representatives from the telecommunications industry.
- 1.1.2 The Specification should be read in the context of other relevant codes, guidelines and documents.
- 1.1.3 The Specification should be read in conjunction with related legislation and regulatory arrangements, including:
  - (a) the *Telecommunications Act 1997 (Cth)* (the Act);
  - (b) *Telecommunications (Consumer Protection and Service Standards) Act 1999 (Cth)* (TCPSS); and
  - (c) the *Telecommunications (Emergency Call Service) Determination 2009* (the Determination).
- 1.1.4 If there is a conflict between the requirements of the Specification and any requirements imposed on a Carrier or CSP by statute, the Carrier or CSP will not be in breach of the Specification by complying with the requirements of the statute.
- 1.1.5 Compliance with this Specification does not guarantee compliance with any legislation. The Specification is not a substitute for legal advice.
- 1.1.6 Statements in boxed text are a guide to interpretation only and not binding as Specification rules.

## 1.2 Regulatory Arrangements

The Specification is referenced by the Australian Communications and Media Authority under the Determination.

*NOTE: Section 49(3) and section 52A(1) of the Determination are of interest to a Mobile Carrier or CSP in relation to obligations about Mobile Location Information.*

## 1.3 Scope

- 1.3.1 The Specification applies to the following sections of the telecommunications industry as defined in section 110 of the Act:
  - (a) Carriers; and
  - (b) Carriage Service Providers (CSPs).
- 1.3.2 The Specification applies to the Emergency Call Person (ECP).

- 1.3.3 It deals with the following telecommunications activities as defined in section 109 of the Act:
- (a) carrying on business as a Carrier; or
  - (b) carrying on business activities as a CSP; or
  - (c) supplying Goods or Service(s) for use in connection with the supply of a Listed Carriage Service.
- 1.3.4 It deals with the provision of Emergency Call services, a telecommunications activity as defined in Part 8 of the TCPSS.
- 1.3.5 This Part of the Specification is an Index for the subsequent parts of G557.

## **1.4 Objectives**

The objectives of the Specification are:

- (a) to define the Standardised Mobile Service Areas (SMSAs) and their corresponding 3 digit 'ABC' codes for use in the signalling of caller location for Emergency Calls;
- (b) to specify the industry procedures for the transfer of correct caller location information from CSPs supplying a Location Independent Communications Service (LICS) and their respective Transit Service Deliverers to the ECP for Emergency Calls;
- (c) to describe the "Pull" processes to be used by Mobile Carriers to provide the MoLI of an active mobile Customer Equipment (CE) to an Emergency Service Organisation (ESO) or the Australian Maritime Safety Authority in response to an authorised request about an Emergency Call; and
- (d) to define an interface for the transfer of Push MoLI between a Mobile Carrier and ECLIPS for an Emergency Call to 000 or 112 originating from a CE that communicates with the macro Base Transceiver Station (BTS) of a Mobile Carrier while the Emergency Call is in progress.

## **1.5 Specification review**

The Specification will be reviewed 5 years after publication, or earlier in the event of significant developments that affect the Specification or a chapter within the Specification.

## 2 ACRONYMS, DEFINITIONS AND INTERPRETATIONS

### 2.1 Acronyms

For the purposes of the Specification:

**ACMA**

means the Australian Communications and Media Authority.

**BTS**

means Base Transceiver Station.

**CE**

means Customer Equipment.

**CSP**

means Carriage Service Provider.

**ECLIPS**

means Enhanced Calling Line Identification Processing System.

**ECP**

means Emergency Call Person.

**ESO**

means Emergency Service Organisation.

**LICS**

means Location Independent Communications Service.

**MoLI**

means Mobile Location Information.

**SMSA**

means Standardised Mobile Service Area.

### 2.2 Definitions

For the purposes of the Specification:

**Act**

means the *Telecommunications Act 1997 (Cth)*.

**Carriage Service Provider**

has the meaning given by section 87 of the Act.

**Carrier**

has the meaning given by section 7 of the Act.

**Customer Equipment**

has the meaning given by section 21 of the Act.

