3GPP TSG-CN Meeting #26   **NP-040504**
8th – 10th December 2004. Athens, Greece.

Source:	**TSG CN WG1**
Title:	**CRs to Rel-6 WI "MBMS" for TS 24.008**
Agenda item:	**9.8**
Document for:	**APPROVAL**

This document contains **2 CRs on Rel-6 Work Item "MBMS"**, that have been agreed by TSG CN WG1 CN#36 meeting and forwarded to TSG CN Plenary meeting #26 for approval.

TDoc #	Tdoc Title	Spec	CR #	Rev	CAT	C_Version	WI	Rel
N1-041738	MBMS update	24.008	907		F	6.6.0	MBMS	Rel-6
N1-042110	NSAPI at MBMS context activation	24.008	908	2	C	6.6.0	MBMS	Rel-6

CR-Form-v7.1

CHANGE REQUEST

| ⌘ | **24.008** CR **907** | ⌘**rev** | **-** | ⌘ | Current version: | **6.6.0** | ⌘ |

*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: ⌘	MBMS update		
Source: ⌘	Ericsson		
Work item code: ⌘	MBMS	***Date:*** ⌘	29/10/2004
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: ⌘	Because of the introduction of the MBMS procedures into TS 24.008, some clarifications and update are needed as follows: - The reference number [7] (i.e. IETF RFC 2236 on "Internet Group Management Protocol, Version 2") is obsolete and it should be replaced by IETF RFC 3376 "Internet Group Management Protocol, Version 3". - The MBMS Notification procedure is specified in TS 25.346 rather than TS 25.331. - The TMGI abbreviation is used in TS 24.008. However, it does not appear in neither the abbreviation section of TS 24.008 nor TR 21.905. - The procedure to set up the MBMS context (i.e. the MBMS context activation procedure) is always initiated by the network at core network protocols with the REQUEST MBMS CONTEXT ACTIVATION message. However, the text in the sub-clause 6.2.2.1.2 may lead to misinterpretation. Therefore, the text should be clarified and corrected. A similar thing happens in the sub-clause 6.2.2.2.3.
Summary of change: ⌘	The reference [107] is updated. The TMGI abbreviation is added. The text in the sub-clauses 6.2.2.1.2 and 6.2.2.2.3 is corrected. A new reference is added, i.e. TS 25.346.
Consequences if not approved: ⌘	The definition of several MBMS states is misleading. Furthermore, the version of the IGMP protocol to be used by 3GPP systems is obsolete and an abbreviation used has no definition anywhere in 3GPP specifications. This results in undesirable effects; for instance, misinterpretation of the MBMS states and

		obsolete version used for the IGMP protocol that lead to different implementation in terminals.

Clauses affected:	⌘	2, 2.1, 6.2.2.1.2, 6.2.2.2.3, Annex I.3, 4.7.13		

		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/ 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.

1st Change

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2   References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1]   Void.

[2]   Void.

[2a]   3GPP TR 21.905 "Vocabulary for 3GPP Specifications"

[3]   3GPP TS 22.002: "Circuit Bearer Services (BS) supported by a Public Land Mobile Network (PLMN)".

[4]   3GPP TS 22.003: "Teleservices supported by a Public Land Mobile Network (PLMN)".

[5]   3GPP TS 42.009: "Security aspects".

[5a]   3GPP TS 33.102: "3G security; Security architecture".

[6]   3GPP TS 22.011: "Service accessibility".

[7]   3GPP TS 42.017: "Subscriber Identity Modules (SIM); Functional characteristics".

[8]   3GPP TS 22.101: "Service aspects; Service principles".

[8a]   3GPP TS 22.001: "Principles of circuit telecommunication services supported by a Public Land Mobile Network (PLMN)".

[8b]   3GPP TS 23.038: "Alphabets and language-specific information".

[9]   3GPP TS 23.101: "General UMTS Architecture".

[9a]   3GPP TS 23.108: "Mobile radio interface layer 3 specification core network protocols; Stage 2 (structured procedures)".

[10]   3GPP TS 23.003: "Numbering, addressing and identification".

[11]   3GPP TS 43.013: "Discontinuous Reception (DRX) in the GSM system".

[12]   3GPP TS 23.014: "Support of Dual Tone Multi-Frequency (DTMF) signalling".

[12a]   Void.

[13]   3GPP TS 43.020: "Security-related network functions".

