**3GPP TSG CT Meeting #28**                                      **CP-0500222**
**1<sup>st</sup> – 3<sup>rd</sup> June 2005. Quebec, CANADA.**

| | |
|---|---|
| **Source:** | **CT3** |
| **Title:** | **CRs to Rel-6 on Work Item "MBMS"** |
| **Agenda item:** | **9.8** |
| **Document for:** | **APPROVAL** |

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**Introduction:**

This document contains 4 CRs to Rel-6 on Work Item "MBMS" that have been agreed by TSG CT WG3, and are forwarded to TSG CT Plenary for approval.

| WG_tdoc | Spec | CR | R | Cat | Title | Rel | C_Ver | Work Item |
|---|---|---|---|---|---|---|---|---|
| C3-050370 | 29.061 | 159 | 1 | F | Correction to MBMS-2G-3G-Indicator AVP | Rel-6 | 6.4.0 | MBMS |
| C3-050290 | 29.061 | 160 | | F | Unnecessary IMSI information | Rel-6 | 6.4.0 | MBMS |
| C3-050292 | 29.061 | 161 | | F | MBMS-Session-Identity is optional | Rel-6 | 6.4.0 | MBMS |
| C3-050361 | 29.061 | 167 | | F | MBMS-Session-Duration is mandatory | Rel-6 | 6.4.0 | MBMS |

*CR-Form-v7.1*

# CHANGE REQUEST

| ⌘ | **29.061** CR **160** | ⌘**rev** | **-** | ⌘ | Current version: | **6.4.0** | ⌘ |

*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 ☐   Radio Access Network ☐   Core Network **X**

| | | |
|---|---|---|
| **Title:** | ⌘ | Unnecessary IMSI information |
| **Source:** | ⌘ | Nortel Networks, Vodafone |
| **Work item code:**⌘ | MBMS | **Date:** ⌘ 29/04/2005 |

| | | | |
|---|---|---|---|
| **Category:** | ⌘ **F** | | **Release:** ⌘ Rel-6 |

Use <u>one</u> 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 <u>one</u> 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:** | ⌘ | At MBMS session start the 3GPP-IMSI AVP is sent from the MBSC to the GGSN as part of the RAR command. This information is not needed. The broadcast/muticast of the MBMS service to the final users is achieve through the knowledge of the list of downstream nodes (SGSNs) and Service Areas applicable. |
| **Summary of change:**⌘ | | Remove of the unnecessary 3GPP-IMSI in the RAR command |
| **Consequences if not approved:** | ⌘ | Unnecessary information sent to the GGSN that can create misunderstanding and consume bandwidth. |

| | | |
|---|---|---|
| **Clauses affected:** | ⌘ | 17.6.5 |

|  | 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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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/](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.

**\*\*\*\*\*\*\*\*\*\*\*\*\* FIRST MODIFIED SECTION \*\*\*\*\*\*\*\*\***

## 17.6.5 Re-Auth-Request Command

The Re-Auth-Request (RAR) command, defined in IETF RFC3588 (DIAMETER BASE) [66], is indicated by the Command-Code set to 258 and the message flags' 'R' bit set.

The relevant AVPs that are of use for the Gmb interface are detailed in the ABNF description below. Other valid AVPs for this command are not used for Gmb purposes and should be ignored by the receiver or processed according to the relevant specifications.

The bold marked AVPs in the message format indicate new optional AVPs for Gmb, or modified existing AVPs.

Message Format:

```
<RAR>  ::= < Diameter Header: 258, REQ, PXY >
             < Session-Id >
           { Origin-Host }
           { Origin-Realm }
           { Destination-Realm }
           { Destination-Host }
           { Auth-Application-Id }
           { Re-Auth-Request-Type }
           [ Called-Station-Id ]
           [ Framed-IP-Address]
           [ Framed-IPv6-Prefix ]
           [ Framed-Interface-Id ]
           [ MBMS-StartStop-Indication ]
         *[ MBMS-Service-Area ]
           [ 3GPP-GPRS-Negotiated-QoS-Profile ]
           [ 3GPP-IMSI]
           [ MBMS-Session-Duration ]
           [ MBMS-Service-Type ]
           [ MBMS-Service-Identity ]
           [ TMGI ]
         * [ 3GPP-SGSN-Address ]            ; broadcast case only
         * [ 3GPP-SGSN-IPv6-Address ]       ; broadcast case only
           [ MBMS-2G-3G-Indicator ]
           [ Origin-State-Id ]
         * [ Proxy-Info ]
         * [ Route-Record ]
```

The MBMS-StartStop-Indication AVP will indicate if the command is indicating a MBMS Session Start procedure or a MBMS Session Stop procedure.

