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Technical Specification

3rd 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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Intellectual Property Rights

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.

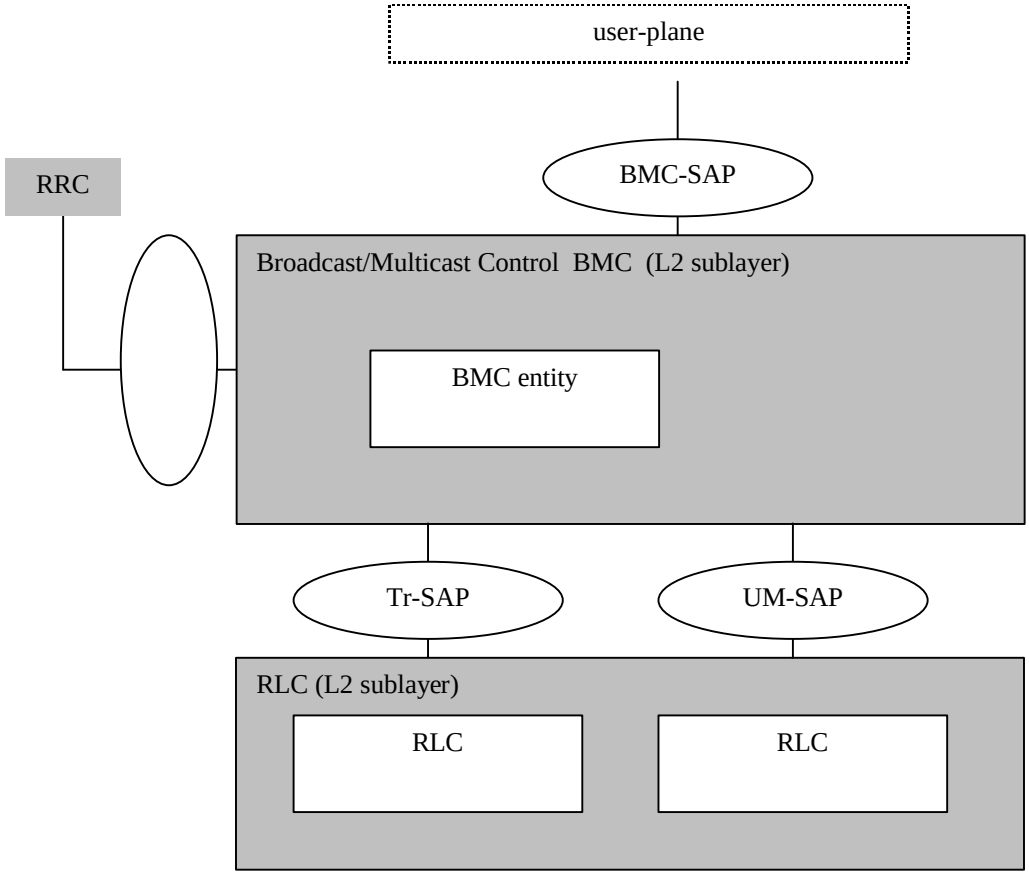

Figure 1: BMC protocol model

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

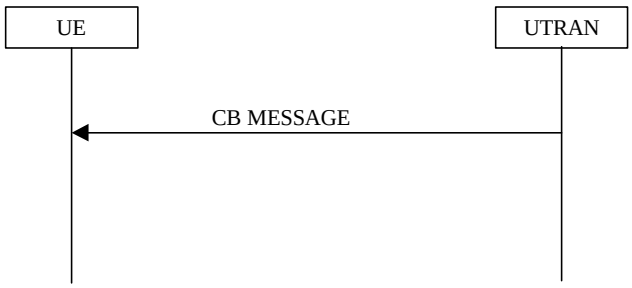

Figure 1) Procedure for broadcast of CB messages

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, 20th – 24th September, 1999
September	0.1.0	Agreed version on RAN WG 2 #7

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