3GPP TSG CN Meeting #27 **NP-050070**
9th - 11th March 2005. Tokyo, Japan.

Source: **TSG CN WG1**

Title: **CR to Rel-6 WI "MBMS" FOR ts 24.008**

Agenda item: **9.8**

Document for: **APPROVAL**

This document contains 3 **CRs on Rel-6 Work Item "MBMS"**, that have been agreed by TSG CN WG1 CN#37 meeting and forwarded to TSG CN Plenary meeting #27 for approval.

TDoc #	Tdoc Title	Spec	CR #	Rev	CAT	C_Version	WI	Rel
N1-050207	Mapping of 'MBMS notification response' to RRC establishment cause	24.008	958		F	6.7.0	MBMS	Rel-6
N1-050311	Correct GPRS SM List and MBMS IE Descriptions	24.008	934	1	F	6.7.0	MBMS	Rel-6
N1-050313	Defining TMGI and MBMS Session Id in the mobile identity field	24.008	933	2	B	6.7.0	MBMS	Rel-6

3GPP TSG-CN1 Meeting #37 **Tdoc N1-050207**
Sydney, Australia, 14-18 February 2005

CR-Form-v7.1

CHANGE REQUEST

⌘ **24.008** **CR** **958** ⌘ **rev** **-** ⌘ Current version: **6.7.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [X] Core Network [ ]

Title:	⌘	Mapping of 'MBMS notification response' to RRC establishment cause
Source:	⌘	Ericsson
Work item code:	⌘	MBMS
Date:	⌘	02/02/2005
Category:	⌘	**F**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	TS 25.331 v6.4.0 contains a new RRC establishment cause value to be used when the mobile station is prompted by the contents of the MBMS Notification procedure to establish a PS signalling connection.
Summary of change:	⌘	New mapping of RRC establishment cause value is added because of MBMS.
Consequences if not approved:	⌘	Undefined mapping of 'MBMS notification response' to RRC establishment cause remains. This leads to undesirable effects; different implementation in terminals when Service request with service type "MBMS notification response" has to be sent. Additionally, the network cannot correctly record the attempts of the NAS procedure Service request with service type "MBMS notification response" initiated by the mobile station.

Clauses affected:	⌘	L.1

Other specs affected: ⌘	Y	N		⌘
		X	Other core specifications	
		X	Test specifications	
		X	O&M Specifications	

Other comments: ⌘

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Annex L (normative): Establishment cause (Iu mode only)

L.1 Mapping of NAS procedure to RRC establishment cause(Iu mode only)

When MM requests the establishment of a RR connection, the RRC establishment cause used by the MS shall be selected according to the CS NAS procedure as specified in table L.1.1.

Table L.1.1/3GPP TS 24.008: Mapping of CS NAS procedure to establishment cause

CS NAS procedure	**RRC Establishment cause (according 3GPP TS 25.331)**
Originating CS speech call	Originating Conversational Call
Originating CS data call	Originating Conversational Call
CS Emergency call	Emergency call
Call re-establishment	Call re-establishment
Location update	Registration
IMSI Detach	Detach
MO SMS via CS domain	Originating Low Priority Signalling
Supplementary Services	Originating High Priority Signalling
Answer to circuit switched paging	Set equal to the value of the paging cause used in the reception of paging in the RRC layer
SS part of Location services	Originating High Priority Signalling

When GMM requests the establishment of a PS signalling connection, the RRC establishment cause used by the MS shall be selected according to the PS NAS procedure as specified in Table L.1.2.

Table L.1.2/3GPP TS 24.008: Mapping of PS NAS procedure to establishment cause

PS NAS procedure	**RRC Establishment cause (according 3GPP TS 25.331)**
GPRS Attach	Registration
Routing Area Update – for the case of 'Directed Signalling Connection Re-Establishment (see chapter 4.7.2.5.)	Call Re-Establishment
Routing area Update – all cases other than 'Directed Signalling Connection Re-Establishment	Registration
GPRS Detach	Detach
Request to re-establish RABs	Either 'Originating Conversational Call' or 'Originating Streaming Call' or 'Originating Interactive Call' or 'Originating Background Call ' – depending on the Traffic Class in QoS of the "most demanding" RAB. (see Note 1)
Request to establish a PS signalling connection for MBMS	MBMS reception
Activate PDP Context	Either 'Originating Conversational Call' or 'Originating Streaming Call' or 'Originating Interactive Call' or 'Originating Background Call ' – depending on the Traffic Class in QoS of the "most demanding" RAB. (see Note 1) – If Traffic Class in QoS is not 'Conversational Class' or 'Streaming Class' or 'Interactive Class' or 'Background Class' but is 'Subscribed Traffic Class', then 'Originating Subscribed traffic Call' shall be used.
Modify PDP Context	Originating High Priority Signalling
Deactivate PDP Context	Originating High Priority Signalling
MO SMS via PS domain	Originating Low Priority Signalling
SS part of Location services	Originating High Priority Signalling
Answer to packet paging	Set equal to the value of the paging cause used in the reception of paging in the RRC layer
NOTE 1: For classification of "most demanding" Traffic Class the following ranking order applies: "Conversational" followed by "Streaming" followed by "Interactive" followed by "Background", where "Conversational" is the most demanding Traffic class in terms of being delay sensitive. In chosing the "most demanding" Traffic Class all already active PDP Context together with the PDP Context to be activated shall be considered	

NOTE: The RRC establishment cause may be used by the network to prioritise the connection establishment request from the MS at high load situations in the network.

