



EENA Operations Document

Emergency Silent, Hang-Up and Abandoned 112 Calls

Title:	Emergency silent, hang-up and abandoned 112 calls		
Version:	1.0		
Code:	3.1.3_SC_v0.2.doc		
Revision Date:	27-10-2011		
Status of the document:	Draft	For comments	Approved



ABSTRACT

Dealing with silent, hang-up, and abandoned 112 calls can be a real challenge for emergency services. In many cases such calls may be genuine emergency calls by people with hearing or speaking impairments, by people who lost conscience after they initiated the call or by people who cannot speak because they are involved in dangerous situations like robberies, kidnappings etc. Furthermore, hang-up calls may occur in cases of network unavailability or in case of failure or damage of the device initiating.

In most of the above situations calling back is not be an option for the emergency services, because the caller may not be able or willing to respond or because calling back is impossible. Facing the problem of silent, hang-up, and abandoned 112 calls requires the extensive deployment of technological solutions such as caller location, storing phone/IMEI numbers of callers, possibility to communicate with the emergency services using SMSs or total conversation solutions and/or other means of communication (e.g. instant messaging, email, video).



Contributors to this document

This document was written by members of the EENA Operations Committee:

Call Taking Subcommittee	Members	Country / Organisation
Blaaha	Manfred	Federal Ministry of the Interior - AT
Brincat	Mark B	Civil Protection Department - MT
Casse	Bertrand	Andrew
Claasen	Alex	Avaya
Cherri	Marco	Individual consultant
Dawson	Martin	Andrew
Gillies	Jim	Global Crossing
Gomez	Iratxe	Siemens IT Solutions and Services (SIS)
Gorrochategui	María	Teltronic
Gramatikov	Stoyan	Ministry of Emergency Situation - BG
Grososiu	Andrei	Special Telecommunications Service -RO
Hines	Stephen	London Ambulance Service NHS Trust -UK
Jänin	Gregor	Disponet
Lumbreras	Cristina	EENA
Machado	Gary	EENA
Maroscikas	Tadas	Lithuanian Emergency Response Centre -LT
Martins	Carlos	Polícia de Segurança Pública - PT
Medland	John	BT
Norman	Jerry	AVAYA
O'Brien	Tony	Commission for Communications Regulation -IE
Sammut	Trevor	Police General Headquarters - Information Technology Section - MT
Seddik	Farid	Newtel
Terpstra	Tjerk	Individual consultant
Thimonier	Pierre	Alcatel-Lucent
Tiquet	Éric	Cap-Gemini
Tschofenig	Hannes	IETF/EENA
Van Alphen	Willem	Netherlands Police Agency (Klpd) - NL
Weynants	Alex	Newtel
Wittmann	Helmut	Siemens-Enterprise



Table of contents

1	Introduction.....	5
2	Definitions	5
2.1	Classification of the calls	5
2.1.1	Silent 112 calls	5
2.1.2	Hang up 112 calls	5
2.1.3	Abandoned calls.....	6
3	Procedure.....	6
4	Technology	7
5	Recommendations	8
6	EENA Requirements	8



1 Introduction

All emergency services are affected by silent, hang-up calls and abandoned 112 calls. It is very difficult for call takers to decide whether these types of calls are real emergency calls or not. The number of these calls is enormous and the vast majority are not real emergency calls.

The objective of this Operations document is to describe possible cases where silent, hang-up and abandoned 112 calls correspond to real emergencies, assemble all information about this issue and outline some of the 'best practices' from the authorities' perspective. This document is in some aspects linked to the "False Emergency Calls" EENA Operations document where cases of abuse and misuse of 112 are detailed.

2 Definitions

2.1 Classification of the calls

For a common understanding of the problem calls can be categorised as follows:

2.1.1 Silent 112 calls

Someone has dialled 112 and the call has successfully been answered by a 112 operator. No voice communication is heard. In some case, background sounds can be heard.

In the majority of cases, a silent call is not linked with a real emergency, but there are some situations in which the caller might be in an emergency situation. The intention of this section of the document is to establish all the possible situations that may occur:

Silent emergency calls	
Type of call	Comments / examples
Hearing/ speaking-impaired person	The person can be in a real emergency situation but is not capable to speak and/or hear that the call has been answered.
Situation does not allow caller to speak	The caller is in an emergency situation, (s)he is able to establish a 112 call, but the situation does not allow him to speak (e.g. kidnapping).
Person unconscious or unable to speak	The caller has been able to dial 112 but after establishing the call (s)he is no longer able to communicate. (e.g. the caller loses conscience)

2.1.2 Hang up 112 calls

Someone has dialled 112 and the call has successfully been answered by a 112 operator. The caller did not talk and hung up after the operator has spoken to him.