**Determination**

means the *Telecommunications (Emergency Call Service) Determination 2009*.

**Enhanced Calling Line Identification Processing System**

means the system used by the ECP for Emergency Calls to 000 and 112 to extract CLI associated with an Emergency Call.

**Emergency Call**

has the meaning given by the Determination.

**Emergency Call Person**

has the meaning given by section 7 of the Act.

**Emergency Service Organisation**

has the meaning given by the Determination.

**Location Independent Communications Service**

has the meaning given by the Determination .

**Mobile Location Information**

means information that is available about the approximate location of the CE of an end user on a public mobile telecommunications service.

**Mobile Carrier**

has the meaning given by section 52A (1) of the Determination.

**Push MoLI**

has the meaning given by Part 5 of G557.

**Transit Service Deliverer**

means a service deliverer contracted through an interconnection agreement to provide a transit service between service deliverers.



## **2.3 Interpretations**

In the Specification, unless the contrary appears:

- (a) headings are for convenience only and do not affect interpretation;
- (b) a reference to a statute, ordinance, code or other law includes regulations and other instruments under it and consolidations, amendments, re-enactments or replacements of any of them;
- (c) words in the singular includes the plural and vice versa;
- (d) words importing persons include a body whether corporate, politic or otherwise;
- (e) where a word or phrase is defined, its other grammatical forms have a corresponding meaning;
- (f) mentioning anything after include, includes or including does not limit what else might be included;
- (g) words and expressions which are not defined have the meanings given to them in the Act; and
- (h) a reference to a person includes a reference to the person's executors, administrators, successors, agents, assignees and novatees.

## 3 INDEX INFORMATION

### 3.1 Introduction

G557 consists of the following parts under the general title Location Information for Emergency Calls:

- (a) Part 1: **General** (this document);
- (b) Part 2: **Standardised Mobile Service Area and Location Indicator Register** (previously G557:2009);
- (c) Part 3: **Location Independent Communications Service Location Indicator for Emergency Services Signalling** (previously G629:2009);
- (d) Part 4: **Mobile Location Information (MOLI) Processes For Emergency Calling And Rescue Coordination** (previously G643:2012); and
- (e) Part 5: **Push Mobile Location Information (MoLI) Interface To Enhanced Calling Line Identification System (ECLIPS)**.

### 3.2 The Parts of G557

- 3.2.1 Part 2 is a pack of 5 compressed files that define the SMSAs for use in the signalling of caller location and 2 spreadsheets containing the SMSAs and their corresponding 3 digit 'ABC' codes for caller location. The 5 compressed files were prepared in MapInfo™ and you will need relevant software to be able to read/view the files. For those unable to view map files there are also some spreadsheets with summary information available from the G557 webpage (refer to the list of References for a link).
- 3.2.2 Part 3 specifies the industry procedures for the transfer of correct caller location information from CSPs supplying a LICS and their respective Transit Service Deliverers to the ECP for Emergency Calls.
- 3.2.3 Part 4 describes the "Pull" processes to be used by Mobile Carriers to provide the MoLI of an active mobile CE to an ESO or the Australian Maritime Safety Authority in response to an authorised request about an Emergency Call.
- 3.2.4 Part 5 defines an interface for the transfer of Push MoLI between a Mobile Carrier and ECLIPS for an Emergency Call to 000 or 112 originating from a CE that communicates with the macro BTS of a Mobile Carrier while the Emergency Call is in progress.

### 3.3 The use and interpretation of location information

In these Specifications, unless the contrary appears:

