ATIS-0700013

ATIS Standard on -

IMPLEMENTATION GUIDELINES FOR
MOBILE DEVICE SUPPORT OF MULTI-LANGUAGE CMAS

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ATIS-0700013, *Implementation Guidelines for Mobile Device Support of Multi-Language CMAS*

Is an ATIS Standard developed by the **Mobile/Wireless GSM/3G System and Network (G3GSN) Subcommittee** under the **ATIS Wireless Technologies and Systems Committee (WTSC)**.

ATIS-0700013

ATIS Standard on

Implementation Guidelines for
Mobile Device Support of Multi-Language CMAS

Alliance for Telecommunications Industry Solutions

Approved April 2012

Abstract

This Standard provides implementation guidelines and principles for the support of multiple language Cell Broadcast message by mobile devices. This Standard defines a common set of implementation guidelines for GSM, UMTS, and E-UTRAN mobile devices.

Foreword

The Alliance for Telecommunication Industry Solutions (ATIS) serves the public through improved understanding between providers, customers, and manufacturers. The Wireless Technologies and Systems Committee (WTSC) develops and recommends standards and technical reports related to wireless and/or mobile services and systems, including service descriptions and wireless technologies. WTSC develops and recommends positions on related subjects under consideration in other North American, regional and international standards bodies.

The mandatory requirements are designated by the word *shall* and recommendations by the word *should*. Where both a mandatory requirement and a recommendation are specified for the same criterion, the recommendation represents a goal currently identifiable as having distinct compatibility or performance advantages. The word *may* denotes a optional capability that could augment the standard. The standard is fully functional without the incorporation of this optional capability.

Suggestions for improvement of this document are welcome. They should be sent to the Alliance for Telecommunications Industry Solutions, WTSC,1200 G Street NW, Suite 500, Washington, DC 20005.

At the time of consensus on this document, WTSC, which was responsible for its development, had the following leadership:

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The Mobile/Wireless GSM/3G System and Network (G3GSN) Subcommittee was responsible for the development of this document.

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Implementation Guidelines for Mobile Device Support of Multi-Language CMAS

1 Scope, Purpose, & Application

1.1 Scope

The scope of this Standard is to provide implementation guidelines and principles for mobile device support of multiple language Commercial Mobile Alert System (CMAS) messages. This Standard defines a common set of implementation guidelines for GSM, UMTS, and E-UTRAN mobile devices.

1.2 Purpose

This Standard defines mobile device principles for the support of multiple language CMAS messages.

1.3 Application

This Standard focuses on the mobile device behavior implementation guidelines and principles associated with the receipt and processing of CMAS messages in multiple languages.

2 Normative References

The following standards contain provisions which, through reference in this text, constitute provisions of this ATIS Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this ATIS Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

[Ref 1] J-STD-100, *Joint ATIS/TIA CMAS Mobile Device Behavior Specification*; January 30, 2009.[1]

[Ref 2] 3GPP TS 23.041, *3rd Generation Partnership Project; Technical Specification Group Core Network and Terminals; Technical realization of Cell Broadcast Service (CBS).*[2]

3 Definitions, Acronyms, & Abbreviations

3.1 Definitions

For a list of common communications terms and definitions, please visit the *ATIS Telecom Glossary*, which is located at < http://www.atis.org/glossary >.

3.2 Acronyms & Abbreviations

ATIS	Alliance for Telecommunications Industry Solutions
CB	Cell Broadcast

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[1] This document is available from the Alliance for Telecommunications Industry Solutions (ATIS) < http://www.atis.org >
[2] This document is available from the 3rd Generation Partnership Project (3GPP) < http://www.3gpp.org/ >

CBS	Cell Broadcast Service
CMAS	Commercial Mobile Alert System
CMSP	Commercial Mobile Service Provider
E-UTRAN	Evolved UMTS Terrestrial Radio Access Network
GSM	Global System for Mobile Communications
TIA	Telecommunications Industry Association
UMTS	Universal Mobile Telecommunication System

4   Mobile Device Principles

4.1   Principle #1 - Main Language and Additional Languages

Mobile device shall be able to distinguish and handle CMAS messages in multiple languages as specified in 3GPP TS 23.041 [Ref 2].

In the US, English is the main language for CMAS messages and Spanish is one example of an additional language for CMAS messages. As specified in 3GPP TS 23.041 [Ref 2], the mobile device shall use the CBS Message Identifier values in the range 4370-to-4382 to identify a CMAS message in the main language. The CBS Message Identifier values in the range 4383-to-4395 identify a CMAS message in an additional language. The language indicator present within the Data Coding Scheme information element of the CBS message shall identify the actual language of the CMAS alert text.