[14]   3GPP TS 23.122: "Non-Access-Stratum functions related to Mobile Station (MS) in idle mode".

[15]   3GPP TS 24.002: "GSM-UMTS Public Land Mobile Network (PLMN) access reference configuration".

[16]   3GPP TS 44.003: "Mobile Station - Base Station System (MS - BSS) interface; Channel structures and access capabilities".

[17]   3GPP TS 44.004: "Layer 1; General requirements".

[18]   3GPP TS 44.005: "Data Link (DL) layer; General aspects".

[19]   3GPP TS 44.006: "Mobile Station - Base Station System (MS - BSS) interface; Data Link (DL) layer specification".

[19a]   3GPP TS 25.321: "Medium Access Control (MAC) protocol specification".

[19b]   3GPP TS 25.322: "Radio Link Control (RLC) protocol specification".

[19c]   3GPP TS 25.413: "UTRAN Iu interface RANAP signalling".

[20]   3GPP TS 24.007: "Mobile radio interface signalling layer 3; General aspects".

[21]   3GPP TS 24.010: "Mobile radio interface layer 3; Supplementary services specification; General aspects".

[22]   3GPP TS 24.011: "Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface".

[23]   3GPP TS 24.012: "Short Message Service Cell Broadcast (SMSCB) support on the mobile radio interface".

[23a]   3GPP TS 44.071: "Location Services (LCS); Mobile radio interface layer 3 specification."

[23b]   3GPP TS 44.031 "Location Services LCS); Mobile Station (MS) - Serving Mobile Location Centre (SMLC); Radio Resource LCS Protocol (RRLP)".

[23c]   3GPP TS 25.331: "Radio Resource Control (RRC) protocol specification"

[24]   3GPP TS 24.080: "Mobile radio Layer 3 supplementary service specification; Formats and coding".

[25]   3GPP TS 24.081: "Line identification supplementary services; Stage 3".

[26]   3GPP TS 24.082: "Call Forwarding (CF) supplementary services; Stage 3".

[27]   3GPP TS 24.083: "Call Waiting (CW) and Call Hold (HOLD) supplementary services; Stage 3".

[28]   3GPP TS 24.084: "MultiParty (MPTY) supplementary services; Stage 3".

[29]   3GPP TS 24.085: "Closed User Group (CUG) supplementary services; Stage 3".

[30]   3GPP TS 24.086: "Advice of Charge (AoC) supplementary services; Stage 3".

[31]   3GPP TS 24.088: "Call Barring (CB) supplementary services; Stage 3".

[32]   3GPP TS 45.002: "Multiplexing and multiple access on the radio path".

[33]   3GPP TS 45.005: "Radio transmission and reception".

[34]   3GPP TS 45.008: "Radio subsystem link control".

[35]   3GPP TS 45.010: "Radio subsystem synchronization".

[36]   3GPP TS 27.001: "General on Terminal Adaptation Functions (TAF) for Mobile Stations (MS)".

[36a]   3GPP TS 27.060: "Mobile Station (MS) supporting Packet Switched Services ".

[37]   3GPP TS 29.002: "Mobile Application Part (MAP) specification".

[38]   3GPP TS 29.007: "General requirements on interworking between the Public Land Mobile Network (PLMN) and the Integrated Services Digital Network (ISDN) or Public Switched Telephone Network (PSTN)".

[39]   3GPP TS 51.010: "Mobile Station (MS) conformance specification".

[40]   3GPP TS 51.021: "GSM radio aspects base station system equipment specification".

[41]   ISO/IEC 646 (1991): "Information technology - ISO 7-bit coded character set for information interchange".

[42]   ISO/IEC 6429: "Information technology - Control functions for coded character sets".

[43]   ISO 8348 (1987): "Information technology -- Open Systems Interconnection -- Network Service Definition".

[44]   ITU-T Recommendation E.163: "Numbering plan for the international telephone service".

[45]   ITU-T Recommendation E.164: "The international public telecommunication numbering plan".

[46]   ITU-T Recommendation E.212: "The international identification plan for mobile terminals and mobile users".

[47]   ITU-T Recommendation F.69 (1993): "The international telex service - Service and operational provisions of telex destination codes and telex network identification codes".

[48]   ITU-T Recommendation I.330: "ISDN numbering and addressing principles".

[49]   ITU-T Recommendation I.440 (1989): "ISDN user-network interface data link layer - General aspects".

