

Summary Handset Requirements

March 2006



*"Reaching Millions
in a Matter of Seconds"*

Issued by Cell Broadcast Forum

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About Cell Broadcast Forum

The Cell Broadcast Forum (CBF) is a non-profit Industry Association that supports the world standard for cell broadcast wireless information and telephony services on digital mobile phones and other wireless terminals. The primary goal of the Cell Broadcast Forum is to bring together companies from all segments of the wireless industry value chain to ensure product interoperability and growth of wireless market.

The Forum's mission includes

- ⊙ Promotion of simple and easy-to-use, interoperable Cell Broadcast service solutions,
- ⊙ Improving the technology and underlying standards
- ⊙ Maximizing business for the mobile and related industry

Cell Broadcast Forum members represent the global handset market, carriers that together serve more than 100 million customers, leading infrastructure providers, software developers and other organisations providing solutions to the wireless industry.

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Foreword

Intensive validation tests of GSM mobile terminals have shown that there is a wide variety of different Cell Broadcast implementations currently in the market.

This variety is the result of a missing GSM/UMTS (3GPP) Technical Specification of the series 02.xx. There are only two specifications available: GSM 03.41/3GPP TS 23.041 specifies e.g. how a Cell Broadcast message shall be coded and GSM 04.12/3GPP TS 24.012 specifies how it is transferred over the air interface. But there is no specification that tells how a mobile station is to receive, display and store Cell Broadcast messages.

With that background the freedom of Cell Broadcast service creation is strongly limited. Hence the Cell Broadcast Forum intends to reduce the variety of implementations by defining some basic requirements, aiming to a future homogeneous mobile terminal behaviour on both GSM and UMTS.

A full set of requirements is specified in CBF-PUB(02)0002 Handset Requirements Specification, and is meant for handset developers. This document contains a summary for the 20 most important requirements in order to clarify the problem.

1 Preface

1.1 Scope

This document reflects the Cell Broadcast Forum's vision of the top-20 most important requirements for a mobile terminal Cell Broadcast implementation.

1.2 References

No normative references today.

1.3 Definitions and Abbreviations

| | |
|----|--------------------|
| GS | Geographical Scope |
| ME | Mobile Entity |
| MI | Message Identifier |
| MS | Mobile Station |

2 Top-20 Requirements

2.1 Introduction

These top-20 handset requirements were derived at the CBF meeting at Cegetel in Paris on 4 December 2002 with attendance from amongst others BouyguesTel, Celltick, CMG, France Telecom, Motorola, Orange France, Proximus, SFR, Swapcom, and Sagem.

2.2 Requirements

The requirements in the table below are in a random order.

| Req | Description |
|-----|---|
| 1 | The MS shall support DRX mode (Scheduling), i.e. be capable of processing both, scheduled and unscheduled messages. High priority messages (Free message slot, reading advised) shall be supported. |
| 2 | There shall be only one single CB (main-) menu within the Messages menu to control CB at the MS. There shall be no separate menus, e.g. within the phone settings, for special Message Identifiers, e.g. MI 50. All handsets shall apply a uniform naming of the CB menu. It shall be possible to (de-)activate CB by a simple and straightforward action. CB activation and de-activation should not interfere with MI selection and de-selection. |
| 3 | Handset must be transparent to CBMI or CBMI-D update of parameters through OTA without erasing previous CBMI or CBMI-D files or channel parameters created through MMI in the SIM. |
| 4 | The audio alert for the reception of a CB message must be different from the SMS. Beep management: <ul style="list-style-type: none"> ☉ Immediate mode messages: no beep. ☉ Normal mode messages: <ul style="list-style-type: none"> ☉ For class 0 and 1, a selectable beep shall be offered in the Profiles or Parameters menu, with settable volume for each activated Message Identifier. ☉ For CB messages over CBMI-D channels (data download): no beep. |
| 5 | Default setting of CB shall be "activated" out of factory. |
| 6 | The name of the technology shall be unique by manufacturer, with a recommendation at country level about the name: standard recommendation would be Cell Broadcast. |