4.2   Principle #2 - English Plus Additional Language CMAS Messages

CMAS messages in languages other than English may not be available in all locations in the US. Based upon Principle #1, with English as the main language and Spanish as the additional language, the mobile device shall exhibit the following behavior:

- When not configured to receive and present the CMAS messages in Spanish, receive and present CMAS messages only in English.
- When configured to receive CMAS messages in Spanish, receive and present CMAS messages in English and Spanish.

4.3   Principle #3 - Additional Language CMAS Message Configuration Option

Mobile devices that will be able to receive and present CMAS messages should have a mechanism for subscribers to indicate that they want to receive CMAS messages in additional languages. This configuration option shall enable the presentation of the non-English CMAS messages in addition to the presentation of the English version of the CMAS message. This configuration option shall be an "other language too" option rather than an "English plus other language" option.

The additional language CMAS message configuration option could be an explicit configuration menu option on the mobile device or could be based upon the preferred language setting of the mobile device.

4.4   Principle #4 - Additional Language CMAS Message Configuration Option to Support Roaming

Mobile devices shall be able to support the configuration of one or more languages as additional languages. To support roaming, English (the main CMAS language in the US) may also be identified as an additional language.

For example, with English configured as an additional languages in the mobile device, users roaming to a foreign county where the English is broadcast as an additional language will be able to receive alerts in English in that country, following Principle #1.

4.5 Principle #5 - CMAS Message Opt-Out Options Language Independence

The capabilities for the subscriber to opt-out of certain types and classes of CMAS messages shall be language independent. If a subscriber opts out of a particular type of CMAS message, then that opt-out selection applies to all CMAS messages of that particular type, regardless of the language of the CMAS message.

The CMAS alert opt-out options defined in clause 10.1 of the J-STD-100, *Joint ATIS/TIA CMAS Mobile Device Behavior Specification* [Ref 1] shall be language-independent. These opt-out options apply equally to CMAS alert messages in any language, including English. There shall not be separate CMAS alert opt-out options for each possible language.

4.6 Principle #6 - Language Independent CMAS Messages

The mobile device shall treat CMAS messages received in multiple languages independently. For example:

1. The mobile device will not try to correlate an English CMAS message with the equivalent Spanish CMAS message (e.g., if the mobile device is receiving weather information in both English and Spanish, the mobile device will not try to correlate the equivalent CMAS messages for the weather information).
2. The receipt of a CMAS message in a language other than English will have no implication on the presentation of the equivalent English CMAS message.
3. The duplicate CMAS message detection for Spanish CMAS message will be independent of the duplicate CMAS message detection for any equivalent English CMAS message. The duplicate CMAS detection in a language will be independent of the duplicate CMAS message detection for an equivalent CMAS message in another language.

4.7 Principle #7 - Presentation of Language Independent CMAS Messages

When CMAS messages in multiple languages are received simultaneously, they shall be presented in the same manner as multiple simultaneous CMAS messages received in the same language.

4.8 Principle #8 - CMAS Messages Based Upon GSM 7-Bit Alphabet

CMAS messages are encoded based upon the GSM 7-bit alphabet; however, characters with tildes or accents may be represented by the closest equivalent letter available in the GSM 7-bit alphabet.

4.9 Principle #9 - Non-English CMAS Messages Longer Than Equivalent English CMAS Message

A non-English CMAS message will generally be longer than the equivalent English CMAS message. The mobile device shall be able to receive and present non-English CMAS messages that are longer than the equivalent English CMAS message.

For example, CMAS messages are Cell Broadcast messages and the English version of CMAS messages is limited to 90 English characters. However, an equivalent CMAS message in Spanish is longer than 90 characters and could be up to 150 characters in length.

4.10 Principle #10 - Conformance with J-STD-100 MDB Specification

The support of CMAS messages in any language shall follow the mobile device behavior specified in J-STD-100, *Joint ATIS/TIA CMAS Mobile Device Behavior (MDB) Specification* [Ref 1].