[50]   ITU-T Recommendation I.450 (1989): "ISDN user-network interface layer 3 General aspects".

[51]   ITU-T Recommendation I.500 (1993): "General structure of the ISDN interworking recommendations".

[52]   ITU-T Recommendation T.50: "International Reference Alphabet (IRA) (Formerly International Alphabet No. 5 or IA5) - Information technology - 7-bit coded character set for information interchange".

[53]   ITU Recommendation Q.931: ISDN user-network interface layer 3 specification for basic control".

[54]   ITU-T Recommendation V.21: "300 bits per second duplex modem standardized for use in the general switched telephone network".

[55]   ITU-T Recommendation V.22: "1200 bits per second duplex modem standardized for use in the general switched telephone network and on point-to-point 2-wire leased telephone-type circuits".

[56]   ITU-T Recommendation V.22bis: "2400 bits per second duplex modem using the frequency division technique standardized for use on the general switched telephone network and on point-to-point 2-wire leased telephone-type circuits".

[57]   Void.

[58]   ITU-T Recommendation V.26ter: "2400 bits per second duplex modem using the echo cancellation technique standardized for use on the general switched telephone network and on point-to-point 2-wire leased telephone-type circuits".

[59]   ITU-T Recommendation V.32: "A family of 2-wire, duplex modems operating at data signalling rates of up to 9600 bit/s for use on the general switched telephone network and on leased telephone-type circuits".

[60]   ITU-T Recommendation V.110: "Support by an ISDN of data terminal equipments with V-Series type interfaces".

[61]   ITU-T Recommendation V.120: "Support by an ISDN of data terminal equipment with V-Series type interfaces with provision for statistical multiplexing".

[62]   ITU-T Recommendation X.21: "Interface between Data Terminal Equipment (DTE) and Data Circuit-terminating Equipment (DCE) for synchronous operation on public data networks".

[63]   Void.

[64]   Void.

[65]   ITU-T Recommendation X.30: "Support of X.21, X.21 bis and X.20 bis based Data Terminal Equipments (DTEs) by an Integrated Services Digital Network (ISDN)".

[66]   ITU-T Recommendation X.31: "Support of packet mode terminal equipment by an ISDN".

[67]   Void.

[68]   Void.

[69]   ITU-T Recommendation X.121: "International numbering plan for public data networks".

[70]   ETSI ETS 300 102-1: "Integrated Services Digital Network (ISDN); User-network interface layer 3; Specifications for basic call control".

[71]   ETSI ETS 300 102-2: "Integrated Services Digital Network (ISDN); User-network interface layer 3; Specifications for basic call control; Specification Description Language (SDL) diagrams".

[72]   ISO/IEC 10646: "Information technology -- Universal Multiple-Octet Coded Character Set (UCS)".

[73]   3GPP TS 22.060: "General Packet Radio Service (GPRS); Service Description; Stage 1".

[74]   3GPP TS 23.060: "General Packet Radio Service (GPRS); Service Description; Stage 2".

[75]   3GPP TS 43.064: "General Packet Radio Service (GPRS); Overall description of the GPRS radio interface; Stage 2".

[76]   3GPP TS 44.060: "General Packet Radio Service (GPRS); Mobile Station (MS) - Base Station System (BSS) interface; Radio Link Control/Medium Access Control (RLC/MAC) protocol".

[77]   IETF RFC 1034: "Domain names - concepts and facilities".

[78]   3GPP TS 44.065: "Mobile Station (MS) - Serving GPRS Support Node (SGSN); Subnetwork Dependent Convergence Protocol (SNDCP)".

[78a]   3GPP TS 44.064: "Mobile Station - Serving GPRS Support Node (MS-SGSN) Logical Link Control (LLC) Layer Specification".

[79]   ITU Recommendation I.460: "Multiplexing, rate adaption and support of existing interfaces".

[80]   3GPP TS 26.111: "Codec for Circuit Switched Multimedia Telephony Service; Modifications to H.324".

[81]   3GPP TS 23.107: "Quality of Service (QoS) concept and architecture".

[82]   3GPP TS 43.022: "Functions related to Mobile Station (MS) in idle mode and group receive mode".

[83]   3GPP TS 26.103: "Speech Codec List for GSM and UMTS".

[84]   3GPP TS 44.018: "Mobile radio interface layer 3 specification, Radio Resource Control Protocol".