For the MBMS Session Start procedure, RAR is sent by the BM-SC to the GGSN(s) that will deliver the MBMS service (e.g. in the multicast case these are the GGSNs that have previously registered for the corresponding multicast MBMS bearer service), when it is ready to send data. This is a request to activate all necessary bearer resources in the network for the transfer of MBMS data and to notify interested UEs of the imminent start of the transmission. For broadcast MBMS bearer services the RAR message contains either an IPv4 address or an IPv6 address for each participating SGSN.

For MBMS Session Stop procedure, RAR is sent by the BM-SC to the GGSN(s) when it considers the MBMS session to be terminated. The session is typically terminated when there is no more MBMS data expected to be transmitted for a sufficiently long period of time to justify a release of bearer plane resources in the network.

The MBMS session to be started/stopped is identified by the TMGI and the MBMS-Session-Identity.

The information of the MBMS-2G-3G-Indicator is passed from BM-SC transparently through GGSN to the SGSN(s) that are relevant for the actual MBMS bearer service.

According to 3GPP TS 23.246 [65], a specific MBMS bearer service is uniquely identified by its IP multicast address and an APN. For the MBMS Session Start procedure for broadcast MBMS bearer services, the following AVPs are included (either IPv4 or IPv6 address) to enable GGSN to relate incoming payload packets to the actual MBMS bearer service and distribute the packets to the downstream SGSNs related to this service:

- The Framed-IPv6-Prefix AVP contains the IPv6 prefix of the multicast address.

- The Framed-Interface-Id AVP contains the IPv6 interface identifier of the multicast address.

- The Framed-IP-Address AVP contains the IPv4 multicast address.

- The Called-Station-Id AVP contains the Access Point Name (APN) for which the MBMS bearer service is defined.

\*\*\*\*\*\*\*\*\*\*\*\*\*   **END OF FIRST MODIFIED SECTION**   \*\*\*\*\*\*\*\*\*\*

CR-Form-v7.1

# CHANGE REQUEST

| ⌘ | **29.061** CR **161** | ⌘**rev** | **-** | ⌘ | Current version: | **6.4.0** | ⌘ |

*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 ☐ Radio Access Network ☐ Core Network **X**

| | | |
|---|---|---|
| **Title:** ⌘ | MBMS-Session-Identity is optional | |
| **Source:** ⌘ | Nortel Networks, Ericsson | |
| **Work item code:**⌘ | MBMS | **Date:** ⌘ 29/04/2005 |
| **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:** ⌘ | In LS C3-050260 and others related it is indicated that session identity is optional. CT3 must incorporate this decision.<br><br>The ABNF of all AVPs for Gmb are marked as optional, but all of those AVPs are needed to be compliant to the Gmb interface unless otherwise stated. This was implicit during all the discussions but was never made explicit.<br><br>In fact, there are some others AVPs whose presence in the Gmb interface is optional and thus, they have been marked as such (e.g. MBMS-Session-Duration ). In the same way, now this optionallity of the MBMS-Session-Identiy is needed |
| **Summary of change:**⌘ | General explicit indication that only when said so, the Gmb AVP can be considered optional within the Gmb interface.<br><br>Indication that the MBMS-Session-Identity AVP is optional within the Gmb interface. |
| **Consequences if not approved:** ⌘ | Missalignment with MBMS radio, and other related MBMS specifications |

| | |
|---|---|
| **Clauses affected:** ⌘ | 17.6, 17.7.11 |

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

| *Other comments:* | ⌘ |
|---|---|

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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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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.

************** **FIRST MODIFIED SECTION** *********

# 17.6    Gmb Messages

This clause defines the Gmb interface Diameter messages.

The relevant AVPs that are of use for the Gmb interface are detailed in this clause. Other Diameter NASREQ AVPs, even if their AVP flag rules is marked with "M", are not required for being compliant with the current specification.

All Gmb specific AVPs for Gmb are needed to be compliant to the Gmb interface unless otherwise stated.