A   Flow Chart to Illustrate Mobile Device Principles

This informative Annex presents the steps mobile devices execute to handle multi-language CMAS messages. The flow chart also shows the steps mobile device execute to handle the opt-out requirements of CMAS message reception and display.
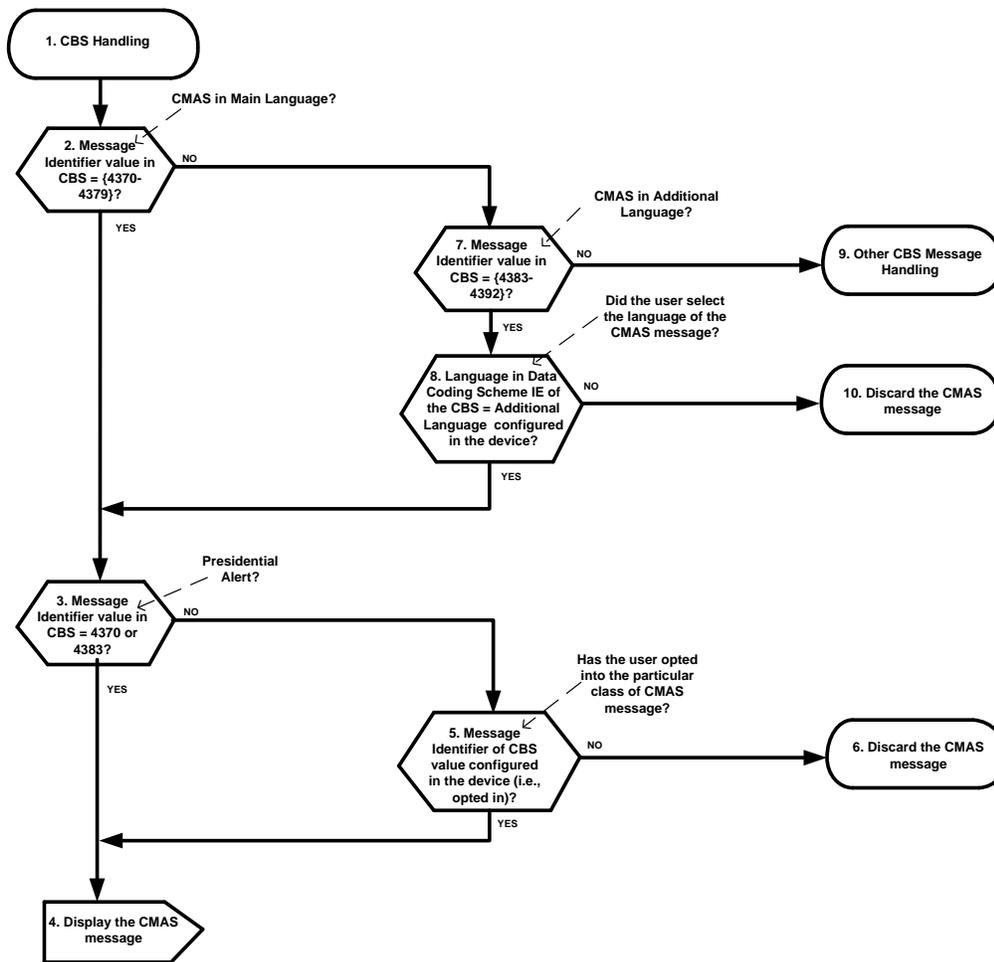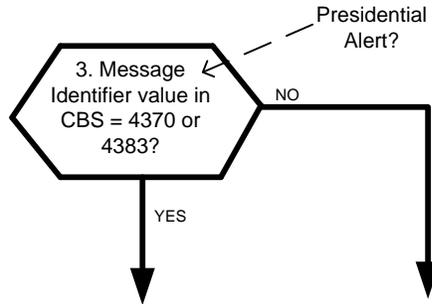

Figure 1: Flow Chart Illustrating Mobile Device Principles with Multi-language Support

The CMAS alert message is displayed if it was not previously displayed. The descriptions shown inside the boxes of the flow chart are the functions performed within the mobile devices in order to accomplish the CMAS functions identified outside of the boxes.

For example:

> A Message Identifier value is compared to the value 4370 and to 4383 (shown inside the box) in order to determine whether or not a CMAS message corresponds to a Presidential Alert (shown outside the box).

Presidential
Alert?

3. Message
Identifier value in
CBS = 4370 or
4383?

NO

YES

Even though the flow chart uses the term CBS, the flow chart is applicable to GSM, UMTS, and E-UTRAN access technologies. In GSM and UMTS, the CMAS messages are broadcast by the CMSP network using the Cell Broadcast Service capabilities. In E-UTRAN, the CMAS messages are broadcast by the CMSP network using Pubic Warning System capabilities.