3GPP TSG-CN1 Meeting #37 **Tdoc N1-050311**
Sydney, Australia, 14-18 February 2004

CR-Form-v7.1

CHANGE REQUEST

⌘ **24.008** **CR** **934** ⌘ **rev** **1** ⌘ Current version: **6.7.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [ ] Core Network [X]

Title:	⌘	Correct GPRS SM List and MBMS IE Descriptions
Source:	⌘	Vodafone
Work item code:	⌘	MBMS
Date:	⌘	16/02/2005
Category:	⌘	**F**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
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Use one of the following releases:

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R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	MBMS messages are missing from Table 10.4a/3GPP TS 24.008: Message types for GPRS session management. The APN IE has an IEI assigned but it is mandatory with a format "LV". No IEI is needed.
Summary of change:	⌘	MBMS messages are added to Table 10.4a. The APN IEI is removed where the APN IE is mandatory wiith format "LV".
Consequences if not approved:	⌘	MBMS messages missing from list of GPRS session management messages, APN IE incorrectly specified for some MBMS messages.

Clauses affected:	⌘	9.5.14, 9.5.22, 9.5.25, 10.4

		Y	N			
Other specs affected:	⌘		X	Other core specifications	⌘	
			X	Test specifications		
			X	O&M Specifications		
Other comments:	⌘					

How to create CRs using this form:
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Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

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*** FIRST CHANGE ***

9.5.14 Deactivate PDP context request

This message is sent to request deactivation of an active PDP context or an active MBMS context. See table 9.5.14~~8~~/3GPP TS 24.008.

Message type: DEACTIVATE PDP CONTEXT REQUEST

Significance: global

Direction: both

Table 9.5.14/3GPP TS 24.008: DEACTIVATE PDP CONTEXT REQUEST message content

IEI	Information Element	Type/Reference	Presence	Format	Length
	Protocol discriminator	Protocol discriminator 10.2	M	V	1/2
	Transaction identifier	Transaction identifier 10.3.2	M	V	1/2– 3/2
	Deactivate PDP context request message identity	Message type 10.4	M	V	1
	SM cause	SM cause 10.5.6.6	M	V	1
9-	Tear down indicator	Tear down indicator 10.5.6.10	O	TV	1
27	Protocol configuration options	Protocol configuration options 10.5.6.3	O	TLV	3 – 253
35	MBMS protocol configuration options	MBMS protocol configuration options 10.5.6.15	O	TLV	3 - 253

9.5.14.1 Tear down indicator

This IE is included in the message in order to indicate whether only the PDP context associated with this specific TI or all active PDP contexts sharing the same PDP address and APN as the PDP context associated with this specific TI shall be deactivated.

If this IE is received for an MBMS context, it shall be ignored by the receiver.

9.5.14.2 Protocol configuration options

This IE is included in the message when the MS or the network wishes to transmit (protocol) data (e.g. configuration parameters, error codes or messages/events) to the peer entity.

If this IE is received for an MBMS context, it shall be ignored by the receiver.

9.5.14.3 MBMS protocol configuration options

This IE is included in the message when the MS or the network wishes to transmit MBMS bearer related (protocol) data (e.g. configuration parameters, error codes or messages/events) to the peer entity for an MBMS context.

If the IE is received for a PDP context, it shall be ignored by the receiver.

9.5.15 Deactivate PDP context accept

This message is sent to acknowledge deactivation of the PDP context requested in the corresponding *Deactivate PDP context request* message. See table 9.5.15/3GPP TS 24.008.

Message type: DEACTIVATE PDP CONTEXT ACCEPT

Significance: global

Direction: both

Table 9.5.15/3GPP TS 24.008: DEACTIVATE PDP CONTEXT ACCEPT message content

IEI	Information Element	Type/Reference	Presence	Format	Length
	Protocol discriminator	Protocol discriminator 10.2	M	V	1/2
	Transaction identifier	Transaction identifier 10.3.2	M	V	1/2– 3/2
	Deactivate PDP context accept message identity	Message type 10.4	M	V	1
27	Protocol configuration options	Protocol configuration options 10.5.6.3	O	TLV	3 – 253
35	MBMS protocol configuration options	MBMS protocol configuration options 10.5.6.15	O	TLV	3 - 253

9.5.15.1 Protocol configuration options

This IE is included in the message when the MS or the network wishes to transmit (protocol) data (e.g. configuration parameters, error codes or messages/events) to the peer entity.