[85]   3GPP TS 48.008: "Mobile-services Switching Centre – Base Station System (MSC – BSS) interface; layer 3 specification".

[86]   3GPP TS 48.018: "General Packet Radio Service (GPRS); Base Station System (BSS) - Serving GPRS Support Node (SGSN); BSS GPRS Protocol (BSSGP)".

[87]   3GPP TS 43.055: "Dual Transfer Mode (DTM); Stage 2".

[88]   3GPP TS 23.067: "enhanced Multi-Level Precedence and Pre-emption service (eMLPP); Stage 2".

[88a]   3GPP TS 23.093: "Technical realization of Completion of Calls to Busy Subscriber (CCBS); Stage 2".

[89]   3GPP TS 22.042: "Network Identity and Time Zone (NITZ), Stage 1".

[90]   3GPP TS 23.040: "Technical realization of Short Message Service (SMS)".

[91]   3GPP TS 44.056: "GSM Cordless Telephony System (CTS), (Phase 1) CTS Radio Interface Layer 3 Specification".

[92]   3GPP TS 23.226: "Global Text Telephony; Stage 2 "

[93]   3GPP TS 26.226: "Cellular Text Telephone Modem (CTM), General Description "

[94]   3GPP TS 23.236: "Intra Domain Connection of RAN Nodes to Multiple CN Nodes"

[95]   3GPP TS 24.229: "IP Multimedia Call Control Protocol based on SIP and SDP"

[96]   3GPP TS 23.205: "Bearer-independent circuit-switched core network; Stage 2".

[97]   3GPP TS 23.172: "UDI/RDI Fallback and Service Modification; Stage 2".

[98]   3GPP TS 25.304: "UE Procedures in Idle Mode and Procedures for Cell Reselection in Connected Mode"

[99]   RFC 3513 (April 2003): "Internet Protocol Version 6 (IPv6) Addressing Architecture".

[100]   3GPP TS 29.207: "Policy control over Go interface".

[101]   3GPP TS 21.111: "USIM and IC card requirements".

[102]   RFC 1661 (July 1994): "The Point-to-Point Protocol (PPP)".

[103]   RFC 3232 (January 2002): "Assigned Numbers: RFC 1700 is Replaced by an On-line Database".

[104]   3GPP TS 23.034: "High Speed Circuit Switched Data (HSCSD) – Stage 2".

[105]   3GPP TS 23.271: "Functional stage 2 description of LCS".

[106]   3GPP TS 23.246: "Multimedia Broadcast/Multicast Service (MBMS); Architecture and Functional Description".

[107]   RFC 3376~~2236~~ (October 2002~~November 1997~~): "Internet Group Management Protocol, Version 3~~2~~".

[108]   RFC 2710 (October 1999): "Multicast Listener Discovery (MLD) for IPv6".

[109]   3GPP TS 23.251: "Network Sharing; Architecture and Functional Description".

[1xy]   3GPP TS 25.346: "Introduction of the Multimedia Broadcast Multicast Service (MBMS) in the Radio Access Network"

Next Change

2.1   Definitions and abbreviations

For the purposes of the present document, the abbreviations defined in 3GPP TR 21.905 [2a] and the followings apply:.

TMGI   Temporary Mobile Group Identity

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Next Change

</div>

6.2.2   MBMS Session Management states

In this subclause, the MBMS states are described for one MBMS-SM entity (see 3GPP TS 24.007 [20]). Each MBMS-SM entity is associated with one MBMS context. The subclause 6.2.2.1 describes the MBMS states in the MS and subclause 6.2.2.2 describes the MBMS states on the network side.

6.2.2.1   MBMS Session Management states in the MS

In this subclause, the possible states of an MBMS-SM entity in the MS are described.

6.2.2.1.1   MBMS-INACTIVE

This state indicates that no MBMS Context exists.

6.2.2.1.2   MBMS-ACTIVE-PENDING

This state exists when the MS has requested the network to activate~~initiate~~ an MBMS C~~c~~ontext ~~activation~~.

6.2.2.1.3   MBMS-ACTIVE

This state indicates that the MBMS Context is active.

6.2.2.2   MBMS Session Management states on the network side

In this clause, the possible states of an MBMS-SM entity on the network side are described.

6.2.2.2.1   MBMS-INACTIVE

This state indicates that the MBMS Context is not active.

