
TECHNICAL SPECIFICATION

Enabling Cell Broadcast for National Public Warning Service (UAE-Alert)

TS FS 001, Version 2.0

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Telecommunications Regulatory Authority (TRA)
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TS FS 001, Version

VERSION CONTROL

Version:	Issue Date:	Reason for Issuance:
1.0	01 January 2016	First version
Draft, 0.1	12 September 2019	First draft issued to Mobile vendors for comment
2.0	November 25, 2019	Updated National Emergency Crisis and Disaster Management Authority comments.

TABLE OF CONTENTS

1	GENERAL REQUIREMENTS	3
2	SCOPE	3
3	DEFINITIONS	3
4	TECHNICAL REQUIREMENTS	4
4.1	MOBILE TECHNICAL SPECIFICATION	4
4.2	SPECIFICATIONS	4
4.3	FEATURE PHONES	5
4.4	SMART PHONES	6
5	VALIDITY OF STANDARDS	7
6	EFFECTIVE DATE	7

TS FS 001, Version

1 General requirements

Technical specification has been prepared and approved by Telecommunications Regulatory Authority (TRA) based on Telecommunication apparatus Type Approval Regime.

Several technical specifications may apply to the equipment. If equipment within the scope of this technical specification also incorporates functions that are covered by another technical specification, the relevant technical specification is applied to each function separately. The influence of one function on the other is taken into account.

2 Scope

The Government of the United Arab Emirates developed a National Public Warning Service (UAE-Alert) which will use the cell broadcast technology to disseminate warning alerts issued by authorities to the public in times of crisis and therefore is required to have effective, high quality communication methods and systems to meet this need. One of the channels is the mobile networks in the UAE through Cell Broadcast technology. The main scope of this specification is to enable Cell Broadcast service in all mobile devices operating in the UAE mobile networks.

3 Definitions

Unless the context requires otherwise, the expressions and wordings appearing in Federal Law by Decree No. (3) of 2003 Regarding the Organisation of the Telecommunications Sector shall have the same meaning ascribed thereto in the above-mentioned Federal Law by Decree, and the following expression and wording shall have the following meanings assigned there to:

Public Warning Service (UAE-Alert)

the system deployed to provide an advance and instance public warning about emergency cases and disaster situations by utilizing different channels and media's

Cell Broadcast Service (CBS)

means broadcasting of messages to the mobile phones of a large number of citizens in a specific location within specific time frame. The area can be as small as one cell and as big as the entire network.

TS FS 001, Version

4 Technical Requirements

4.1 Mobile technical specification

ETSI TS 123 041 Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); Technical realization of Cell Broadcast Service (CBS) (3GPP TS 23.041 version 15.3.0 Release 15)

4.2 Specifications

The following requirements shall apply:

1. The Handset shall be configured by default to receive all emergency alerts as per TRA specification.
2. An emergency alert message shall be immediately recognizable (Emergency alerts shall be specifically recognizable as being an emergency message that cannot be mistaken for an ordinary message.)
3. The emergency alerts shall stay on the display regardless of the user setting, until the message indication is cancelled by the user. It shall be possible for the user to review the message at a later time.
4. The delivery of the emergency alert shall not preempt an active voice or data session.
5. The mobile device shall be capable to perform duplicate detection.
6. Mobile devices shall support receiving and displaying emergency alerts in Arabic and English.
7. Handsets shall only be required to receive and present emergency alerts in languages as issued by the Alert Originator.
8. It shall be possible for the emergency alerts to be displayed on the handset upon reception and without any user interaction.
9. The handset shall not support any capabilities to reply, forward or copy the received emergency alerts.
10. The handset shall be able to support concurrent reception of multiple emergency alerts.
11. The cell broadcast (CB) shall be enabled for GSM, UMTS, LTE, 5G and any future radio technologies.
12. The message IDs (Channel IDs) will be according to the CMAS/WEA for both, the primary and the secondary language (See Table1 AND Table 2)
13. Inclusion of phone numbers and URLs is permitted, and they should be clickable. Mobile phones behavior.

TS FS 001, Version

4.3 Feature phones

All feature phones shall implement the following behaviors:

Table 1 Feature phones behaviour:

Cell Broadcast Information		UAE-Alert Information			User Equipment (UE)/Mobile Devices Requirements						
MsgID (Primary Block)	MsgID (Secondary Block)	Class	Class Title (Arabic)	Class Title (English)	Audio Attention Type	Audio Attention Duration	Vibration	Display Popup	Default Setting	User Opt-out	Settings Page
4370	4383	Class 1	تحذير طارئ وطني	National Emergency Alert	Audio Signal	10.5 seconds	Yes	Yes	On	No	Hidden
4371	4384	Class 2	تحذير طارئ	Emergency Alert	Audio Signal	10.5 seconds	Yes	Yes	On	No	Hidden
4373	4386	Class 3	تحذير طارئ	Emergency Alert	Audio Signal	10.5 seconds	Yes	Yes	On	No	Hidden
4379	4392	Class 4	رسالة تحذيرية	Warning Alert	Audio Signal	10.5 seconds	Yes	Yes	On	Yes	Shown
4396	4397	Class 7	تحذير: السلامة العامة	Public Safety Alert	SMS Tone	SMS Tone	Yes	Yes	On	Yes	Shown
4398	4399	Class 8	رسالة تجريبية	Test Alert	SMS Tone	SMS Tone	Yes	Yes	On	No	Hidden