If this IE is received for an MBMS context, it shall be ignored by the receiver.

9.5.15.2 MBMS protocol configuration options

This IE is included in the message when the MS or the network wishes to transmit MBMS bearer related (protocol) data (e.g. configuration parameters, error codes or messages/events) to the peer entity for an MBMS context.

If the IE is received for a PDP context, it shall be ignored by the receiver.

9.5.16 Void

9.5.17 Void

9.5.18 Void

9.5.19 Void

9.5.20 Void

9.5.21 SM Status

This message is sent by the network or the MS to pass information on the status of the indicated context and report certain error conditions (eg. as listed in clause 8). See table 9.5.21/3GPP TS 24.008.

Message type: SM Status

Significance: local

Direction: both

Table 9.5.21/3GPP TS 24.008: SM STATUS message content

IEI	Information Element	Type/Reference	Presence	Format	Length
	Protocol discriminator	Protocol discriminator 10.2	M	V	1/2
	Transaction identifier	Transaction identifier 10.3.2	M	V	1/2– 3/2
	SM Status message identity	Message type 10.4	M	V	1
	SM Cause	SM Cause 10.5.6.6	M	V	1

9.5.22 Activate MBMS Context Request

This message is sent by the MS to the network as an explicit response to a *Request MBMS Context Activation* message
See table 9.5.22/3GPP TS 24.008.

Message type: ACTIVATE MBMS CONTEXT REQUEST

Significance: global

Direction: MS to network

TABLE 9.5.22 : ACTIVATE MBMS CONTEXT REQUEST message content

IEI	Information Element	Type/	Presence	Format	Length
	Protocol discriminator	Protocol discriminator 10.2	M	V	1/2
	Transaction identifier	Transaction identifier 10.3.2	M	V	1/2– 3/2
	Activate MBMS context request message identity	Message type 10.4	M	V	1
	Requested MBMS NSAPI	Enhanced Network service access point identifier 10.5.6.15	M	V	1
	Requested LLC SAPI	LLC service access point identifier 10.5.6.9	M	V	1
	Supported MBMS bearer capabilities	MBMS bearer capabilities 10.5.6.14	M	LV	2 – 3
	Requested multicast address	Packet data protocol address 10.5.6.4	M	LV	3 - 19
~~28~~	Access point name	Access point name 10.5.6.1	M	LV	2 – 101
35	MBMS protocol configuration options	MBMS protocol configuration options 10.5.6.15	O	TLV	3 - 253

NOTE: The MBMS NSAPI will be used in Iu mode when the network chooses a point-to-point MBMS bearer for the transfer of MBMS data in the user plane.

9.5.22.1 MBMS protocol configuration options

This IE is included in the message when the MS wishes to transmit MBMS bearer related (protocol) data (e.g. configuration parameters, error codes or messages/events) to the peer entity for an MBMS context.

9.5.23 Activate MBMS Context Accept

This message is sent by the network to the MS to acknowledge activation of an MBMS context.
See table 9.5.23/3GPP TS 24.008.

Message type: ACTIVATE MBMS CONTEXT ACCEPT

Significance: global

Direction: network to MS

TABLE 9.5.23 : ACTIVATE MBMS CONTEXT ACCEPT message content

IEI	Information Element	Type/Reference	Presence	Format	Length
	Protocol discriminator	Protocol discriminator 10.2	M	V	1/2
	Transaction identifier	Transaction identifier 10.3.2	M	V	1/2– 3/2
	Activate MBMS context accept message identity	Message type 10.4	M	V	1
	Temporary Mobile Group Identity	Temporary Mobile Group Identity 10.5.6.13	M	LV	4-7
	Negotiated LLC SAPI	LLC service access point identifier 10.5.6.9	M	V	1
35	MBMS protocol configuration options	MBMS protocol configuration options 10.5.6.15	O	TLV	3 - 253

9.5.23.1 MBMS protocol configuration options

This IE is included in the message when the network wishes to transmit MBMS bearer related (protocol) data (e.g. configuration parameters, error codes or messages/events) to the peer entity for an MBMS context.

9.5.24 Activate MBMS Context Reject

This message is sent by the network to the MS to reject activation of a MBMS context.
See table 9.5.24/3GPP TS 24.008.