6.2.2.2.2   MBMS-ACTIVE-PENDING

This state exists when the network has initiated MBMS Context activation.

6.2.2.2.3   MBMS-INACTIVE-PENDING

This state exists when the network has requested the MS to deactivate~~initiated~~ an MBMS C~~c~~ontext ~~deactivation~~.

6.2.2.2.4   MBMS-ACTIVE

This state indicates that the MBMS Context is active.

<div style="border:2px solid black; text-align:center;">

Next Change

</div>

I.3   Additional causes for MBMS Session Management

Cause value = 24 MBMS bearer capabilities insufficient for the service

This cause code is used by the network to indicate that an MBMS context activation request was rejected by the network, because the MBMS bearer capabilities are insufficient for the MBMS service.

Cause value = 47 Multicast group membership time-out

This cause code is used by the network to indicate that the MBMS context is deactivated because the timer supervising the IGMP group membership interval (see RFC 3376~~2236~~ [107], subclause 8.4) or the MLD multicast listener interval (see RFC 2710 [108], subclause 7.4) expired.

Next Change

4.7.13   Service Request procedure (UMTS only)

The purpose of this procedure is to transfer the PMM mode from PMM-IDLE to PMM-CONNECTED mode, and/or to assign radio access bearer in case of PDP contexts are activated without radio access bearer assigned. In latter case, the PMM mode may be PMM-IDLE mode or may alternatively be the PMM-CONNECTED mode if the MS requires radio access bearer re-establishment. This procedure is used for;

- the initiation of CM layer service (e.g. SM or SMS) procedure from the MS in PMM-IDLE mode,

- the network to transfer down link signalling,

- uplink (in PMM-IDLE or PMM CONNECTED) and downlink (only in PMM-IDLE) user data,

- counting the number of mobile stations in a cell which are interested in a specific MBMS multicast service.

For downlink transfer of signalling or user data in PMM-IDLE mode, the trigger is given from the network by the paging request procedure, which is out of scope of the present document.

For pending downlink user data in PMM-CONNECTED mode, the re-establishment of radio access bearers for all active PDP contexts is done without paging.

For counting the number of mobile stations in PMM-IDLE mode interested in a specific MBMS service, the trigger is given from the network by the MBMS notification procedure (see 3GPP TS 25.331 [23c]).

Service type can take either of the following values; "signalling", "data", "paging response" or "MBMS notification response". Each of the values shall be selected according to the criteria to initiate the Service request procedure.

The criteria to invoke the Service request procedure are when;

   a) the MS has any signalling messages except GMM messages (e.g. for SM or SMS) to be sent to the network in PMM-IDLE mode (i.e., no secure PS signalling connection has been established). In this case, the service type shall be set to "signalling".

   b) the MS, either in PMM-IDLE or PMM-CONNECTED mode, has pending user data to be sent and no radio access bearer is established for the corresponding PDP context. The procedure is initiated by an indication from the lower layers (see 3GPP TS 24.007 [20]). In this case, the service type shall be set to "data". If in PMM-CONNECTED mode, a Service Request with service type "data" was already accepted by the network the MS shall not issue a second Service Request with service type "data" unless the PMM-IDLE state is entered again.

   c) the MS receives a paging request for PS domain from the network in PMM-IDLE mode. In this case, the service type shall be set to "paging response".

   d) the MS is in PMM-IDLE, receives an MBMS notification for an MBMS multicast service for which the MS has activated an MBMS context, and is prompted by the contents of the notification to establish a PS signalling connection (see 3GPP TS 25.3~~46~~46~~31~~ [1xy~~23c~~]). In this case, the service type shall be set to "MBMS notification response".

If the network indicates "follow-on proceed" in the ATTACH ACCEPT or ROUTING AREA UPDATE ACCEPT message and the MS has a service request pending, the MS shall react depending on the service type. If the service type is:

- "signalling": the MS shall abort Service request procedure and send the pending signalling messages immediately;

- "data": the MS shall immediately perform the pending Service request procedure using the current PS signalling connection;

- "paging response": the MS shall abort Service request procedure. No further specific action is required from the MS.

If the network indicates "follow-on proceed" and the MS has no service request pending, then no specific action is required from the MS.

If the network indicates "no follow-on proceed" in the ATTACH ACCEPT or ROUTING AREA UPDATE ACCEPT message, the MS shall not initiate the pending Service request procedure until the current PS signalling connection is released.