Definitions	
Default Setting	This field defines if these types of alerts are enabled by default or not. If set to "On", then that means this class/message ID must be on by default and out-of-the-box, without the need to enable it by the user. If set to "Off", then it should be disabled and the user will toggle (on/off) as needed.
User Opt-out	User Opt-out: The ability for the user to enable/disable receiving any alerts on this message ID/class. If set to yes, then the user should be able to opt-in/out and the option can be displayed in the settings page of the phone. If set to no, that means the user should not be able to opt-out, and that he/she will receive the alert if sent to this message ID
Settings Page	This field describes if we want to show or hide the warning/emergency alerts in the phone. If hidden, that means we don't want the user to see it listed in a settings page.
Notes:	
1.) Class 8 is meant for implementation on preconfigured devices, and shall not be implemented on commercial mobiles	
2.) The above list is only applicable on mobile devices with limited specifications (e.g. Featured Phones) and that has limited resources.	

TS FS 001, Version

4.4 Smart phones

All smart phones shall implement the following behaviors:

Table 2 Smart phones behaviours:

Cell Broadcast Information		UAE-Alert Information			User Equipment (UE)/Mobile Devices Requirements						
MsgID (Primary Block)	MsgID (Secondary Block)	Class	Class Title (Arabic)	Class Title (English)	Audio Attention Type	Audio Attention Duration	Vibration	Display Popup	Default Setting	User Opt-out	Settings Page
4370	4383	Class 1	تحذير طارئ وطني	National Emergency Alert	Audio Signal	10.5 seconds	Yes	Yes	On	No	Hidden
4371	4384	Class 2	تحذير طارئ	Emergency Alert	Audio Signal	10.5 seconds	Yes	Yes	On	No	Hidden
4372	4385	Class 2	تحذير طارئ	Emergency Alert	Audio Signal	10.5 seconds	Yes	Yes	On	No	Hidden
4373	4386	Class 3	تحذير طارئ	Emergency Alert	Audio Signal	10.5 seconds	Yes	Yes	On	No	Hidden
4374	4387	Class 3	تحذير طارئ	Emergency Alert	Audio Signal	10.5 seconds	Yes	Yes	On	No	Hidden
4375	4388	Class 3	تحذير طارئ	Emergency Alert	Audio Signal	10.5 seconds	Yes	Yes	On	No	Hidden
4376	4389	Class 3	تحذير طارئ	Emergency Alert	Audio Signal	10.5 seconds	Yes	Yes	On	No	Hidden
4377	4390	Class 3	تحذير طارئ	Emergency Alert	Audio Signal	10.5 seconds	Yes	Yes	On	No	Hidden
4378	4391	Class 3	تحذير طارئ	Emergency Alert	Audio Signal	10.5 seconds	Yes	Yes	On	No	Hidden
4379	4392	Class 4	رسالة تحذيرية	Warning Alert	Audio Signal	10.5 seconds	Yes	Yes	On	Yes	Shown
4380	4393	Class 5	رسالة تجريبية	Test Alert	SMS Tone	SMS Tone	Yes	Yes	Off	Yes	Shown
4381	4394	Class 6	تمرين	Exercise	Audio Signal	10.5 seconds	Yes	Yes	On	No	Hidden
4396	4397	Class 7	تحذير: السلامة العامة	Public Safety Alert	SMS Tone	SMS Tone	Yes	Yes	On	Yes	Shown
4398	4399	Class 8	رسالة تجريبية	Test Alert	SMS Tone	SMS Tone	Yes	Yes	On	No	Hidden

Definitions	
Default Setting	This field defines if these types of alerts are enabled by default or not. If set to "On", then that means this class/message ID must be on by default and out-of-the-box, without the need to enable it by the user. If set to "Off", then it should be disabled and the user will toggle (on/off) as needed.
User Opt-out	User Opt-out: The ability for the user to enable/disable receiving any alerts on this message ID/class. If set to yes, then the user should be able to opt-in/out and the option can be displayed in the settings page of the phone. If set to no, that means the user should not be able to opt-out, and that he/she will receive the alert if sent to this message ID
Settings Page	This field describes if we want to show or hide the warning/emergency alerts in the phone. If hidden, that means we don't want the user to see it listed in a settings page.
Notes: 1.) Class 8 is meant for implementation on preconfigured devices, and shall not be implemented on commercial mobiles	

TS FS 001, Version

5 Validity of standards

If no issue or revision number is quoted along with the title of a standard, the valid edition should be used. The valid of the standard can be checked on:

- For EN standards:

http://ec.europa.eu/growth/single-market/european-standards/harmonised-standards/rte/index_en.htm.

6 Effective date

All handsets entering UAE shall be compliant with these specifications, effective from 31 December 2019.