Message type: ACTIVATE MBMS CONTEXT REJECT

Significance: global

Direction: network to MS

TABLE 9.5.24 : ACTIVATE MBMS CONTEXT REJECT message content

IEI	Information Element	Type/Reference	Presence	Format	Length
	Protocol discriminator	Protocol discriminator 10.2	M	V	1/2
	Transaction identifier	Transaction identifier 10.3.2	M	V	1/2– 3/2
	Activate MBMS context reject message identity	Message type 10.4	M	V	1
	SM cause	SM Cause 10.5.6.6	M	V	1
35	MBMS protocol configuration options	MBMS protocol configuration options 10.5.6.15	O	TLV	3 - 253

9.5.24.1 MBMS protocol configuration options

This IE is included in the message when the network wishes to transmit MBMS bearer related (protocol) data (e.g. configuration parameters, error codes or messages/events) to the peer entity for an MBMS context.

9.5.25 Request MBMS Context Activation

This message is sent by the network to the MS to initiate activation of an MBMS context.
See table 9.5.25/3GPP TS 24.008.

Message type: REQUEST MBMS CONTEXT ACTIVATION

Significance: global

Direction: network to MS

TABLE 9.5.25 : REQUEST MBMS CONTEXT ACTIVATION message content

IEI	Information Element	Type/Reference	Presence	Format	Length
	Protocol discriminator	Protocol discriminator 10.2	M	V	1/2
	Transaction identifier	Transaction identifier 10.3.2	M	V	1/2– 3/2
	Request MBMS context activation message identity	Message type 10.4	M	V	1
	Linked NSAPI	Network service access point identifier 10.5.6.2	M	V	1
	Offered Multicast address	Packet data protocol address 10.5.6.4	M	LV	3 - 19
~~28~~	Access point name	Access point name 10.5.6.1	M	LV	2 – 101
35	MBMS protocol configuration options	MBMS protocol configuration options 10.5.6.15	O	TLV	3 - 253

9.5.25.1 Linked NSAPI

This IE is included in the message to allow the UE to associate the MBMS context with the PDP context over which the IGMP/MLD join message was sent.

9.5.25.2 MBMS protocol configuration options

This IE is included in the message when the network wishes to transmit MBMS bearer related (protocol) data (e.g. configuration parameters, error codes or messages/events) to the peer entity for an MBMS context.

*** SECOND CHANGE ***

10 General message format and information elements coding

The figures and text in this clause describe the Information Elements contents.

10.1 Overview

Within the Layer 3 protocols defined in 3GPP TS 24.008, every message is a standard L3 message as defined in 3GPP TS 24.007 [20]. This means that the message consists of the following parts:

a) protocol discriminator;

b) transaction identifier;

c) message type;

d) other information elements, as required.

This organization is illustrated in the example shown in figure 10.1/3GPP TS 24.008.

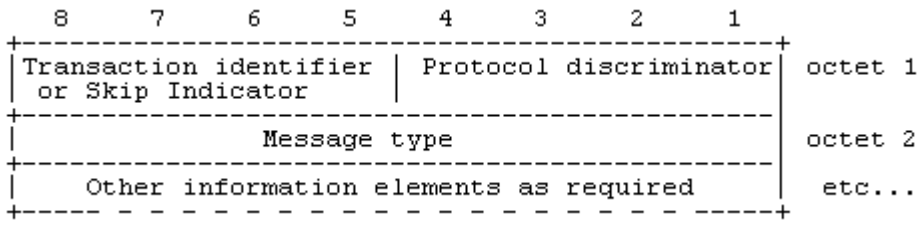

Figure 10.1/3GPP TS 24.008 General message organization example

Unless specified otherwise in the message descriptions of clause 9, a particular information element shall not be present more than once in a given message.

The term "default" implies that the value defined shall be used in the absence of any assignment, or that this value allows negotiation of alternative values in between the two peer entities.

When a field extends over more than one octet, the order of bit values progressively decreases as the octet number increases. The least significant bit of the field is represented by the lowest numbered bit of the highest numbered octet of the field.

10.2 Protocol Discriminator

The Protocol Discriminator (PD) and its use are defined in 3GPP TS 24.007 [20].

10.3 Skip indicator and transaction identifier

10.3.1 Skip indicator

Bits 5 to 8 of the first octet of every Mobility Management message and GPRS MobilityManagement message contains the skip indicator. A message received with skip indicator different from 0000 shall be ignored. A message received with skip indicator encoded as 0000 shall not be ignored (unless it is ignored for other reasons). A protocol entity sending a Mobility Management message or a GPRS Mobility Management message shall encode the skip indicator as 0000.

10.3.2 Transaction identifier

Bits 5 to 8 of the first octet of every message belonging to the protocols "Call Control; call related SS messages" and "Session Management"contain the transaction identifier (TI). The transaction identifier and its use are defined in 3GPP TS 24.007 [20].

For the session management protocol, the extended TI mechanism may be used (see 3GPP TS 24.007 [20]).

For the call control protocol, the extended TI mechanism shall be supported for the purpose of protocol error handling as specified in subclause 8.3.1

10.4 Message Type

The message type IE and its use are defined in 3GPP TS 24.007 [20]. Tables 10.3/3GPP TS 24.008, 10.4/3GPP TS 24.008, and 10.4a/3GPP TS 24.008 define the value part of the message type IE used in the Mobility Management protocol, the Call Control protocol, and Session management protocol.