NOTE: The "follow-on proceed" indication was not defined in earlier versions of the protocol. A network that is compliant with the earlier versions of the protocol will always encode the respective bit as zero, i.e. as "follow-on proceed", even if it does not prolong the PS signalling connection.

After completion of a Service request procedure but before re-establishment of radio access bearer, if the PDP context status information element is included, then the network shall deactivate all those PDP contexts locally (without peer to peer signalling between the MS and the network), which are not in SM state PDP-INACTIVE on network side but are indicated by the MS as being in state PDP-INACTIVE.

After completion of a Service request procedure, the pending service is resumed and uses then the connection established by the procedure. If the service type is indicating "data", then the radio access bearers for all activated PDP contexts are re-established by the network, except for those activated PDP contexts having maximum bit rate value set to 0 kbit/s for both uplink and downlink. The re-establishment of radio access bearers for those PDP contexts is specified in subclause 6.1.3.3.

The selective re-assignment capability is not supported for the simplicity of the function.

CR-Form-v7.1

CHANGE REQUEST

⌘ **24.008 CR 908** ⌘**rev 2** ⌘ Current version: **6.6.0** ⌘

*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: ⌘	NSAPI at MBMS context activation
Source: ⌘	Ericsson, Samsung
Work item code:⌘	MBMS **Date:** ⌘ 18/11/2004
Category: ⌘	**C** **Release:** ⌘ Rel-6

Use *one* of the following categories:
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A *(corresponds to a correction in an earlier release)*
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Detailed explanations of the above categories can be found in 3GPP TR 21.900.

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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: ⌘	The LS in N1-041655 on 'MBMS NSAPI' indicates that today, TS 23.146 specifies that the MBMS UE Contexts (i.e. MBMS context in TS 24.008) contains among other parameters the MBMS NSAPI which was chosen by the UE during the MBMS Multicast Service Activation procedure.

With the current solution only a maximum of 11 MBMS contexts can be simultaneously activated, which also have to be shared by ordinary PDP context. This CR proposes that a new IE is defined as an 'Enhanced NSAPI' intended to be used exclusively for MBMS. The UE allocates an unused NSAPI value from the new enhanced IE value space when activating a new MBMS context. |
| **Summary of change:**⌘ | A new enhanced NSAPI IE is defined to be used by the UE in the ACTIVATE MBMS CONTEXT REQUEST message. |
| **Consequences if not approved:** ⌘ | Only a maximum of 11 MBMS contexts could be activated. |

Clauses affected: ⌘	9.5.22, 10.5.6.15

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:

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1st Change

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 10.5.6.215	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 ~~UTRAN~~ the network chooses a point-to-point MBMS
bearer for the transfer of MBMS data in the user plane.

Next Change

10.5.6.15   Enhanced network service access point identifier

The purpose of the *enhanced network service access point identifier* information element is to identify the service
access point that is used at layer 3.

The *enhanced network service access point identifier* is a type 3 information element with a length of 2 octets.

The value part of an *enhanced network service access point identifier* information element is coded as shown in
figure 10.5.xxx/3GPP TS 24.008 and table 10.5.xxx/3GPP TS 24.008.
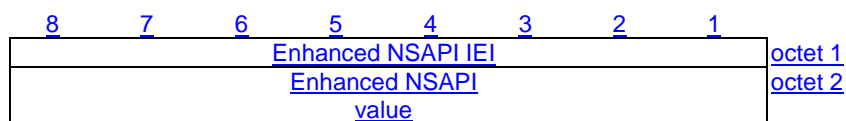
8	7	6	5	4	3	2	1	
Enhanced NSAPI IEI								octet 1
Enhanced NSAPI value								octet 2

**Figure 10.5.xxx/3GPP TS 24.008: *Enhanced network service access point identifier* information
element**

Table 10.5.xxx/3GPP TS 24.008: *Enhanced network service access point identifier* **information element**

Enhanced NSAPI value (octet 2, bits 1 to 7)	
Bits 8 7 6 5 4 3 2 1	
0 0 0 0 0 0 0 0 through 0 1 1 1 1 1 1 1	Reserved Reserved
1 0 0 0 0 0 0 0 through 1 1 1 1 1 1 1 1	NSAPI 128 for Multimedia Broadcast/Multicast Service (MBMS) NSAPI 255 for Multimedia Broadcast/Multicast Service (MBMS)

End of Change