************** **END OF FIRST MODIFIED SECTION** *********

************** **NEXT MODIFIED SECTION** *********

## 17.7.11  MBMS-Session-Identity  AVP

The MBMS-Session-Identity AVP (AVP code 908) is of type OctetString. Its length is one octet. It is allocated by the BM-SC. Together with TMGI it identifies a transmission of a specific MBMS session. The initial- transmission and subsequent retransmissions of the MBMS session will use the same values of these parameters. This AVP is optional within the Gmb interface.

************** **END OF MODIFIED SECTION** *********

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*CR-Form-v7.1*

# CHANGE REQUEST

⌘       **29.061** CR **167**    ⌘rev   **-**   ⌘   Current version:   **6.4.0**   ⌘

</div>

*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 ☐   Radio Access Network ☐   Core Network **X**

| | |
|---|---|
| ***Title:***   ⌘ | MBMS-Session-Duration is mandatory |
| ***Source:***   ⌘ | Nortel Networks |

| | | | |
|---|---|---|---|
| ***Work item code:***⌘ | MBMS | ***Date:*** ⌘ | 29/04/2005 |

| | |
|---|---|
| ***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:*
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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:*** ⌘ | According to the LS received from SA2 in C3-050342 SA2 is asking CT3 to consider the mandatory presence of the session duration information in the BM-Sc and therefore over the Gmb interface. The specificatgion is amended accordingly. |
| ***Summary of change:***⌘ | Removal of the indication that the MBMS-Session-Duration AVP is optional within the Gmb interface. |
| ***Consequences if not approved:*** ⌘ | Missalignment with SA2 requirements |

| | |
|---|---|
| ***Clauses affected:***   ⌘ | 17.7.7 |

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

| | |
|---|---|
| ***Other comments:***   ⌘ | |

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****************    **FIRST MODIFIED SECTION**   *********

## 17.7.7    MBMS-Session-Duration AVP

The MBMS-Session-Duration AVP (AVP code 904) is of type Unsigned32, and indicates the estimated session duration (MBMS Service data transmission) if available. ~~This AVP is optional within the Gmb interface.~~ The time is indicated in seconds.

The highest value of this AVP (i.e. all 1's), is reserved to indicate an indefinite value to denote sessions that are expected to be always-on.

****************    **END OF FIRST MODIFIED SECTION**   *********

3GPP TSG-CT WG3 Meeting #36
Cancun, Mexico. 25<sup>th</sup> - 29<sup>th</sup> April 2005.

*Tdoc* ⌘*C3-050370*

*CR-Form-v7.1*

# CHANGE REQUEST

| ⌘ | **29.061** CR **159** | ⌘**rev** **1** ⌘ | Current version: **6.4.0** ⌘ |

*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☐ Radio Access Network ☐ Core Network **X**

| | | |
|---|---|---|
| **Title:** ⌘ | Correction to MBMS-2G-3G-Indicator AVP | |
| **Source:** ⌘ | Nortel Networks, Vodafone | |
| **Work item code:**⌘ | MBMS | **Date:** ⌘ 29/04/2005 |
| **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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   *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:** ⌘ | The definition of the MBMS 2G/3G indicator AVP is correct and aligned with thestage 2, however the definition of its enumerated values is not aligned with the given definition. |
| **Summary of change:**⌘ | The enumerated values definition is changed to match the definition of the AVP in alignment with stage 2 (TS 23.246) definition |
| **Consequences if not approved:** ⌘ | The AVP referes to the distinction on the coverage area and not on the content which is not necessarily different for the 2G and 3G coverage areas. The enumerated values definition is incorrect and lead to misunderstanding |

| | |
|---|---|
| **Clauses affected:** ⌘ | 17.7.10 |

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

| | |
|---|---|
| **Other comments:** ⌘ | |

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************ **FIRST MODIFIED SECTION** *********

## 17.7.10 MBMS-2G-3G-Indicator AVP

The MBMS-2G-3G-Indicator AVP (AVP code 907) is of type Enumerated. It indicates whether the MBMS bearer service will be delivered in 2G- only, 3G- only of both coverage areas. The following values are supported:

2G (0)

The MBMS bearer service shall~~will~~ only be ~~used to~~ delivered in 2G only coverage areas. ~~content.~~

3G (1)

The MBMS bearer service shall~~will~~ only be ~~used to~~ delivered in 3G only coverage areas. ~~content~~

2G-AND-3G (2)

The MBMS bearer service shall~~will~~ be ~~used to~~ delivered both in 2G and 3G coverage areas. ~~content~~

************ **END OF FIRST MODIFIED SECTION** *********