Table 10.2/3GPP TS 24.008: Message types for Mobility Management

8	7	6	5	4	3	2	1	
x	x	0	0	-	-	-	-	Registration messages:
				0	0	0	1	- IMSI DETACH INDICATION
				0	0	1	0	- LOCATION UPDATING ACCEPT
				0	1	0	0	- LOCATION UPDATING REJECT
				1	0	0	0	- LOCATION UPDATING REQUEST
x	x	0	1	-	-	-	-	Security messages:
				0	0	0	1	- AUTHENTICATION REJECT
				0	0	1	0	- AUTHENTICATION REQUEST
				0	1	0	0	- AUTHENTICATION RESPONSE
				1	1	0	0	- AUTHENTICATION FAILURE…….……..
				1	0	0	0	- IDENTITY REQUEST
				1	0	0	1	- IDENTITY RESPONSE
				1	0	1	0	- TMSI REALLOCATION COMMAND
				1	0	1	1	- TMSI REALLOCATION COMPLETE
x	x	1	0	-	-	-	-	Connection management messages:
				0	0	0	1	- CM SERVICE ACCEPT
				0	0	1	0	- CM SERVICE REJECT
				0	0	1	1	- CM SERVICE ABORT
				0	1	0	0	- CM SERVICE REQUEST
				0	1	0	1	- CM SERVICE PROMPT
				0	1	1	0	- Reserved (see NOTE)
				1	0	0	0	- CM RE-ESTABLISHMENT REQUEST
				1	0	0	1	- ABORT
x	x	1	1	-	-	-	-	Miscellaneous messages:
				0	0	0	0	- MM NULL
				0	0	0	1	- MM STATUS
				0	0	1	0	- MM INFORMATION

NOTE: This value was allocated but never used in earlier phases of the protocol.

When the radio connection started with a core network node of earlier than R99, bit 8 shall be set to 0 and bit 7 is reserved for the send sequence number in messages sent from the mobile station. In messages sent from the network, bits 7 and 8 are coded with a "0". See 3GPP TS 24.007 [20].

When the radio connection started with a core network node of R'99 or later, bits 7 and 8 are reserved for the send sequence number in messages sent from the mobile station. In messages sent from the network, bits 7 and 8 are coded with a "0". See 3GPP TS 24.007 [20].

Table 10.3/3GPP TS 24.008: Message types for Call Control and call related SS messages

8	7	6	5	4	3	2	1	
x	x	0	0	0	0	0	0	escape to nationally specific message types; see 1) below
x	x	0	0	-	-	-	-	Call establishment messages:
				0	0	0	1	- ALERTING
				1	0	0	0	- CALL CONFIRMED
				0	0	1	0	- CALL PROCEEDING
				0	1	1	1	- CONNECT
				1	1	1	1	- CONNECT ACKNOWLEDGE
				1	1	1	0	- EMERGENCY SETUP
				0	0	1	1	- PROGRESS
				0	1	0	0	- CC-ESTABLISHMENT
				0	1	1	0	- CC-ESTABLISHMENT CONFIRMED
				1	0	1	1	- RECALL
				1	0	0	1	- START CC
				0	1	0	1	- SETUP
x	x	0	1	-	-	-	-	Call information phase messages:
				0	1	1	1	- MODIFY
				1	1	1	1	- MODIFY COMPLETE
				0	0	1	1	- MODIFY REJECT
				0	0	0	0	- USER INFORMATION
				1	0	0	0	- HOLD
				1	0	0	1	- HOLD ACKNOWLEDGE
				1	0	1	0	- HOLD REJECT
				1	1	0	0	- RETRIEVE
				1	1	0	1	- RETRIEVE ACKNOWLEDGE
				1	1	1	0	- RETRIEVE REJECT
x	x	1	0	-	-	-	-	Call clearing messages:
				0	1	0	1	- DISCONNECT
				1	1	0	1	- RELEASE
				1	0	1	0	- RELEASE COMPLETE
x	x	1	1	-	-	-	-	Miscellaneous messages:
				1	0	0	1	- CONGESTION CONTROL
				1	1	1	0	- NOTIFY
				1	1	0	1	- STATUS
				0	1	0	0	- STATUS ENQUIRY
				0	1	0	1	- START DTMF
				0	0	0	1	- STOP DTMF
				0	0	1	0	- STOP DTMF ACKNOWLEDGE
				0	1	1	0	- START DTMF ACKNOWLEDGE
				0	1	1	1	- START DTMF REJECT
				1	0	1	0	- FACILITY

1): When used, the message type is defined in the following octet(s), according to the national specification.