Hang-up emergency calls	
Type of call	Comments / examples
Situation does not allow caller to speak	The caller is in an emergency situation where (s)he has been able to establish a 112 call, but (s)he is obliged to hang-up before being able to describe the situation. e.g. witness of a robbery
Problems with signal	The caller is able to establish a 112 call, but unexpectedly, due to signal problems the call is interrupted e.g. no network coverage
Problems with the device	The caller is able to set up a 112 call but the call is interrupted due to problems with the device. e.g. battery problem



2.1.3 Abandoned calls

Someone has dialled 112. The caller has hung up prior call has been answered by an operator.

Abandoned emergency calls	
Type of call	Comments / examples
Situation does not allow caller to speak	The caller is in an emergency situation where (s)he has been able to establish a 112 call, but (s)he is obliged to hang-up before being able to describe the situation. e.g. kidnapping
Problems with signal	The caller is able to establish a 112 call, but unexpectedly, due to signal problems the call is interrupted e.g. mobile network coverage lost
Problems with the device	The caller is able to set up a 112 call but the call is interrupted due to problems with the device. e.g. battery problems

3 Procedure

In this section the possibilities to establish a common procedure to handle these types of calls have been analysed. The phone number of the caller is the only link to the person who has tried to contact the emergency services. It can be used to call back the person in an emergency situation, but, as is explained in the following tables, calling-back may not be useful.

Silent emergency calls		
Type of call	Comments / examples	Procedure
Hearing/ speaking-impaired person	The person may be in a real emergency situation but is not capable to speak and/or to hear that the call has been answered.	In this case, calling back could be only useful if the person with the hearing/speaking-impairment could establish some type of communication. Hearing and speaking impaired persons need to have alternative means to contact emergency services.
Situation does not allow caller to speak	The caller is in an emergency situation, (s)he is able to establish a 112 call, but the situation does not allow him to speak (e.g. kidnapping).	Emergency services should try to contact this person, but if they call-back, the situation may become worse. In this case, the caller could be helped only if (s)he has the possibility to communicate with other means (e.g. sms, text messaging) with the emergency services.
Person unconscious or unable to speak	The caller has been able to dial 112 but after establishing the call (s)he is no longer able to communicate. (e.g. the caller loses conscience)	In this case, calling back is not useful. Availability of additional data about the call (e.g. medical data) could help emergency services.



Hang-up emergency calls Abandoned emergency calls		
Type of call	Comments / examples	Procedure
Situation does not allow caller to speak	The caller is in an emergency situation where (s)he has been able to establish a 112 call, but (s)he is obliged to hang-up before being able to describe the situation. e.g. witness of a robbery	Emergency services should try to contact this person, but if they call-back, the situation may become worse. In this case, the caller could be helped only if (s)he has the possibility to communicate with other means (e.g. sms, text messaging) with the emergency services.
Problems with signal	The caller is able to establish a 112 call, but unexpectedly, due to signal problems the call is interrupted e.g. no network coverage	Emergency services will not be able to communicate with the caller even if they try to call him back. If national roaming is available, the caller will be able to call again 112. It could be conceivable that national roaming is available for receiving calls from a PSAP.
Problems with the device	The caller is able to set up a 112 call but the call is interrupted due to problems with the device. e.g. battery problem	Emergency services will not be able to communicate with the caller even if they try to call him back. In case of abandoned calls, information about the location of the caller may not be available.

4 Technology

Technology can also help emergency services to assist people in distress in case of silent, abandoned and hang-up calls, through the following.

- Location of the caller¹: the operator can find out the address from where the call was initiated.
- Possibility to check if more calls have been received from the same caller: storing the phone / IMEI number of a caller who has made silent, abandoned and hang-up calls can be very useful in order to decide whether these calls correspond to real emergency situations.
- SMS: some emergency services use SMS as a means to communicate with callers².
- Total conversation: Total Conversation is a combination of three media in a conversational call: video, real-time text and audio. Total conversation services through the Internet and terminals are deployed in a number of countries in Europe, and adopted by people with disabilities who, for example, need video for sign language or real-time text for text based conversations or as complement to voice conversations³.
- Other means of communication with emergency services: technologies like instant messaging, email, video, etc. are available.
- Statistics: the storage and classification of data can be very helpful.

¹ See 2.2.2 Caller Location in Support of Emergency Services EENA Operations Document

² See 2.1.2 SMS EENA Operations Document

³ See 3.1.6 Accessibility of 112 for people with disabilities EENA Operations Document



5 Recommendations

In this document some situations linked with silent, hang-up and abandoned calls can be real emergency calls. Calling-back is not always useful, and in some cases, it can even make the situation worse. The only way to solve this kind of situations is by allowing access to 112 through means of communication other than the voice call, without additional overload of PSAPs with false emergency calls.

6 EENA Requirements

Requirements	
Statistics	Available
Means of communication for people with disabilities	The PSAP is accessible for people with disabilities.
Means of communication with ES	The PSAP is accessible by at least some other means of communication by all citizens