## TSGR#5(99)467

### TSG-RAN meeting #5 Korea, 6 - 8 October 1999

Agenda Item:

**Source:** TSG RAN WG2

Title: TS 25.324 v0.1.0: Description of the BMC protocol

**Document for:** Information

# 3G TS RAN 25.324 V0.1.0 (1999-09)

Technical Specification

3<sup>rd</sup> Generation Partnership Project (3GPP); Technical Specification Group (TSG) RAN; Working Group 2 (WG2);

Broadcast/Multicast Control BMC (3G TS 25.324 version 0.1.0)



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### Reference

<Workitem> (<Shortfilename>.PDF)

### Keywords

Digital cellular telecommunications system, Universal Mobile Telecommunication System (UMTS), UTRA, IMT-2000

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### **Foreword**

This Technical Specification (TS) has been produced by the 3rd Generation Partnership Project (3GPP). The contents of this TS are subject to continuing work within 3GPP TSG-RAN and may change following formal TSG RAN approval.

## 1. Scope

The present document provides the description of the Broadcast/Multicast Control Protocol (BMC). This protocol adapts broadcast and multicast services on the radio interface.

### 2. References

[1] 3GPP TS 25.322: "RLC Protocol Specification"

### 3. Definitions and Abbreviations

AS Access Stratum

BMC Broadcast/Multicast Control C-SAP Control Service Access Point

kbps kilo-bits per second
L1 Layer 1 (physical layer)
L2 Layer 2 (data link layer)
L3 Layer 3 (network layer)
MAC Medium Access Control
NAS Non Access Stratum

NSAPI Network layer Service Access Point PDCP Packet Data Convergence Protocol

RLC Radio Link Control
RRC Radio Resource Control
UE User Equipment

### 4. General

### 4.1.Model of BMC

Figure 1 shows the model of the BMC within the UTRAN protocol architecture.

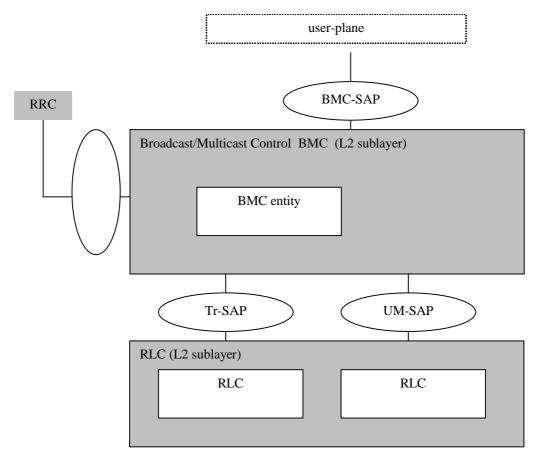


Figure 1: BMC protocol model

## 5. Functions

The functions are specified in TS 25.301. They are:

- Scheduling of SMS CB messages (ffs.)
- Storage of SMS CB Messages
- Transmission of SMS CB messages to UE (UTRAN side)
- Delivery of SMS CB messages to upper layer (UE side)

## 6. Services provided to Upper Layers

The BM-SAP provides a broadcast/multicast transmission service in the user plane on the radio interface for common user data in transparent or unacknowledged mode.

## 7. Services expected from RLC

See [1] TS 25.322 RLC Protocol Specification for details.

## 8. Elements for layer-to-layer communication

### 8.1. Service Primitives between RRC and BMC

The communication takes place at the CBMC-SAP.

## 8.2. Service Primitives between upper layer and BMC

The communication takes place at the BMC-SAP.

### 9. Procedures

### 9.1.CB MESSAGE Broadcast



Figure 1) Procedure for broadcast of CB messages

This procedure is used for broadcasting CB messages from the network to UEs in a cell. The UE can be in the RRC states IDLE, URA\_PCH, CELL\_PCH or CELL\_FACH.

## 10. Messages (PDUs)

Note: This chapter is based on GSM 03.41 and 04.12.

### 10.1.CB MESSAGE

< Functional description of this message to be included here>

RLC-SAP: t.b.d. Logical channel: CTCH Direction: UTRAN → UE

Information Element	Presence	Range	IE type and reference	Semantics description
Message Type	M			
CB Message ID	M			
Serial Number	M			
Data Coding Scheme	M			
CB Data	M			

## 11. Information Elements

Note: This chapter is based on GSM 03.41 and 04.12.

## 11.1.Message Type

Type of BMC message.

Length: ffs. Coding: ffs.

## 11.2.CB Message ID

This IE identifies the source and type of CB message.

Length: 16 bit Coding: 00H .. FFH

### 11.3. Serial Number

This IE identifies variations of a CB message and is part of the overall CB message identification.

Length: 16 bit Coding:

IE/Group Name	Presence	Range	IE Type and reference	Semantics description
Serial Number				
GS			The Geographical Scope	
			IE indicates the	
			geographical area over	
			which the Message Code	
			is unique and the Display	
			Mode; see Table below.	
			Enumerated: 2 bits	
Message Code	The Message Code IE			
_			identifies different	
			message themes	
			Enumerated: 10 bits	
Update Number	The Update Number			
			indicates a change of the	
			same message.	
			Enumerated: 4 bits	

Table: Coding of GS

GS	Display Mode	Geographical area
00	Immediate	Cell wide
01	Normal	PLMN wide
10	Normal	Location Area wide
11	Normal	Cell wide

## 11.4.CB Coding Scheme

This IE identifies the intended handling of the message at the UE, the alphabet/coding and the language (when applied). It is specified in GSM 03.38.

Length: 8 bits

Coding: See GSM 03.38.

### 11.5.CB Data

This IE contains the content of a CB message. Length: variable (1 bit ...  $N_{CB}$ , the maximum value for  $N_{CB}$  is ffs.)

Coding: ---

## 12. History

Document history			
Date	Version	Comment	
September 1999	0.0.1	First draft	
September 1999	0.0.2	Second draft provided for approval in RAN WG 2 during meeting #7 in Malmö, $20^{th} - 24^{th}$ September, 1999	
September	0.1.0	Agreed version on RAN WG 2 #7	

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This document is written in Microsoft Word version 7/97.