When the radio connection started with a core network node of earlier than R99, bit 8 shall be set to 0 and bit 7 is reserved for the send sequence number in messages sent from the mobile station. In messages sent from the network, bits 7 and 8 are coded with a "0". See 3GPP TS 24.007 [20].

When the radio connection started with a core network node of R'99 or later, bits 7 and 8 are reserved for the send sequence number in messages sent from the mobile station. In messages sent from the network, bits 7 and 8 are coded with a "0". See 3GPP TS 24.007 [20].

Table 10.4/3GPP TS 24.008: Message types for GPRS mobility management

Bits 8	7	6	5	4	3	2	1	
0	0	-	-	-	-	-	-	Mobility management messages
0	0	0	0	0	0	0	1	Attach request
0	0	0	0	0	0	1	0	Attach accept
0	0	0	0	0	0	1	1	Attach complete
0	0	0	0	0	1	0	0	Attach reject
0	0	0	0	0	1	0	1	Detach request
0	0	0	0	0	1	1	0	Detach accept
0	0	0	0	1	0	0	0	Routing area update request
0	0	0	0	1	0	0	1	Routing area update accept
0	0	0	0	1	0	1	0	Routing area update complete
0	0	0	0	1	0	1	1	Routing area update reject
0	0	0	0	1	1	0	0	Service Request
0	0	0	0	1	1	0	1	Service Accept
0	0	0	0	1	1	1	0	Service Reject
0	0	0	1	0	0	0	0	P-TMSI reallocation command
0	0	0	1	0	0	0	1	P-TMSI reallocation complete
0	0	0	1	0	0	1	0	Authentication and ciphering req
0	0	0	1	0	0	1	1	Authentication and ciphering resp
0	0	0	1	0	1	0	0	Authentication and ciphering rej
0	0	0	1	1	1	0	0	Authentication and ciphering failure
0	0	0	1	0	1	0	1	Identity request
0	0	0	1	0	1	1	0	Identity response
0	0	1	0	0	0	0	0	GMM status
0	0	1	0	0	0	0	1	GMM information

Table 10.4a/3GPP TS 24.008: Message types for GPRS session management

Bits 8	7	6	5	4	3	2	1	
0	1	-	-	-	-	-	-	Session management messages
0	1	0	0	0	0	0	1	Activate PDP context request
0	1	0	0	0	0	1	0	Activate PDP context accept
0	1	0	0	0	0	1	1	Activate PDP context reject
0	1	0	0	0	1	0	0	Request PDP context activation
0	1	0	0	0	1	0	1	Request PDP context activation rej.
0	1	0	0	0	1	1	0	Deactivate PDP context request
0	1	0	0	0	1	1	1	Deactivate PDP context accept
0	1	0	0	1	0	0	0	Modify PDP context request(Network to MS direction)
0	1	0	0	1	0	0	1	Modify PDP context accept (MS to network direction)
0	1	0	0	1	0	1	0	Modify PDP context request(MS to network direction)
0	1	0	0	1	0	1	1	Modify PDP context accept (Network to MS direction)
0	1	0	0	1	1	0	0	Modify PDP context reject
0	1	0	0	1	1	0	1	Activate secondary PDP context request
0	1	0	0	1	1	1	0	Activate secondary PDP context accept
0	1	0	0	1	1	1	1	Activate secondary PDP context reject
0	1	0	1	0	0	0	0	Reserved: was allocated in earlier phases of the protocol
0	1	0	1	0	0	0	1	Reserved: was allocated in earlier phases of the protocol
0	1	0	1	0	0	1	0	Reserved: was allocated in earlier phases of the protocol
0	1	0	1	0	0	1	1	Reserved: was allocated in earlier phases of the protocol
0	1	0	1	0	1	0	0	Reserved: was allocated in earlier phases of the protocol
0	1	0	1	0	1	0	1	SM Status
0	1	0	1	0	1	1	0	Activate MBMS Context Request
0	1	0	1	0	1	1	1	Activate MBMS Context Accept
0	1	0	1	1	0	0	0	Activate MBMS Context Reject
0	1	0	1	1	0	0	1	Request MBMS Context Activation
0	1	0	1	1	0	1	0	Request MBMS Context Activation Reject

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Sydney, Australia, 14 – 18 February 2005

Tdoc ⌘N1-050313
Revision of N1-050250

CR-Form-v7.1

CHANGE REQUEST

⌘ **24.008** **CR** **933** ⌘**rev** **2** ⌘ Current version: **6.7.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [ ] Core Network [X]

Title:	⌘	Defining TMGI and MBMS session id in the mobile identity field
Source:	⌘	Ericsson, Telecom Italia S.p.A., Vodafone, Nokia
Work item code:	⌘	MBMS
Date:	⌘	16/02/2005
Category:	⌘	**B**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	Introduction of MBMS in Rel-6. The mobile identity field in PAGING REQUEST messages in 3GPP TS 44.018 is used to send out (pre-)notification of an MBMS service, i.e. to page the mobile for MBMS services. For this the Temporary Mobile Group Identity (TMGI) and the optional MBMS Session Identity will be used. GERAN2 has requested the MBMS Session Identity to be 1 octet long in order to minimize capacity demands for (pre-)notification.
Summary of change:	⌘	The mobile identity, which in this case is the TMGI and the optional MBMS Session Identity, is used to address mobiles using an MBMS service. This CR contains the needed definitions to support the (pre-)notification procedure.
Consequences if not approved:	⌘	The full MBMS functionality will not be available in Rel-6, i.e. it will not be possible to make MBMS (pre-)notifications when a CCCH is used. Thus, a network that is not using a PCCCH cannot provide MBMS services.