| Req | Description |
|-----|--|
| 7 | The index feature must be supported in the CB menu, and upon message reception, a simple click must provision the corresponding channel number in the CBMI or CBMI-D file and un-provision the index channel. Index reception shall generate a beep and deliver full screen information (=> recommended would be to offer Normal mode class 1 message) |
| 8 | <p>It must be possible to configure and activate :</p> <ul style="list-style-type: none"> ⊙ 5 channels at least ⊙ 10 channels in addition <p>The ME shall receive messages over all configured channels</p> |
| 9 | The actual Settings shall not be affected, neither by a battery replacement nor a SIM replacement, nor by turning on/off the ME. The range of configurable MIs by MMI should be limited to 000-999. The MI > 999 must not be configurable through the handset. When CB is active, a MS shall scan the CB flow and not adopt a "sleeping mode" where no CB message is scanned, unless DRX is used. |
| 10 | Immediate mode is compulsory. Upon reception of an "immediate message", it must pop up on the screen. The message should scroll under the operator logo. Operator logo shall never disappear upon message scrolling. The scrolling speed must be readable (adapted for reading: not too low, not too quick) and the cut off at the end of a message shall be respected before the scrolling begins again. Upon immediate mode message reception, it shall never beep. No message storage shall be possible. Manual deletion shall be offered, as automatically deletion upon cell's change or new received message. |
| 11 | <p>Normal mode message is compulsory,</p> <ul style="list-style-type: none"> ⊙ With support of Class 0, Class 1, Class2 <ul style="list-style-type: none"> ⊙ Class 0 messages should pop up full screen till the customer deletes it or stores it, or till it is replaced by a new one on the same channel. ⊙ For class 1 or 2 messages a teaser shall notify the customer that a new message has arrived. Upon click through, the message shall appear full screen till the customer deletes it or stores it, or till it is replaced by a new one on the same channel. ⊙ Support of class 3 is optional <p>Note: Audio alerting requirements for normal mode are listed in 4</p> |
| 12 | <p>To delete a message :</p> <ul style="list-style-type: none"> ⊙ For immediate mode, deletion shall be offered through MMI. The proposed choices are delete or return. ⊙ Either automatically through a new message, ⊙ Or a cell change. ⊙ For normal mode, deletion should be offered |

| Req | Description |
|-----|--|
| | <ul style="list-style-type: none"> ⊙ Through MMI ⊙ Or automatically through new message on the same channel ⊙ Or reception of a message with a different GS <p>Manual deletion shall occur through an option feature. The proposed choices are delete, store or return. When selecting "store", the message shall be stored provided there is enough space left.)</p> <p>If the message is multi-page, all pages shall be deleted.</p> |
| 13 | Multi-language feature is optional, but recommended. |
| 14 | <p>Multi-page feature :</p> <ul style="list-style-type: none"> ⊙ with a minimum of 5 pages, ⊙ 15 pages are nice to have. |
| 15 | <p>When the message is broadcast several times on the network, the ME shall display it only once. Compliance to GS Code is compulsory, in this case, a message with the same MI and different GS code shall repeat.</p> |
| 16 | <p>The number of active messages is as many as the number of active channels. If multi-page, up to 20 active pages shall be available in volatile memory. If above 20, the management is first in, first out.</p> |
| 17 | <p>Upon new incoming or outgoing call or SMS creation, the CB message shall not be deleted. ME shall receive every CB message when "on hook", even if the customer is typing a SMS or surfing in the menu. ME shall receive CB message during GPRS connection. If the ME is locked, CB message immediate (or normal class 0) shall be received and shall scroll (or pop-up full screen) on the screen, and normal mode message class 1, 2 or 3 shall be received. Upon message reception, no option must be given for the customer to deactivate CB.</p> |
| 18 | A minimum of 10 MI storage shall be supported. |
| 19 | The ME should receive messages broadcast on channels download by OTA over channels N° stored in the CBMI-D file. |
| 20 | <p>Automatic click through shall be supported with URL (launch browser), with phone number between " " or without " " (send call). As soon as possible, compliance to EMS R5 for CB is required regarding automatic click through out of CB towards any bearer.</p> |

2.3 Requirements on Handling of Emergency Messages

After the meeting in 2001 where the top-20 requirements were established, the world has been confronted with an increasing number of disasters (9/11, 7/7, Tsunami, Katrina, Pakistan earth quake, etc.). Emergency warning systems are being developed and Cell Broadcast is a technology that can fulfil most requirements of such an emergency warning system in cellular networks.

This section deals with the handling by the ME when an emergency message is received. Emergency messages shall be distinguishable from normal messages for the following reasons:

- ⦿ ME users shall recognize the CB message as an emergency message that is not to be ignored,
- ⦿ ME users shall know the emergency CB message is not a (hoax) SMS message

There are three levels of emergency messages that shall be distinguishable through their ring tone:

1. Emergency message (highest level of alert)
2. Warning message (instructions or guidance from authorities)
3. Notifications

2.4 Requirements for services

MEs shall support both GSM and UMTS.

Revision History

This Document is a joint effort of various individuals active in a Cell Broadcast Forum Working Group. Every Full Member of the Cell Broadcast Forum can delegate participants to the Working Group and is welcome to contribute. See the Cell Broadcast Forum Web Site <http://www.cellbroadcastforum.org> for details of membership.

| Revision | Date | Author | Comment |
|-----------------|-------------|---------------|---|
| Draft 1.0 | 21/01/2000 | Peter Sanders | First revision |
| 2.0 | 01/03/2006 | Peter Sanders | Added emergency requirements |
| 2.1 | 27/03/2006 | Peter Sanders | Replaced EMS requirement with DRX requirement |
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