- (a) the location information is derived from information obtained from the networks or facilities of a Carrier or CSP in the delivery of Emergency Calls to the ECP.
- (b) the location information represents an estimate with limited accuracy by the networks or facilities of a Carrier or CSP of the approximate geographic location with an area of uncertainty of the CE used by a caller to make an Emergency Call.
- (c) the availability, accuracy and area of uncertainty of the location information provided by each network or facility of a Carrier or CSP is dependent on (but is not limited to) its design, age, construction, operation, equipment, network architecture or geographic configurations, number of cell towers and technologies.
- (d) consideration must be given by the user of the location information that not all networks or facilities of a Carrier or CSP use the same geographic mapping methodologies, mathematical algorithms or the interpretation of international standards in order to estimate with limited accuracy a CE's approximate physical location with an area of uncertainty.
- (e) users of this location information must not use, interpret or treat the provision of the location information as an "absolute" physical location of the CE but should instead use this location information in conjunction with all available location information (including the service address from the integrated public number database) and the information, where available, provided by the emergency caller.
- (f) The provision of Push MoLI under Part 5 is a relatively new technology development with very few operator deployments globally at time of publication. There remains a possibility that under some circumstances that Push MoLI location information may either not be available or is less precise than the SMSA information provided under Part 2 during Push MoLI's introduction period in Australia due to a variety of technical & operational factors.
- (g) Depending on the specific Emergency Call scenario, one or more of the procedures described in the different parts of G557 may be applicable. In the specific case of PMTS originated Emergency Calls, SMSA Indicators (G557.2), "Pull" MoLI (G557.4) and Push MoLI (G557.5) may all apply.
- (h) Where both Push MoLI and SMSA information is provided for an Emergency Call:
  - a. The Push MoLI information is expected to provide a more precise location than SMSA information;
  - b. The SMSA indicator provided may be used as a secondary point of reference; and

- c. If there is found to be any inconsistency between the Push Moll and SMSA information (e.g. the location areas indicated by Push MoLI is not within the SMSA), then it is recommended that the ECP and ESOs use the SMSA information along with other available location information in preference to the Push MoLI information, as SMSA codes have been found reliable as the primary source of location information since 1990.
- d. The ECP and/or ESO should report the Push MoLI location area inconsistency to the Mobile Carrier as a fault;
- e. The Mobile Carrier should review the reported inconsistency and where appropriate, apply correction to its underlying systems or databases.

## 4 REFERENCES

<b>Publication</b>	<b>Title</b>
<b>Industry Specification</b>	
G557:2014	Location Information for Emergency Calls  Part 1: General  Part 2: Standardised Mobile Service Area and Location Indicator Register  Part 3: Location Independent Communications Service Location Indicator for Emergency Services Signalling  Part 4: Mobile Location Information (MOLI) Processes For Emergency Calling And Rescue Coordination  Part 5: Push Mobile Location Information (MoLI) Interface To Enhanced Calling Line Identification Processing System (ECLIPS)  <a href="http://commsalliance.com.au/Documents/all/guidelines/g557">http://commsalliance.com.au/Documents/all/guidelines/g557</a>
<b>Legislation and Regulation</b>	
	<i>Telecommunications Act 1997</i>  <a href="http://www.comlaw.gov.au/Series/C2004A05145">http://www.comlaw.gov.au/Series/C2004A05145</a>
	<i>Telecommunications (Emergency Call Service) Determination 2009</i>  <a href="http://www.comlaw.gov.au/Series/F2009L04720">http://www.comlaw.gov.au/Series/F2009L04720</a>

## **PARTICIPANTS**

The Working Committee that developed the Specification consisted of the following organisations and their representatives:

<b>Organisation</b>	<b>Membership</b>	<b>Representative</b>
Optus	Voting	Sam Mangar
Optus	Non-voting	Terry Gillesie
Optus	Non-voting	Michael Elsegood
Telstra	Voting	Jane Elkington
Telstra	Non-voting	Kandiah Arulventhan
Telstra	Non-voting	Michael Ryan
Vodafone Hutchison Australia	Voting	Alexander Osborne
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Vodafone Hutchison Australia	Non-voting	Jon Fripp

This Working Committee was chaired by James Duck of Communications Alliance who also provided project management support.

Communications Alliance was formed in 1997 to provide a unified voice for the Australian communications industry and to lead it into the next generation of converging networks, technologies and services.

In pursuing its goals, Communications Alliance offers a forum for the industry to make coherent and constructive contributions to policy development and debate.

Communications Alliance 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.

It is committed to the achievement of the policy objective of the *Telecommunications Act 1997* - the greatest practicable use of industry self-regulation without imposing undue financial and administrative burdens on industry.



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