Clauses affected:	⌘	10.5.1.4

Other specs affected: ⌘	Y	N		⌘
		X	Other core specifications	
		X	Test specifications	
		X	O&M Specifications	

Other comments:	⌘	

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

10.5.1.4 Mobile Identity

The purpose of the *Mobile Identity* information element is to provide either the international mobile subscriber identity, IMSI, the temporary mobile subscriber identity, TMSI/P-TMSI, the international mobile equipment identity, IMEI, ~~or~~ the international mobile equipment identity together with the software version number, IMEISV, or the temporary mobile group identity (TMGI), associated with the optional MBMS Session Identity.

The IMSI shall not exceed 15 digits, the TMSI/P-TMSI is 4 octets long, and the IMEI is composed of 15 digits, the IMEISV is 16 digits (see 3GPP TS 23.003 [10]). The TMGI is at maximum 6 octets long and is defined in subclause 10.5.6.13. The MBMS Session Identity, if included, is 1 octet long (see 3GPP TS 48.018 [86]).

For packet paging the network shall select the mobile identity type with the following priority:

1- P-TMSI: The P-TMSI shall be used if it is available.

2- IMSI: The IMSI shall be used in cases where no P-TMSI is available.

For MBMS (pre-)notification (see 3GPP TS 44.018 [84] and 3GPP TS 44.060 [76]) the network shall select the mobile identity type "TMGI and optional MBMS Session Identity".

NOTE 1: The type of identity "TMGI and optional MBMS Session Identity" is only used by the MBMS (pre-)notification procedure in of A/Gb mode.

For all other transactions except emergency call establishment, emergency call re-establishment, mobile terminated call establishment, the identification procedure, the GMM identification procedure, the GMM authentication and ciphering procedure and the ciphering mode setting procedure, the mobile station and the network shall select the mobile identity type with the following priority:

1- TMSI: The TMSI shall be used if it is available.

2- IMSI: The IMSI shall be used in cases where no TMSI is available.

For mobile terminated call establishment the mobile station shall select the same mobile identity type as received from the network in the PAGING REQUEST message.

For emergency call establishment and re-establishment the mobile station shall select the mobile identity type with the following priority:

1- TMSI: The TMSI shall be used if it is available and if the location update status is UPDATED, and the stored LAI is equal to the one received on the BCCH from the current serving cell.

2- IMSI: The IMSI shall be used in cases where no TMSI is available or TMSI is available but either the update status is different from UPDATED, or the stored LAI is different from the one received on the BCCH from the current serving cell.

3- IMEI: The IMEI shall be used in cases where no SIM/USIM is available or the SIM/USIM is considered as not valid by the mobile station or no IMSI or TMSI is available.

In the identification procedure and in the GMM identification procedure the mobile station shall select the mobile identity type which was requested by the network, if available. If the requested identity is not available, then the mobile station shall indicate the identity type "No Identity".

In the ciphering mode setting procedure and in the GMM authentication and ciphering procedure the mobile shall select the IMEISV.

The *Mobile Identity* information element is coded as shown in figure 10.5.4/3GPP TS 24.008 and table 10.5.4/3GPP TS 24.008.

The *Mobile Identity* is a type 4 information element with a minimum length of 3 octet and 11 octets length maximal. Further restriction on the length may be applied, e.g. number plans.

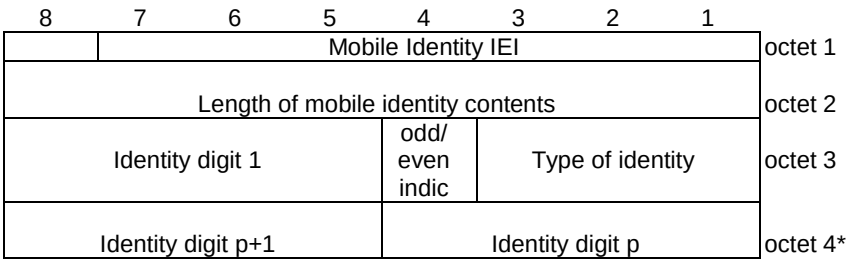

Figure 10.5.4/3GPP TS 24.008 *Mobile Identity* information element

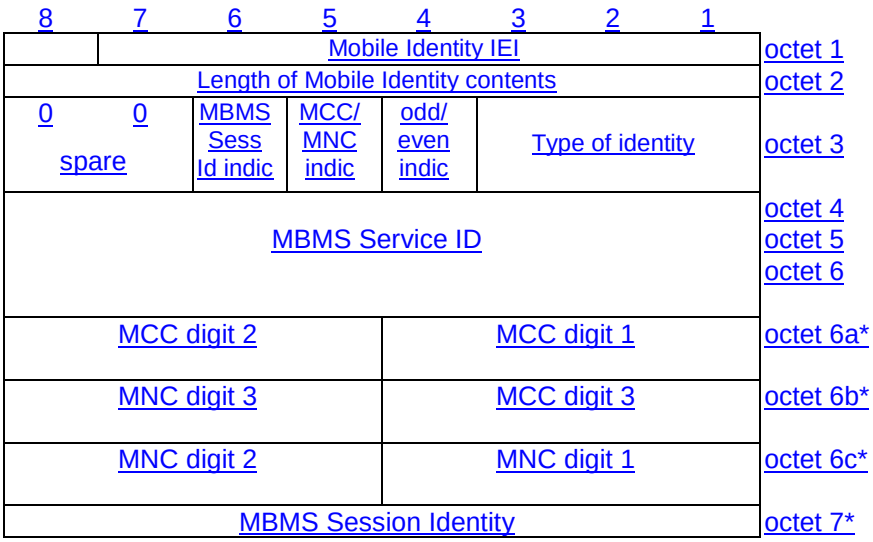

Figure 10.5.4a/3GPP TS 24.008: *Mobile Identity* information element for type of identity "TMGI and optional MBMS Session Identity"

Table 10.5.4/3GPP TS 24.008: *Mobile Identity* information element

Type of identity (octet 3)
Bits

3	**2**	**1**	
0	0	1	IMSI
0	1	0	IMEI
0	1	1	IMEISV
1	0	0	TMSI/P-TMSI
1	0	1	TMGI and optional MBMS Session Identity
0	0	0	No Identity (note 1)

All other values are reserved.

Odd/even indication (octet 3)
Bit

4	
0	even number of identity digits and also when the TMSI/P-TMSI or TMGI and optional MBMS Session Identity is used
1	odd number of identity digits

Identity digits (octet 3 etc)

For the IMSI, IMEI and IMEISV this field is coded using BCD coding. If the number of identity digits is even then bits 5 to 8 of the last octet shall be filled with an end mark coded as "1111".

For Type of identity "No Identity", the Identity digit bits shall be encoded with all 0s and the Length of mobile identity contents parameter shall be set to 1.

If the mobile identity is the TMSI/P-TMSI then bits 5 to 8 of octet 3 are coded as "1111" and bit 8 of octet4 is the most significant bit and bit 1 of the last octet the least significant bit. The coding of the TMSI/P-TMSI is left open for each administration.

For type of identity "TMGI and optional MBMS Session Identity" the coding of octet 3 etc is as follows:

MCC/MNC indication (octet 3)
Bit

5	
0	MCC/MNC is not present
1	MCC/MNC is present

MBMS Session Identity indication (octet 3)
Bit

6	
0	MBMS Session Identity is not present
1	MBMS Session Identity is present

MBMS Service ID (octet 4, 5 and 6)

The contents of the MBMS Service ID field are coded as octets 3 to 5 of the *Temporary Mobile Group Identity* IE. Bit 8 of octet 3 is the most significant bit and bit 1 of octet 5 the least significant bit. The coding of the MBMS Service ID is the responsibility of each administration. Coding using full hexadecimal representation may be used. The MBMS Service ID consists of 3 octets.

MCC, Mobile country code (octet 6a, octet 6b bits 1 to 4)

The MCC field is coded as in ITU-T Rec. E.212, Annex A.

MNC, Mobile network code (octet 6b bits 5 to 8, octet 6c)

The coding of this field is the responsibility of each administration but BCD coding shall be used. The MNC shall consist of 2 or 3 digits. If a network operator decides to use only two digits in the MNC, bits 5 to 8 of octet 7 shall be coded as "1111".

The contents of the MCC and MNC digits are coded as octets 6 to 8 of the *Temporary Mobile Group Identity* IE in Figure 10.5.6.13/3GPP TS 24.008.

MBMS Session Identity (octet 7)

The MBMS Session Identity field is encoded as the value part of the MBMS Session Identity IE as specified in 3GPP TS 48.018 [86].

NOTE 1: This can be used in the case when a fill paging message without any valid identity has to be sent on the paging subchannel and when the requested identity is not available at the mobile station during the identity request procedure.

~~NOTE: This can be used in the case when a fill paging message without any valid identity has to be sent on the paging subchannel and when the requested identity is not available at the mobile station during the identity request procedure.~~